



OKLAHOMA DYSLEXIA HANDBOOK:
A GUIDE TO LITERACY DEVELOPMENT AND
READING STRUGGLES

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CHAPTER 1 INTRODUCTION

"Reading is the fundamental skill upon which all formal education depends. Research now shows that a child who doesn't learn the reading basics early is unlikely to learn them at all. Any child who doesn't learn to read early and well will not easily master other skills and knowledge, and is unlikely to ever flourish in school or in life."

-Louisa Moats, 1999

MYTH: Oklahoma does not recognize dyslexia.

FACT: Oklahoma recognizes dyslexia as a disability under the Individuals with Disabilities Education Act (IDEA) and Section 504 of the Rehabilitation Act. A [letter dated January 17, 2014](#) from the Oklahoma State Department of Education (OSDE) identified that Oklahoma "has ensured that policies and procedures are in place to ensure that all children suspected of having a disability, including dyslexia, are identified, located, and evaluated to determine whether they are in need of special education and related services." Dyslexia is included in the OK Special Education Handbook under Specific Learning Disability. State statute, Title 70 Section 6-194, requires all schools to provide dyslexia awareness professional development beginning in the 2020-2021 school year. The OSDE provides technical assistance and professional development regarding the implementation of the IDEA, including supporting students with dyslexia.

MYTH: Dyslexia is rare.

FACT: The National Center for Learning Disabilities projects that one in five has a specific learning disability. Of students identified with specific learning disabilities, 70-80% have deficits in reading. The International Dyslexia Association (IDA) further notes that the most common type of reading, writing, and/or spelling disability is dyslexia. These numbers quickly dispel the myth that dyslexia is rare.

Purpose of Handbook

The purpose of this Oklahoma Dyslexia Handbook is to provide guidance to educators, students, families, and community members about dyslexia, and the best practices for identification, intervention, and support for children with dyslexia.

With this goal in mind, the intent is to:

- Build an understanding of dyslexia and related difficulties with written language;
- Demonstrate how to identify and remediate students with dyslexia, and
- Inform both educators and families about best practices to support students with dyslexia.

In addition, this handbook provides guidance to assist school-based decision-making teams in determining appropriate educational programming decisions for students with dyslexia. It can also serve as a starting point when additional resources are needed to support students.

Information regarding implementing strategies according to state statutes (70-6-194 and 70-18-109.5) pertaining to dyslexia and how they relate to federal laws such as [Section 504 of the Rehabilitation Act of 1973](#) (Section 504), [the Americans with Disabilities Act](#) (ADA), as amended, and the [Individuals with Disabilities Education Act](#) (IDEA, 2004) are included.

To compliment this handbook, the development of additional dyslexia resources will be ongoing. Currently, the Oklahoma State Department of Education (OSDE) is working on professional development opportunities to fulfill the requirements set by H.B. 1228 (2019) for Dyslexia Awareness Training in schools.

Why Does It Matter?

We asked students with dyslexia to share why it matters to them that their educators understood dyslexia. Students shared they had struggled with feelings of shame before understanding their struggles were due to dyslexia. This shame was reinforced when their educators made statements showing they too did not understand the reason for their struggle in the classroom. Students shared with us the following statements that were made about them by an educator:

“Not all kids go to college.” -Kindergarten Teacher

“You obviously are not doing your reading homework, because you are not getting better.” -Teacher

“Not a Shining Star.” -Teacher

“Doesn’t want to learn.” -Teacher

“Lazy and inattentive.” -Teacher

“I could just choke him at times.” -Teacher

“Unable to be taught” -Special Education Teacher

“He’s a bright child; I just don’t know what’s wrong. Was he dropped as a baby?” -School Psychologist

Social and Emotional Connection

“Samuel T. Orton, M.D. was one of the first researchers to describe the emotional aspects of dyslexia. According to his research, the majority of preschoolers who were later diagnosed as having dyslexia are happy and well adjusted. Their emotional problems begin to develop when early reading instruction does not match their learning needs. Over the years, the frustration mounts as classmates surpass the student with dyslexia in reading skills.” (IDA, [Dyslexia in the Classroom](#))

“Parents (and teachers, too) of children with reading problems should make their number one goal the preservation of their child’s self-esteem. This is the area of greatest vulnerability for children who are dyslexic.” (Shaywitz, 2003)

Stress and anxiety within a student can be a result of frustration of not being able to adequately grasp the task of learning to read. Students who don’t understand that their struggles with reading are the result of dyslexia can blame themselves. Students that are not supported at home or school are vulnerable to problems with self-esteem and depression. Research from Gershen Kaufman, Ph.D., an expert on the culture of shame says people who struggle to read report feeling the same level of personal shame that “often matches, in intensity, the shame experienced over incest.”(Foss, 2016) We need to build the self-esteem of student and not add to their shame. We need to ensure the school building is a place of nurture. The research in self-image indicates it is essential to provide early intervention. Students with a poor self-image by age 10 have a difficulty redefining themselves with a positive self-image. Teachers need to know the signs of depression in younger students, instead of withdrawn, they may be active or misbehave to hide the feelings of pain.

89% of adolescents who committed suicide and left a note could have been identified with a learning disability based on spelling and handwriting errors found in the note. ([McBride and Siegel](#)). As early as second-grade students who struggle as readers and who do not receive the necessary identification, intervention, and support are being identified with anxiety, depression, and suicidal warning signs.

Students who do not have a supportive environment of parents and educators who identify dyslexia and provide effective intervention are also more likely to struggle with:

- Substance Abuse
- Teenage Pregnancy
- Criminal Court System
- High School Drop Out

“The depressed child with dyslexia not only experiences great pain in his present experience but also foresees a life of continuing failure.” (IDA Dyslexia in the Classroom)

IDA’s fact sheet entitled, "[The Dyslexia-Stress-Anxiety Connection, Implications for Academic Performance and Social Interactions](#)", provides guidance on how dyslexia, stress, and anxiety intertwine.

What Are We Missing?

Dyslexia has been an unspoken word in many schools simply because we don’t have a good understanding of what it is. To help increase our awareness let’s first dispel a few misconceptions:

What Dyslexia is NOT:
<ul style="list-style-type: none">• Dyslexia is NOT... reading or writing backwards• Dyslexia is NOT... caused by poor eyesight, vision processing problems or hearing problems• Dyslexia is NOT... an intellectual or developmental disability• Dyslexia is NOT... more prevalent in boys than girls• Dyslexia is NOT... a lack of educational opportunity or lack of books in the home• Dyslexia is NOT... a lack of motivation or laziness, in fact students with dyslexia are working harder than their peers• Dyslexia is NOT... uncommon (15-20% of population)• Dyslexia is NOT... responsive to standard reading instruction

CHAPTER 2 WHAT IS DYSLEXIA?

“Dyslexia is a different brain organization that needs different teaching methods. It is never the fault of the child, but rather the responsibility of us who teach to find methods that work for that child.”

-Maryanne Wolf, 2015

MYTH: Dyslexia is a general “catch-all” term.

FACT: Dyslexia is a specific term for a learning disability that is neurological in origin and is specific to written language. The research-based definition of dyslexia, recognized by the International Dyslexia Association (IDA) and supported by the National Institutes of Health (NIH), clearly outlines the characteristics of dyslexia.

MYTH: If given enough time children will learn to read.

FACT: There is strong evidence to support the hypothesis that a reading disability is the result of a deficit, rather than a developmental lag (Francis, et.al, 1996).

MYTH: Children will outgrow dyslexia.

FACT: Dyslexia is neurological in origin and is a lifelong learning disability. Evidence indicates that without early effective intervention and reading instruction, children with dyslexia continue to experience reading problems into adolescence and adulthood (Shaywitz, 2003).

MYTH: Writing letters and words backwards are the most prominent signs of dyslexia.

FACT: Writing letters and words backwards may occur in any child prior to 2nd grade or the age of eight or nine. Dyslexia does not cause children to see letters, numbers, and words backwards or inverted. However, some children with dyslexia may confuse letters, misread words, or have difficulty forming letters as a result of the lack of phonological skills (Moats, 1999).

What Is a Specific Learning Disability (SLD)?

Individuals with Disability Education Act (IDEA) defines a Specific Learning Disabilities or (SLD) as a disorder in one or more of the basic psychological processes involved in understanding or in using language, *spoken or written*, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain disfunction, dyslexia, and developmental aphasia.

SLD does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of intellectual disability, of emotional disturbance, or of environmental, cultural or economic disadvantage, or limited English Proficiency. IDEA 2004.34CFR300.8

Why should we identify dyslexia?

In October 2015, the United States Department of Education issued a [Dear Colleague](#) guidance letter to ensure a high-quality education for children with Specific Learning Disabilities (SLD). The purpose of the letter was to, "Clarify that there is nothing in the IDEA that would prohibit the use of the terms dyslexia, dyscalculia, and dysgraphia in IDEA evaluation, eligibility determinations, or IEP documents."

"Identifying a child's dyslexia doesn't limit their potential. It empowers them to understand the nature of their difficulties and strengths and their path for success." Josh Clark, Head of The Schenck School

Our group of students with dyslexia shared with us after receiving an identification of dyslexia, effective reading intervention, and support through accommodations and assistive technology they were able to work up to their protentional. Students had a new found level of confidence in their ability to learn and their educators shared the following statements with them:

"He is the hardest working student in my class" -Teacher

"I wish every student gave the effort she does" -Teacher

"Committed, loyal, hardworking" -Coach

"Excellent ability to recall historical facts" -Teacher

"Voracious learner, great perseverance" -Teacher

"Outside the box thinker" -Teacher

"Honor Roll" -Teacher

"He went further than any other student I have ever tested" -School Psychologist

How Do We Define Dyslexia?

According to the Woodcock Johnson IV, “Dyslexia affects reading at the *single word* level, reading *fluency* and rate, and *spelling*. In turn, these weaknesses cause difficulties with reading comprehension and written expression.

Other abilities that do not require reading, such as general intelligence, reasoning, oral language, mathematics, and knowledge are often unimpaired. In other words, the reading and spelling difficulties are often unexpected in relation to the person’s other abilities.” (Mather & Wendling, 2014)

DYSLEXIA SYMPTOMS
<p>Lack of response to treatment</p> <p>Pre-Reader Difficulties</p> <ul style="list-style-type: none"> • Alphabet Writing • Phonics/Letter Knowledge <p>Reader Difficulties</p> <ul style="list-style-type: none"> • Word Reading/Decoding <ul style="list-style-type: none"> • Reading Fluency • Spelling • Written Expression • Reading Comprehension < Listening Comprehension
CAUSES/ CORRELATES
<ul style="list-style-type: none"> • Phonological Processing • Rapid Automatic Naming • Auditory Working Memory <ul style="list-style-type: none"> • Processing Speed • Long-Term Storage and Retrieval <ul style="list-style-type: none"> • Associative Memory • Orthographic Processing
RISK FACTORS
<ul style="list-style-type: none"> • Family History • Language Impairment and/or Poor Receptive Vocabulary . (Hybrid Model of Dyslexia Identification)

Characteristics of Dyslexia

Characteristics of students with dyslexia directly parallel the definition of dyslexia. Students with dyslexia are likely to perform poorly on measures of **phonological processing, decoding nonwords, and developing an adequate pool of sight words.**

According to research, the major *cognitive correlates* of dyslexia include weaknesses in one or more of the following abilities: phonological awareness, orthographic awareness, memory, rapid naming, and perceptual speed.

INTERNATIONAL DYSLEXIA ASSOCIATION

DYSLEXIA is a specific learning disability that is neurological 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.

An accurate identification of dyslexia in preschool or kindergarten is more likely when these problems occur in students who:

- 1) have strong abilities in other areas of language such as vocabulary;
- 2) come from homes that provide a language and print rich preschool environment; and,
- 3) have a first or second-degree relative who experienced severe early reading difficulties.

However, inherent phonological processing difficulties can also occur in children of poverty who come to school with limited vocabularies and knowledge of print. Although the phonological weaknesses of these students most likely result from a lack of certain kinds of language experience in the home, they may also be the result of biologically-based, inherent phonological processing weaknesses.

STUDENTS WITH DYSLEXIA MAY EXPERIENCE DIFFICULTY WITH ANY OR ALL OF THE FOLLOWING:

- Learning letter names and sounds
- Phonological processing skills
- Automaticity of reading
- Decoding
- Spelling and writing
- Vocabulary

WHAT DYSLEXIA LOOKS LIKE BY AGES AND GRADE

PRESCHOOL

History of ear infections

Speech-language delays

- Word retrieval
- Mispronunciations
- Vocabulary

Directionality

- Left/right
- Up/down
- Before/after

Pre-literacy Skills

- Auditory memory for rhymes and chants
- Letters in name
- Rote information
- Remembering/following directions
- Recognizing/producing rhyme

2ND-3RD GRADE

Difficulty

- Acquiring new vocabulary or using age-appropriate grammar
- Putting ideas on paper
- Decoding single words in isolation
- Reading multisyllabic words and phonetically irregular words

Word retrieval difficulties in class discussions

Over-reliance on context to derive meaning from print

Confusion of visually similar letters

(b/d, p/q, w/m, h/n, f/t)

Confusion of auditorily similar letters

(d/t, b/p, f/v, s/z)

Spelling skills which are not phonetically consistent

Slower-paced/effortful reading; lacks inflection and has a tendency to read through punctuation

KINDERGARTEN/1ST GRADE

Difficulty

- remembering names/shapes, and/or sounds of letters
- generating rhyming words
- reading common one-syllable sight words
- with phonemic awareness tasks

Spelling errors that reflect difficulty with sound/symbol associations

- reversals *past/pats*
- omissions *tip/trip*
- additions *slip/sip*
- substitutions *rip/rib*
- transpositions *stop/pots*

Frustration in school and/or

Complains about reading

4TH-12TH GRADE

Significant difficulty reading and spelling multisyllabic words often omitting entire syllables as well as making single sound errors

Difficulties with reading comprehension and learning new information from the text due to underlying word recognition difficulties

Avoids reading aloud; poor fluency skills

Reports unusually long hours spent doing homework

CHAPTER 3 WHAT IS THE SCIENCE OF READING?

“To many, reading seems a natural act,
whereas it is anything but natural.”

- Judith Birsh, 2011

“Teaching Reading Is Rocket Science.”

- Louisa Moats, 1999

MYTH: Children who are read to nightly become good readers.

FACT: Simply being read to will not help a child sound out unknown word. Reading with a child is not enough to ensure a child becomes a successful reader. However, between the ages of zero to five being read to helps prepare the brain for becoming a reader. Reading to a child at any age promotes growth in vocabulary and background knowledge which can improve their comprehension.

MYTH: Most reading specialists know the latest research on dyslexia.

Fact: Unfortunately, recent research has shown that most teacher-training programs aren't teaching *the science of reading* including early identification of children at risk for reading failure, daily training in linguistic and oral skills, implicit instruction in letter sounds and syllables, and teaching phonics in a sequential order that research has shown will be most beneficial to students.

How Do We Learn to Read using the Simple View of Reading?

“We human beings were never born to read; we invented reading and then had to teach it to every new generation. Each new reader comes to reading with a 'fresh' brain - one that is programmed to speak, see, and think, but not to read.” (Wolf, 2007)

Simple View of Reading

A formula introduced by Gough & Tunmer (1986)



Gough and Tunmer, (1986) and Hoover and Gough, (1990) described reading as the product of decoding and language comprehension. They add that these components work together in a delicate, interdependent balance and that when there is a disconnect between these components, reading failure can occur. This model is referred to as the **Simple View of Reading**.

Decoding refers to a student’s ability to sound out words phonetically. As students become proficient decoders, they move to automatic word recognition. Comprehension skills begin with listening comprehension tasks. As students gain the ability to access text they move toward the ultimate goal of reading, comprehension, or the ability to read and obtain meaning from text.

Both decoding and language comprehension are essential components and equally important for reading comprehension, as demonstrated through the multiplication sign in the above equation. When something is multiplied by zero, the product is also zero. In this same manner, if a student lacks either decoding or language comprehension, then the student will not have success with reading comprehension.

Decoding refers to a student's ability to sound out words phonetically. As students become proficient decoders, they move to automatic word recognition. Comprehension skills begin with listening comprehension tasks. As students gain the ability to access text, they move toward the ultimate goal of reading comprehension, or the ability to read and obtain meaning from text.

Why Is Reading Difficult for Students with Dyslexia?

A dyslexic brain is different than that of a “typical” reader. It is characterized as having less efficient patterns of processing when reading. In the book *Essentials of Dyslexia Assessment and Intervention* (Mather & Wendling, 2012) the neurobiological characteristics of individuals with dyslexia are identified. The chart below outlines these findings:

Summary of Neurobiological Characteristics of Individuals with Dyslexia (Mather et.al. 2012)
• Less activation of posterior reading systems in left hemisphere
• Less temporoparietal activation
• Less occipitoparietal activation
• More activation left frontal, right frontal, and right occipitoparietal systems
• Age-related differences noted between nonimpaired readers and those with dyslexia
• Readers with dyslexia tend to rely on memorization of words
• Differences persist into adulthood, affecting development of reading fluency and spelling

Like many other researchers interested in how a dyslexic readers brain works, Dr. Papanicolaou’s research conducted with the Texas Reading Institute showed that the brain activity of dyslexic readers clusters disproportionately on the right side of the brain, rather than on the left side like that of effective and efficient readers. “It’s like trying to paint with your toes,” explains Dr. Papanicolaou in the film, *Reading in the Brain*, made available from WETA on Reading Rockets. “You are doing something using perfectly normal equipment, but not suitable for the purpose.” You can view the video using this link: <http://www.readingrockets.org/shows/launching/brain>

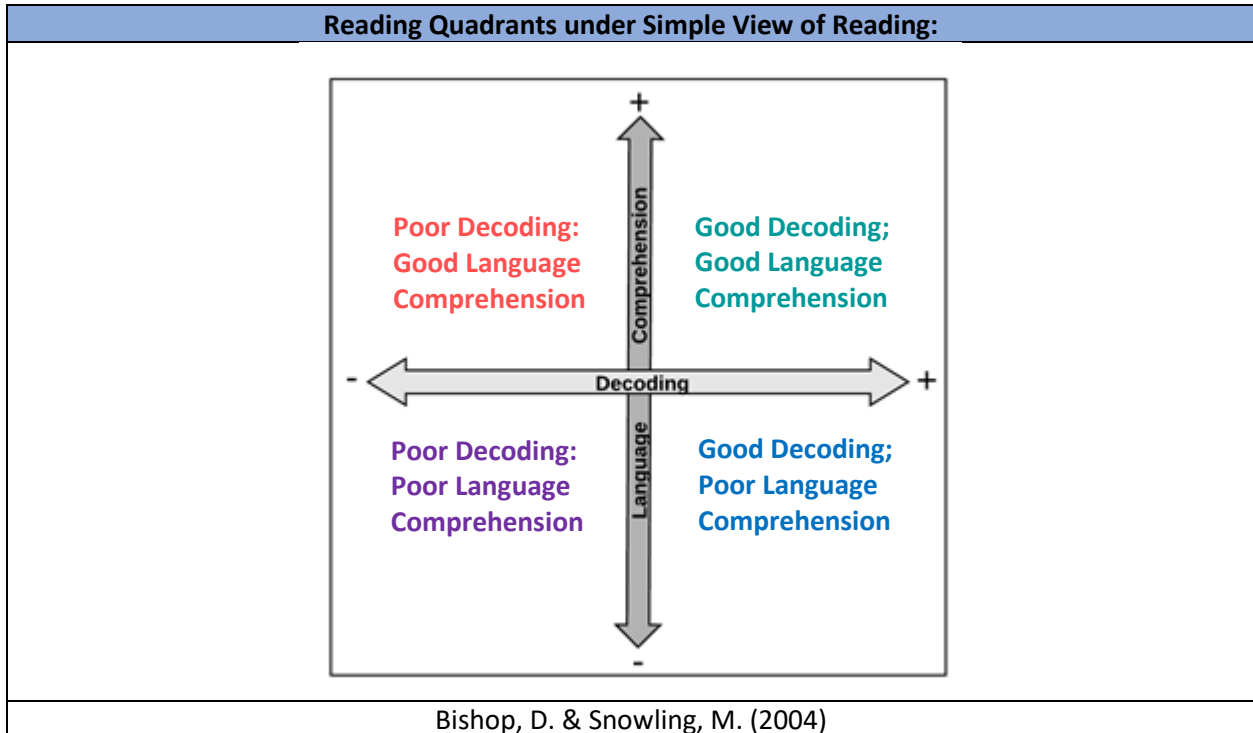
In the *Proust and the Squid: The Story and the Science of the Reading Brain* (2007), Maryanne Wolf states, “When phonological skills play a more significant role in reading acquisition, as they do in less regular languages like English and French, phoneme awareness and decoding accuracy are often very deficient—and are good predictors of dyslexia.”

Wolf (2007) also cautions:

Children with any form of dyslexia are not ‘dumb’ or ‘stubborn’; nor are they ‘not working to potential’--three most frequent descriptions they endure. However, they will be mistakenly described in these ways many times by many people, including themselves. It is vital for parents and teachers to work to ensure that all children with any form of reading problems receive immediate, intensive intervention and that no child or adult equates reading problems with low intelligence. A comprehensive support system should be in place from the first indication of difficulty until the child becomes an independent, fluent reader, or the frustrations of reading failure can lead to a cycle of learning failure, dropping out, and delinquency. Most important, the

considerable potential of these children will be lost to themselves and to society. (pg. 194-196)

Keeping Wolf’s caution in mind it is very important that parents and teachers understand the various patterns of reading challenges among struggling readers. Kilpatrick (2015) outlined the following four patterns of reading difficulties based on the **Simple View of Reading**:



<p>Dyslexic (Top Left): The student has word-level reading difficulties but average or better language skills. Word-reading skills, reading fluency, and reading comprehension are substantially below the student’s language comprehension skills.</p> <p>Compensator (also Top Left): The student displays a mild form of the dyslexic pattern but compensates to some degree with strong language skills, making this problem more difficult to recognize.</p>	<p>Typical Reader (Top Right)</p>
<p>Mixed (Bottom Left): The student has poor word-level reading skills and weak language skills.</p>	<p>Hyperlexic (Bottom Right): The student displays good word-level reading but weak language skills. Reading comprehension skills are substantially below the student’s word-level reading and reading fluency.</p>

CHAPTER 4 WHAT IS EFFECTIVE READING INSTRUCTION?

“High-quality instruction is the key to ensuring that all children learn to read and write. Moreover, researchers have noted the important and positive impact that a knowledgeable teacher can make on a child’s literacy acquisition, particularly for children who struggle to acquire basic literacy skills.”

-Joshi, Washburn & Kahn-Horwitz, 2016

MYTH: Instruction that is research-based is the most effective.

FACT: The term research-based can be misleading as it is an “unprotected” term. Unfortunately, it can be used as a marketing ploy by companies who want you to buy their product. Instructional reading strategies and programs used to meet the needs of students with dyslexia should have research backing and have significant evidence to support it. This evidence is found in the standard score gains on word level reading tests that should be connected to the findings when companies tout research-based or evidence-based. We must be critical consumers and ask for the evidence through standard score gains keeping Kilpatrick’s (2017) overview of significant gains in mind. “Studies demonstrating the most highly effective intervention outcomes in word-level reading showed gains of 12 to 25 standard score points in less than half a school year.” For more information see Kilpatrick’s article on the [IDA website](#).

MYTH: Sight word flashcard drills should begin upon entering kindergarten.

FACT: Time spent on phonological awareness and beginning decoding skills like letter sounds, letter names, as well as blending and segmenting are a better use of time than flashcard sight word drills. As students increase their phonological awareness skills and learn the structure of our language through phonics and morphology, they will increase their word recognition ability through orthographic mapping. Memorization in reading is not the key to becoming a better reader.

Core Reading Instruction For All Students

Core (Tier I) instruction is provided to all students in the general classroom setting. Effective, evidenced-based reading instruction will benefit all learners but **is essential for students with dyslexia**. Reading is fundamental to a free and appropriate public education. Quality reading instruction begins in the classroom before the need for supplemental instruction is determined. Core instruction continues in the classroom for all students, even if supplemental instruction is being received. In the pages that follow, critical evidence-based reading instruction for all learners is outlined.

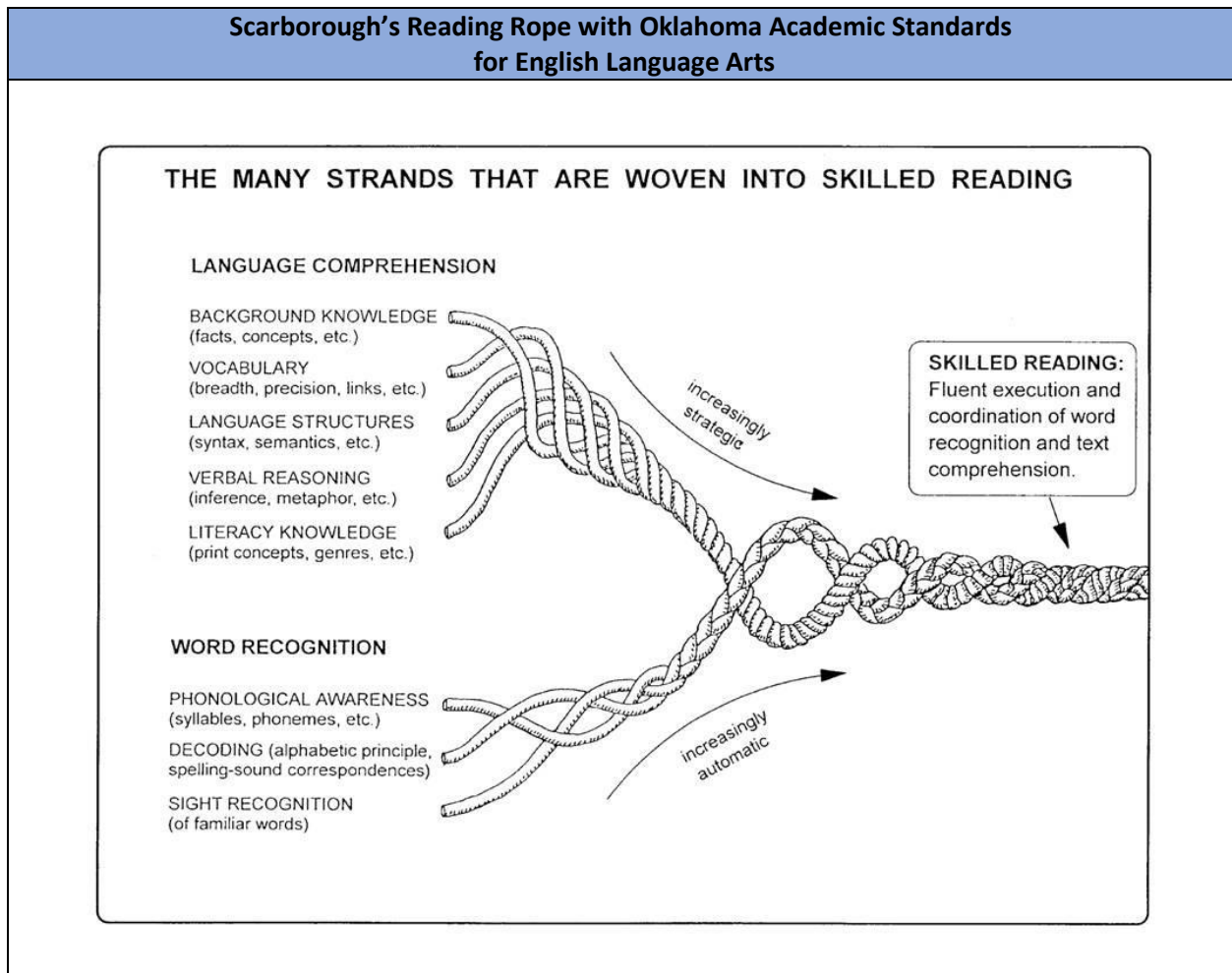
How Do Teachers Know What to Include in Their Instruction?

“Do we continue with repackaged versions of the classic approaches that yield a high rate of struggling readers, supplemented by interventions approaches that produce an average of 2 to 5 standard score point gains on nationally normed assessments? Or, do we shift to scientifically validated approaches that can prevent 75% to 80% of the reading difficulties that we see as well as produce 12 to 20 standard score point gains among students with reading problems? It would seem that the choice is quite clear. The next step is to figure out a way to let the educational community know that this choice even exists.” David Kilpatrick (2015)

Components of Effective Instruction Using the Reading Rope

Dr. Hollis Scarborough, a leading researcher in literacy, expands the **Simple View of Reading** (more information can be found in [Chapter 3](#) of this handbook) and shares that reading is a multifaceted skill that is gradually acquired through years of instruction and practice. **Scarborough's Reading Rope** illustrates how the strands of many skills that are required to comprehend texts are intertwined and how they become more complex. Dr. Hollis Scarborough (2001) compares skilled reading to the many strands of a rope. Each strand represents a separate skill that when combined with the others, creates a strong, proficient reader. When any one strand (skill) is not acquired with fluency, it weakens the strength of the rope. The rope model includes two major categories: language comprehension and word recognition.

Language comprehension skills become increasingly more strategic over time, while word recognition skills become increasingly more automatic. These skills enable a student to fluently read connected text and to coordinate word recognition and text comprehension.



Language Comprehension: The Upper Components of The Reading Rope

Typically, students with dyslexia do not struggle with language comprehension. However, when language-learning activities require written responses, students with dyslexia may need to utilize classroom accommodations as they often struggle to get their thoughts on paper.

Upper Strand 1: Background Knowledge

Providing students ample opportunity to activate background knowledge prior to listening or reading comprehension tasks will help all readers.

Types of Background Knowledge
General world knowledge/cultural knowledge
Specific topical knowledge (directly related to the text)
Background knowledge and prior life experiences
Knowledge of text structure
Vocabulary Knowledge

Upper Strand 2: Vocabulary

Semantics is the aspect of language concerned with meaning. Semantics is different from vocabulary because it extends beyond the individual meaning of words. Semantics requires knowledge of vocabulary (a word's meaning, and perhaps its synonyms and antonyms), as well as syntax.

Morphology is the study of words, how they are formed, and their relationship to other words in the same language. Comprehensive morphology work includes the study of base words, common roots, prefixes, and suffixes, along with the derivations of Latin and Greek roots. The word *instructor*, for example, contains the root *struct*, which means to build, the prefix *in*, which means in or into, and the suffix *or*, which means one who. An instructor is one who builds knowledge in his or her students. The chart below gives examples of common English morphological units.

Examples of Morphological Units		
Prefix	Root/Base	Suffix
in-, im-	tract	-s, -es
mis-	port	-ment
pre-	struct	-ible, -able
sub-	rupt	-ness

“Evidence that morphological instruction brings benefits to younger students and that this instruction brings special benefits to less able students could have important practical implications. With a foundation of morphological knowledge gained with the support of instruction from the start, it is possible many students who fail in response to typical instruction could achieve much stronger success.” (Bowers, Kirby, & Deacon, 2010)

Effective reading instruction includes vocabulary instruction, which can include work with morphology. “About 80% of all words have one or more affixes—prefixes or suffixes” (Cunningham, 1998). 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, including but not limited to reading, direct instruction, and student-centered activities. Some considerations for direct or explicit instruction can be found in the chart.

Vocabulary Guidelines for Instruction (Birsh, 2018 pg.569)
• Provide rich and varied language experiences
• Teach individual words
• Teach word-learning strategies
• Foster word consciousness
• Use explicit instruction
• Apply cognitive and metacognitive strategies
• Incorporate questioning approaches
• Use collaborative engagement involving verbal interactions
• Provide many opportunities for practice with teacher feedback

Upper Strand 3: Language Structures

Language structures is comprised of discourse and syntax. **Discourse** can be defined as spoken or written language with a unified purpose and meaning. It is the organizational conventions in longer segments of oral or written language. **Syntax** is the set of principles that dictate the way in which words are put together to form phrases, clauses, or sentences. This includes grammar, sentence variation, and the mechanics of language. Understanding the components of grammar is important for teachers, because effective use of these will allow students to comprehend text more successfully, and they will also allow students to demonstrate command of the conventions of the language in their written work. The components of syntax when associated with grammar are shared in the chart below.

Components of Syntax, as a subset of grammar:
Parts of speech
Rules for correct word order (i.e., active/passive)
Sentence length
Sentence types (declarative, interrogative, exclamatory, and imperative)
Sentence constructions (simple, compound, complex, compound/complex)

Upper Strand 4: Verbal Reasoning

Readers need to be able to make inferences and construct meanings from the text: that is, they need to be able to THINK logically about what they read if they are to understand it, and its implications. Other indicators of verbal reasoning skills are understanding metaphors, words with multiple meanings, and inferences.

Upper Strand 5: Literacy Knowledge

Readers need to have knowledge of how print works, including familiarity with concepts about print, such as reading from left to right and top to bottom, etc. (see glossary). Literacy knowledge also includes an understanding of different genres, text structures and features, and knowledge of the parts of books.

“As adults it is hard for us to remember how many concepts have to be learned to become an effective reader. Many of the very early skills we take for granted. But these very skills are predictors of future reading achievement and...’ serve as the very foundation on which orthographic and phonological skills are built.’ (Adams, 1994)” (ESC20)

Word Recognition: The Lower Components of The Reading Rope

A typical student with dyslexia will struggle the most with the Word Recognition strands of Scarborough’s Reading Rope. While all children benefit from explicit, systematic instruction in phonological awareness, decoding, and sight recognition, children with dyslexia require more instruction, repetition, and strategic practice.

Lower Strand 1: Phonological Awareness

Phonemic awareness is crucial to reading, and the other skills of phonological awareness are the foundation for phonemic awareness. Research supports instruction in phonological awareness for a minimum of 10-15 minutes per day. This instruction can be delivered in 5-minute segments in order to keep students engaged. (Phillips, Menchetti, & Lonigan, 2008)

There is a progression of phonological awareness skills that leads to phonemic awareness (PA), a critical skill for beginning readers. Older students may also experience weakness in this area and will require explicit instruction in phonemic awareness. Familiarity with the progression is necessary to plan instruction for students who are dyslexic or need intervention due to underdeveloped skills.

“There is no age where a student is ‘too old’ for phoneme awareness training—if the skills have not been mastered, the student should get training.” (Kilpatrick, 2016)

In this quote, Kilpatrick means that older students and even adults can have weakness in this skill area and still require explicit instruction in phoneme awareness to improve these deficits.

Phonological Awareness Tasks and Gradient of Difficulty

Phonological Awareness is the overarching term that refers to the ability to attend to, discriminate, remember, and manipulate oral language units at the word, syllable, and phoneme (sound) level. When individual phonemes are manipulated, it is referred to as **phonemic awareness**. You can complete phonological tasks with your eyes closed. Some sample phonological tasks include the following from easiest to hardest:

More extensive practice examples including all phonemic awareness standards for OK students can be found in the OK ELA Frameworks for grades PreK to 1:
<http://elaokframework.pbworks.com/w/page/114061501/Introduction%20to%20the%20ELAOK%20Framework>

Lower Strand 2: Decoding

Decoding is the process of using sound-letter correspondences to sound out words. Interestingly, 84% of words in the English language can be decoded using phonics or word analysis (Hanna, Hanna, Hodges, and Rudorf, 1966). Phonics is a systematic process for teaching sound-symbol relationships and their use of reading and spelling words. Systematic, explicit, and cumulative phonics instructions is critical for students with dyslexia and helpful for beginning readers. A phoneme is a smallest unit of sound within spoken language; a grapheme is a written representation of a phoneme (i, ie, igh, ch, tch). There are 44 phonemes in the English language represented by a letter or letter combinations using the 26 letters of our alphabet.

Phoneme (Sound)	/p/	/k/	/ch/
Grapheme (Symbol)	pot	cup, kettle, deck, book, picnic, school, oblique	cheer, batch

In the chart to the left, the phoneme, or sound, is mapped to possible grapheme, or symbols. The sound /p/ is only represented by <p>, while /k/ or /ch/ can be represented with multiple graphemes.

Effective reading instruction must include the evidenced-based practice of instruction in systematic phonics. This means instruction should progress from simple to more difficult tasks while employing the “I do, we do, you do” model. Daily practice should be repetitive and cumulative with individualized feedback.

Explicitly teaching, understanding, and recognizing the six syllable types found in the English language is essential. Using common (school-wide) hand gestures to represent each syllable type is beneficial. Making a fist to indicate a closed syllable, opening your hand/fingers wide to represent an open syllable,

using two fingers in a V to point out vowel teams, the sign language for an <r> to signify an R-controlled, etc.

Students need two key skills to decode multisyllabic words successfully:

- Ability to pronounce affixes
- Ability to pronounce open and closed syllables

We know that open and closed syllables make up almost 75% of syllables in English words. (Stanback, 1992)

Research has shown that there is a significant relationship between students’ sight knowledge of open and closed syllables and students’ ability to read multisyllabic words. (Shefelbine, Lipscomb, and Hern, 1989). Students can be taught to flexibly segment multisyllabic words into spelling units (chunks) that can be decoded (Bhattacharya and Ehri 2004; Archer et al. 2003, 2006.)

Six Syllable Types with Descriptions and Examples		
Syllable Type	Description	Example
Closed VC	Contains one vowel followed by one or more consonants. Vowel sound is short.	<u>bat</u> , <u>will</u> , <u>trip</u> , <u>mash</u> , <u>bend</u>
Silent E VCE	Contains one vowel, a consonant, and a silent e. Vowel sound is long.	<u>rope</u> , <u>safe</u> , <u>lime</u>
Open V	A syllable that ends in one vowel. Vowel sound is long.	<u>he</u> , <u>go</u> , <u>my</u> , <u>flu</u> , <u>hero</u>
Consonant + le C+le	Also known as final stable syllable. An unaccented final syllable with a consonant followed by an /l/ and a silent e.	<u>middle</u> , <u>table</u>
R-controlled Vr	Also known as a Vowel R. Often the vowel sound changes before the r.	<u>bird</u> , <u>star</u> , <u>her</u> , <u>fork</u> , <u>fur</u>
Vowel Teams VV	Made up of vowel digraphs and diphthongs.	<u>beat</u> , <u>toad</u> , <u>sweet</u> , <u>saw</u> , <u>boil</u> , <u>snow</u> , <u>cow</u> , <u>choy</u>

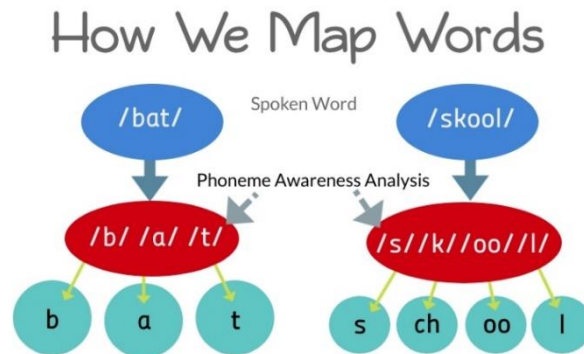
For more information on teaching multisyllabic words: <https://www.texasgateway.org/resource/six-syllable-types-and-morphology>

Lower Strand 3: Sight Recognition

“Some people limit the term sight word to refer only to high-frequency words or to irregularly spelled words. However, this is not accurate. Any word that is read sufficiently often becomes a sight word that is read from memory.

Another misconception is to consider sight word reading as a strategy for reading words. However, being strategic involves choosing procedures to optimize outcomes. Readers are strategic when they figure out unknown words by decoding, analogizing, or predicting.” (Ehri, 2005)

Orthographic mapping which builds sight recognition (including sight words) is the mental process of forming letter-sound connections in order to combine and recall the spelling, pronunciation, and the meaning of words. It involves the critical process by which children are able to learn to read words at a glance, spell a word aloud from memory, and develop vocabulary knowledge. This cannot occur until a child is able to segment at least three phonemes within a word.



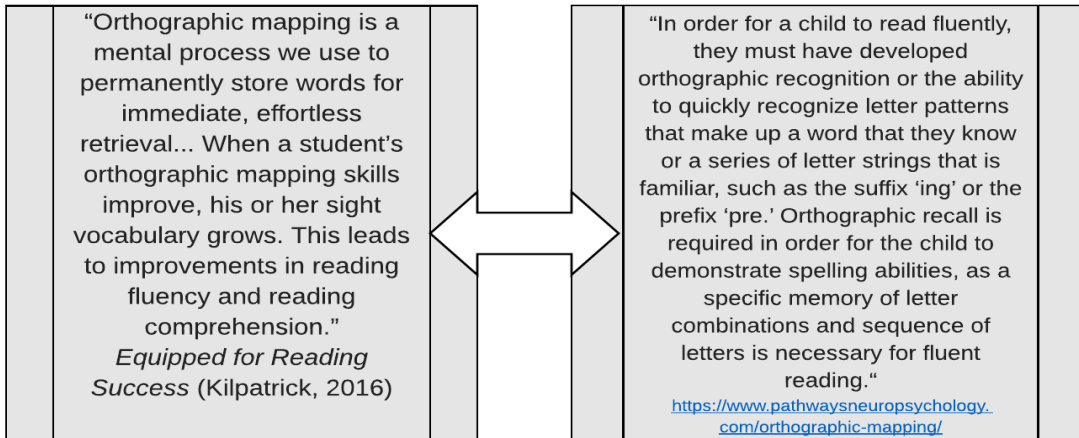
When decoding using phonics a student looks at the parts or sounds within the word and blends them to determine the whole word. Orthographic mapping could be looked at as the inverse. It begins with the whole word and then the word is broken into its parts. A student must have strong phonological awareness/analysis skills to be able to efficiently build their sight recognition with orthographic mapping. For a student to be successful at orthographic mapping they must have a solid foundation in the following skills: automatic letter-sound associations, highly proficient phoneme awareness, and word study. (Kilpatrick, 2016)

Where Does Fluency Fit?

“Fluency is not seen as a separate reading subskill, but rather as a byproduct of having instant access to most or all of the words on the page.” (Kilpatrick, 2015)

Fluent reading is, first and foremost, accurate reading. Accurate reading is a necessary precursor to becoming an efficient reader. Automatic word recognition frees a student’s attention to comprehend the text. When students struggle with accuracy, phonics screening tools should be used to determine which skills require targeted intervention.

Efficient orthographic mapping skills lead to reading fluency. It is described in greater detail above in Strand 3 - Sight Recognition.



When students read accurately, fluency instruction should focus on reading with expressions, proper intonation, and phrasing (prosody).

Fluency Assumptions NOT Backed by Educational Research (Kilpatrick, 2015)	
<p>“...with sufficient exposure or repeated readings, children eventually generate some sort of “visual memory” of those oft-repeated words based on paired-associate learning.”</p>	<p>“Many or most of the words a student is expected to read are already stored in the student’s sight vocabulary but require additional practice to become more quickly accessed.”</p>

In *Essentials of Assessing, Preventing and Overcoming Reading Difficulties* (Kilpatrick, 2015) it is reported by Kilpatrick that, “Repeated readings that report gains...are only modest improvements of about 3 to 5 standard score points.” (pg. 214) This is not a significant gain when compared to working with orthographic mapping and the important skills that build it. Kilpatrick states, “The most exciting indirect evidence for orthographic mapping comes from subsets of intervention studies with weak readers. These studies produced improvements ranging from 12 to 25 points.” (pg. 112)

It is imperative for classroom teachers and others in the educational field to understand these false assumptions about fluency as well as understand and apply evidence-based practices. The evidence-based practices that show the most improvement in a student’s fluency combine:

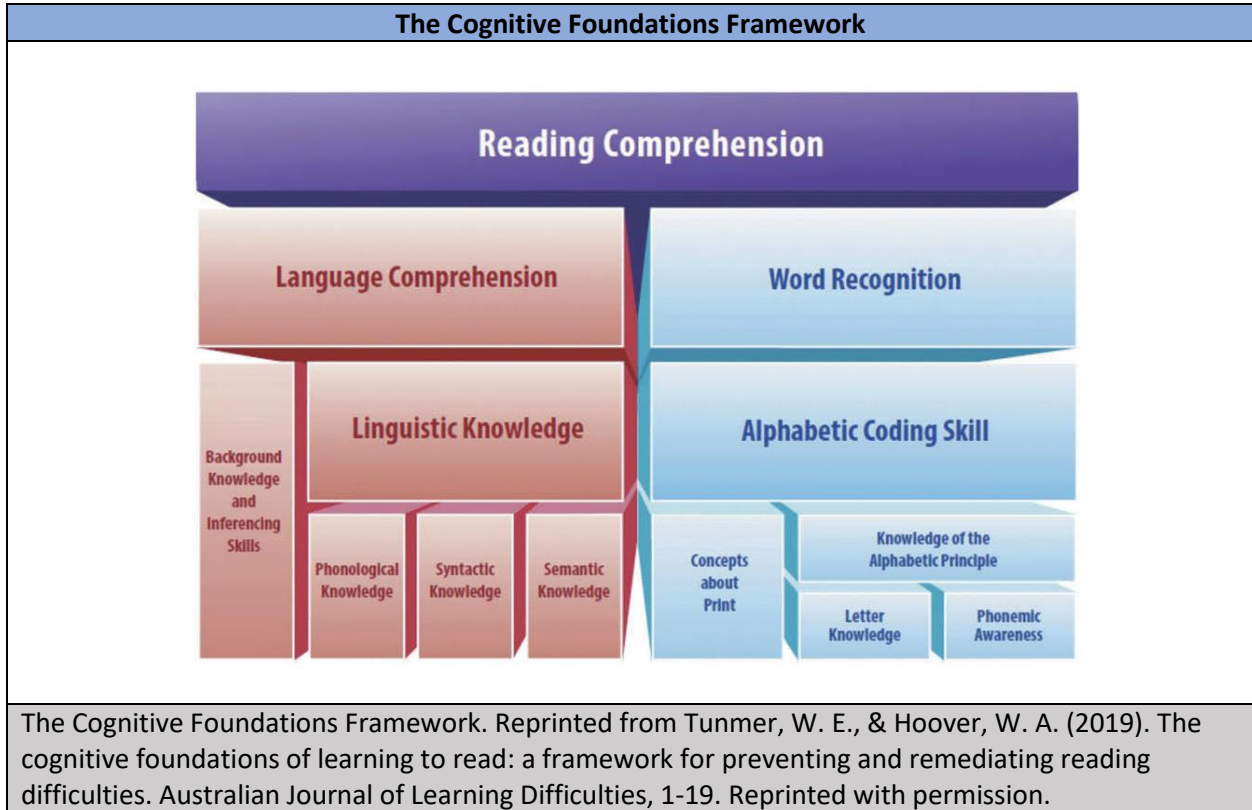
- advanced phoneme manipulation tasks
- phonics decoding training in areas of weakness
- orthographic mapping
- the use of connected text

Reading Comprehension: The By-Product of Good Word Recognition and Language Comprehension

These "strands" all work together to create a skilled reader who comprehends text. The components under "Language Comprehension" become more strategic over time, as a child learns and practices using different aspects of background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge. The components under "Word Recognition" become more automatic with practice. All strands combine to create a knowledge and strategy base which skilled readers use to read

fluently and with good text comprehension. The overarching goal of instruction using the strands is to develop independent readers who can apply what they learn to read on their own.

Tunmer and Hoover (2019) further explains the by-product of reading comprehension as The Cognitive Foundations Framework in graphic below.



For additional information about all strands in the Scarborough’s Rope reading model, visit the PGC Statewide Network: Progress in the General Curriculum Site – Literacy Instruction for Students with Disabilities. <https://projects.esc20.net/page/pgc.li.home>

Quick Guide for Systematic Implementation of the Reading Rope

Guidelines for Systematic Implementation of the Word Recognition Strands of the Reading Rope for Classroom Instructional Use	
Phonological Awareness Skills	Follow the continuum mentioned in the <i>Lower Strand 1: Phonological Awareness</i> section above.
Letter Names	Introduce these alongside the development of phoneme awareness but not during PA lessons.
Matching Speech to Print (Easiest to Hardest)	Begin with single letters that represent single sounds.
	Progress to digraphs, two letters that represent one single sound. Ex. <ck> = /k/, <th> = /th/
	Introduction of Vowel Teams
	Practice with Blends
	Work with Syllables
	Work with Morphemes

See [Appendix D](#) for sample Word Recognition lesson plans.

For more information regarding literacy instruction, please see the Oklahoma State Literacy Plan and access a District Literacy Plan Toolkit at the [OSDE Website](#).

CHAPTER 5 USING DATA TO DETERMINE STUDENT NEEDS

“The longer screening is delayed, however, the more entrenched reading problems become and the more likely they are to have adverse effects on cognitive and language development.”

-Natalie Rathvon, 2004

MYTH: Dyslexia cannot be diagnosed until 3rd grade.

FACT: Early intervention is critical to the success of a student with dyslexia. Assessments of phonemic awareness; letter knowledge and speed of naming; and sound-symbol association can be completed as early as kindergarten. Success, or lack thereof, in these specific skill areas often predicts reading ability in the first and second grades. Research has shown it takes four times as long to intervene in fourth grade as it does in late kindergarten (Lyon & Fletcher, 2001)

MYTH: If students with dyslexia would just try harder, they would succeed.

FACT: Dyslexia is the result of a neurological difference beyond the control of the student. Motivation is not usually the primary problem associated with reading difficulties but may become a secondary problem due to repeated stress and failure in academic areas relating to reading.

Universal Screening

Early identification of students at risk for reading difficulties is critical in developing the appropriate instructional plan. “The best solution to the problem of reading failure is to allocate resources for early identification and prevention.” (Torgesen, 2014). Initial screening is the first step in identifying the students who are at risk for learning difficulties and who may need additional supports. Under the Reading Sufficiency Act (RSA) all kindergarten through third-grade students must be screened for reading skills. Students in fourth grade and above may be screened as determined by the district.

What is a screening assessment?

Initial screening should consist of short, informal probe(s) or measures designed to be:

- Brief
- Valid and reliable
- Evidence-based
- Used with all students

What is the purpose of a screening assessment?

The purpose of screening and early identification is to:

- a. identify students who are at risk for reading failure,
- b. to provide them with extra intensive instruction,
- c. and to identify any in need of a more thorough and detailed assessment for a more specific identification if the students lag behind peers. (Badian, 2000); (Invernizzi et al., 2005)

Which students should receive Universal Screening?

Under RSA, ALL kindergarten through 3rd-grade students must be screened using a State Board of Education-approved screening instrument:

Under RSA, K-3 students must be screened three times a year—at the beginning, middle, and end of the year.

In addition:

1. Kindergarten through grade three (K-3) students who enter an Oklahoma public school for the first time should be screened within the first two weeks of enrollment; and,
2. A student in grade four or higher experiencing difficulty, as noted by a classroom teacher, should be screened.

Who should administer the Universal Screening?

It is recommended that the classroom teacher responsible for the student’s reading instruction administer the screening instrument.

When should students be screened?

Under RSA, all students must be screened for the following skills using a State Board of Education-approved screening instrument:

- Phonemic awareness
- Phonics
- Decoding skills
- Oral Reading Fluency
- Vocabulary
- Comprehension

In addition, teachers should utilize the following for each student:

- Dyslexia Checklist for Teachers

It is strongly recommended that students who score below benchmark on the above skills **be** screened in the following areas as they are not a component of the RSA requirements:

- Rapid naming
- Encoding skills (spelling)
- Advanced phonemic awareness skills (phoneme manipulation)

NOTE: The Universal Screening measures may not be sensitive enough to detect reading difficulties in younger students, teachers should consider screening **all younger students** in these areas as well.

How does MTSS/RTI influence Universal Screening?

Multi-tiered systems of support (MTSS) is an inclusive term that addresses meeting the academic, behavioral, and mental health needs of all students. More precisely, it is the blending of academic intervention models (i.e. Response to Intervention) and behavioral intervention models (i.e. Positive Behavior Intervention and Supports). The MTSS framework provides quality core instruction to all students and additional appropriate intervention and layered supports to students identified through Universal Screening measures as “at-risk” for future academic and/or behavioral failure. The primary goal of MTSS is to improve student achievement by intervening early and using evidence-based interventions matched to student needs.

Universal Screening is the primary method for the early identification of students at-risk of academic or behavioral difficulties. In this model, all students should be screened multiple times per year to ensure all students continue receiving the appropriate level of supports matched to their needs. Screening instruments should have a strong evidence-base for the designed student population and should provide information on benchmark performance, as well as typical student performance. Once a screening measure has identified that a student may be at-risk, some additional assessments may be needed to identify specific skill deficits targeted for intervention. Screening and follow-up assessment data are the basis for instructional and intervention decision-making.

It is also important to remember that the use of a multi-tiered system is not intended as a referral, eligibility, or placement model for Special Education Services; rather, it is a flexible service delivery model designed to increase academic and behavioral performance in areas of need for every student. While data gathered through the use of MTSS can be used in a comprehensive evaluation for special education eligibility, it cannot be used to delay or deny the provision of a full and individual evaluation under the Individuals with Disabilities Education Act (IDEA).

DYSLEXIA CHECKLIST FOR TEACHERS: Elementary

Administration: The checklist should be completed for 1st, 2nd, and 3rd grade student as part of the Universal Screening process. It should be completed for Kindergarten students at the beginning of the Spring semester. The classroom teacher(s) responsible for the students' reading instruction should complete the checklists. Mark a check beside each behavior observed in the classroom.

Student _____

Grade _____

Teacher _____

Date _____

- | | | |
|----------------------------------|-------|---|
| Alphabet Knowledge: | _____ | Difficulty learning and remembering the names of letters in the alphabet |
| | _____ | Difficulty sequencing the alphabet orally (without singing) |
| | _____ | Difficulty writing the letters of the alphabet in sequence without a model |
| | _____ | Difficulty naming the vowels |
| Sound/Symbol Recognition: | _____ | Difficulty associating letters with sounds, such as the letter t with the /t/ sound |
| Phonological Awareness: | _____ | Difficulty recognizing and/or generating rhyming patterns |
| | _____ | Difficulty pulling words apart into individual sounds (ex. mat = /m//a//t/) |
| | _____ | Difficulty blending sounds to form words |
| Reading: | _____ | Slow in acquiring reading skills |
| | _____ | Difficulty sounding out words using phonics skills, often making guesses |
| | _____ | Difficulty identifying basic sight words |
| | _____ | Oral reading is slow and laborious |
| Spelling: | _____ | Difficulty using the correct short vowels in spelling words |
| | _____ | Difficulty spelling words correctly in connected text tasks however, maybe able to memorize words for a spelling test |
| | _____ | Frequently makes spelling errors that involve changing the order of letters within a word (ex. left/felt; past/taps) |
| Handwriting: | _____ | Handwriting is often illegible or messy |
| | _____ | Pencil grip is awkward, tight, or fist-like |
| | _____ | Difficulty getting thoughts on paper |
| Other considerations: | _____ | Reading, writing or spelling skills are below what you would expect in view of perceived intellectual, academic, and/or oral language ability |
| | _____ | Difficulty "finding the right word" and/or seems to hesitate when trying to answer a direct question |
| | _____ | Difficulty with organization, memory and/or following directions |
| | _____ | Difficulty with spatial orientation (ex. left/right, before/after) |
| | _____ | Homework takes longer than typical to complete |

If any item is checked, the teacher should administer the Informal Classroom Diagnostic to the student.

_____ **Student does NOT demonstrate any of the behaviors listed above.**

Teacher's signature _____ Date _____

Adapted from the Alabama Scottish Rite Foundation Learning Center Checklist

DYSLEXIA CHECKLIST FOR TEACHERS: Middle School/High School

Administration: The checklist should be completed for middle and high school grade student as part of the Universal Screening process. The classroom teacher(s) responsible for the students' reading and or English instruction should complete the checklists. Mark a check beside each behavior observed in the classroom.

Student _____

Grade _____

Teacher _____

Date _____

- Reading:**
- Difficulty sounding out words using phonics skills, often making guesses
 - Difficulty identifying basic sight words
 - Oral reading is slow and laborious with many inaccuracies

- Spelling:**
- Difficulty with spelling
 - Often spells the same word differently within the same writing task
 - Frequently makes spelling errors that involve changing the order of letters within a word (ex. left/felt; past/taps)

- Handwriting/
Written Expression:**
- Handwriting is often illegible or messy
 - Pencil grip is awkward, tight, or fist-like
 - Difficulty getting thoughts on paper
 - Often procrastinates or avoids writing tasks
 - Difficulty summarizing or outlining information in writing

- Other considerations:**
- Reading, writing or spelling skills are below what you would expect in view of perceived intellectual, academic, and/or oral language ability
 - Difficulty "finding the right word" and/or seems to hesitate when trying to answer a direct question
 - Difficulty with organization, memory and/or following directions
 - Difficulty with spatial orientation (ex. left/right, before/after)
 - Reports that homework takes an increased amount of time to complete

If any item is checked, the teacher should administer the Classroom Diagnostic Screener to the student.

Student does NOT demonstrate any of the behaviors listed above.

Teacher's signature _____ Date _____

Adapted from the Alabama Scottish Rite Foundation Learning Center Checklist

Informal Classroom Diagnostic

What is the purpose of an Informal Classroom Diagnostic?

An Informal Classroom Diagnostic is to identify students who are at risk for possible reading difficulties and helps teachers identify specific areas in which a student is struggling.

Which students should receive an Informal Classroom Diagnostic?

Any student who scores below benchmark expectations on the Universal Screening or obtains indicators on the Teacher Checklist should be given an Informal Classroom Diagnostic.

Who should administer the Informal Classroom Diagnostic?

It is recommended that the classroom teacher responsible for the student's reading instruction administer the Informal Classroom Diagnostic.

When should students be assessed?

Students should be given an Informal Classroom Diagnostic within 2 weeks of Universal Screening.

What is an Informal Classroom Diagnostic?

The Informal Classroom Diagnostic includes an in-depth assessment of the following:

- Alphabet (sequencing/oral and written)
- Decoding Skills
- Phonological Awareness
 - Rhyming
 - Recognizing Rhyming
 - Recognizing words that do not rhyme
 - Generating words that rhyme
 - Segmentation
 - Segmenting words into syllables
 - Segmenting sounds
 - Sound Manipulation
 - Sound deletion
 - Sound substitution
 - Phonological Memory
 - Digit Memory
 - Word Memory
- Encoding Skills (Spelling)
- Rapid naming
- Family Questionnaire

While some of the skills above are assessed in the Universal Screening, the Informal Classroom Diagnostic takes a deeper look into these skills.

How is an Informal Classroom Diagnostic different than Universal Screening?

Universal screening assessments are quick, repeatable testing of age-appropriate skills to all students. An Informal Classroom Diagnostic aids educators in understanding the causes for students' breaks down. This information is used to plan, modify and/or differentiate instruction.

FAMILY QUESTIONNAIRE

Administration: The classroom teacher responsible for the student's reading instruction should orally administer or request the questionnaire be completed by a family member. Note: Additional informal classroom diagnostics should not be postponed if this teacher is unable to complete the family questionnaire.

Student _____ Grade _____ Teacher _____

Yes: **No:**

_____ _____ Do you have any concerns about your child's work at school?
If yes, explain: _____

_____ _____ Has your child received any special instruction or tutoring at school or privately?
If yes, explain: _____

_____ _____ Has your child repeated a grade?
If yes, explain: _____

_____ _____ Has your child had a speech or language problem?
If yes, explain: _____

_____ _____ Has your child ever been critically or chronically ill?
If yes, explain: _____

_____ _____ Does your child have any physical problems that you feel may cause difficulty in learning? If yes, explain: _____

_____ _____ Does your child seem to have difficulty following directions?
If yes, explain: _____

_____ _____ Does your child seem to have more difficulty in reading, writing, and spelling than in most other subjects? If yes, explain: _____

_____ _____ Does your child need a significant amount of help to complete homework?
If yes, explain: _____

_____ _____ Does your child enjoy being read to by adults?
If yes, explain: _____

_____ _____ Does your child hesitate to read to you?
If yes, explain: _____

_____ _____ Is reading difficult for any family member (Parent, Grandparent, etc..)?
If yes, explain: _____

Completed by: _____ **Relationship** _____ **Date** _____

Adapted from the Alabama Scottish Rite Foundation Learning Center Checklist

CHAPTER 6 EDUCATIONAL EVALUATION/FORMAL ASSESSMENT FOR DYSLEXIA

“If you don’t know the cause, you get instructional paradigms built on faulty assumptions.”

-Reid Lyon, (Dickman, 2005)

MYTH: Dyslexia is a medical condition and can only be diagnosed by a medical professional.

FACT: While dyslexia is a medical condition when it significantly impacts the student’s achievement, it becomes an educational issue as well. The school multidisciplinary team determines what tests and assessments are necessary to complete a thorough evaluation. An evaluation may include medical professionals as part of the multidisciplinary assessment process, but the majority of assessments and tests are administered by educators who are trained in and knowledgeable of the instruments and procedures for identifying characteristics of dyslexia. To be eligible for special education services under the Individuals with Disabilities Education Act (IDEA), multidisciplinary team findings must demonstrate that the disability of dyslexia has a significant impact on student performance.

MYTH: There is a test to determine if an individual has dyslexia.

FACT: There is no single test for dyslexia. A comprehensive evaluation consisting of multiple assessments is critical to support the conclusion of dyslexia. Areas of assessment may include: phonological processing, oral language, alphabet knowledge, decoding, word recognition, reading fluency, reading comprehension, spelling, written expression, and cognitive functioning, and are determined by the multidisciplinary team. [Chapter 5](#) reviewed Screenings, this Chapter will cover Evaluations and Formal Assessments.

MYTH: Dyslexia is a visual problem and vision therapy and/or colored overlays will help.

FACT: Dyslexia is not a problem with the eyes. Many children reverse their letters when learning to write regardless of whether they have dyslexia. For more information, visit the [joint statement](#) from American Academy of Pediatrics, the American Academy of Ophthalmology, the American Association for Pediatric Ophthalmology and Strabismus and the American Association of Certified Orthoptists.

How Do We Identify Dyslexia Using Formal Assessment?

The school-based decision-making team will be responsible for providing an in-depth assessment as warranted by screening and/or response to intervention. In addition to the information obtained through the review of cumulative folders/permanent records, a teacher checklist, and the family interview, other areas of assessment should be considered.

The following process of identification was developed by the *Luke Waites Center for Dyslexia and Learning Disorders* at Texas Scottish Rite Hospital for Children and utilizes the [Characteristic Profile of Dyslexia](#), Revised 2007, Updated 2014. It provides school-based decision-making teams the framework to effectively identify students with characteristics of dyslexia by identifying a pattern of typical strengths and deficits found in dyslexia.

Student skills are assessed and rated to determine whether scores indicate high, moderate, or low risk of dyslexia (i.e.: Low risk=SS >90, Moderate risk=SS 80-89, High risk= SS below 80).

Who can identify and diagnosis dyslexia?

"A diagnosis of dyslexia begins with the gathering of information gained from interviews, observations and testing. This information is collected by various members of a team that includes the classroom teacher(s) speech/language pathologist, educational assessment specialist(s), and medical personnel (if co-occurring difficulties related to development, health or attention are suspected).

The task of relating and interpreting the information collected should be the responsibility of a professional who is thoroughly familiar with the important characteristics of dyslexia at different stages in the development of literacy skills. This professional should also have knowledge of the influence of language development and behavior on literacy learning." (Sawyer & Jones, 2009) IDA Testing & Evaluation Fact Sheet

This profile provides five questions to consider when identifying a student with characteristics of dyslexia.	See Appendix B
<ol style="list-style-type: none"> Does the student demonstrate one or more of the primary reading characteristics of dyslexia in addition to a spelling deficit? Are the reading and spelling difficulties the result of a phonological processing deficit? Are the reading, spelling, and phonological processing deficits unexpected? Does the student demonstrate cognitive ability to support age-level academic learning? Are there secondary characteristics of dyslexia evident in reading comprehension and written expression? Does the student have strengths that could be assets? Are there coexisting deficits that may complicate identification and the response to intervention and may deserve further assessment and intervention? 	

The information gleaned from these questions reflects components of the definition of dyslexia as expressed in the definition provided by the International Dyslexia Association. The school-based decision-making team may use these five key questions to determine whether the student is demonstrating a pattern of strengths and weaknesses that is consistent with dyslexia. If so, the student's instruction or intervention should be matched to an evidence-based multisensory, systematic, and explicit reading curriculum developed for students with dyslexia.

Components of An Effective Evaluation

BACKGROUND INFORMATION

Family history of learning difficulty

Medical History

- Speech-language delays
- Developmental delays
- Ear infections

Previous Evaluation

- Educational
- Speech-Language, Occupational, Physical Therapy
- Attention/Focus
- Mental Health

Documentation of Previous Intervention

- RTI, IEP, Private services
- Type, length, outcome

CHARACTERISTICS OF READING DIFFICULTY

Word Recognition

Decoding

Oral Reading Fluency (Rate/Accuracy)

Spelling (Words, Dictation, Connected Text)

UNDERLYING CAUSE

Phonological Processing

- Phonological Awareness (taking sounds apart, blending sounds, manipulating sounds)

Phonological Memory

- Rapid Naming

What is COGNITIVE ABILITY?

“An average ability to learn in the absence of print or in other academic areas.” (Coletti, 2013)

COGNITIVE/ACADEMIC ABILITY

Cognitive/Intelligence

Verbal or non-verbal problem-solving

- Concept formation
- Critical thinking
- General Knowledge

Mathematics

- Math Reasoning
- Calculation/Computation
- Math Facts Fluency

Other Abilities

Oral Language

- Oral/listening comprehension
- Receptive/expressive vocabulary

Creative Arts

- Dance
- Music
- Drama/Speech
- Theatre

Athletics

OUTCOMES

Reading comprehension

Written expression

CO-EXISTING

CONDITIONS/ASSETS/COMPLICATIONS

Oral language

Vocabulary

Mathematics

Attention

Handwriting

Behavior/Emotions

Based on the student’s academic difficulties and characteristics, additional areas that may be considered include vocabulary, written expression, handwriting, and mathematics.

Analyzing Assessment Results

The results of the assessments are plotted on the Characteristic Profile of Dyslexia (see [Appendix B](#)). In sequence, the Differential Identification Questions are asked to aid in determining whether a student's performance is consistent with the characteristics of dyslexia.

Differential Identification Questions for Dyslexia

1. Does the student demonstrate one or more of the primary reading characteristics of dyslexia in addition to a spelling deficit?

Below Average/Low Average: phonological awareness (the sounds), letter knowledge, decoding, word recognition, oral reading fluency, and spelling

2. Is there a deficit in phonological processing/phonemic awareness (Underlying causes of dyslexia)?

Below average/Low Average: phonological awareness (pulling apart, blending, and manipulating sounds), rapid naming, letter knowledge)

- a. If a cluster score is used, look at the individual subtests to determine consistency of scores, and
- b. Has the student received intervention that may have normalized the score? If so, there should be evidence of a prior weakness in phonological awareness. (Because previous effective instruction in phonological/phonemic awareness may remediate phonological awareness skills in isolation, average phonological awareness scores alone do not rule out dyslexia.)-The Dyslexia Handbook--Revised 2007, Updated 2010-Procedures Concerning Dyslexia and Related Disorders-pg. 17. TEA, Austin, TX. February 2007, Updated 2010.

3. Are the reading, spelling, and phonological deficits unexpected? Does the student demonstrate cognitive ability to support age level academic learning?

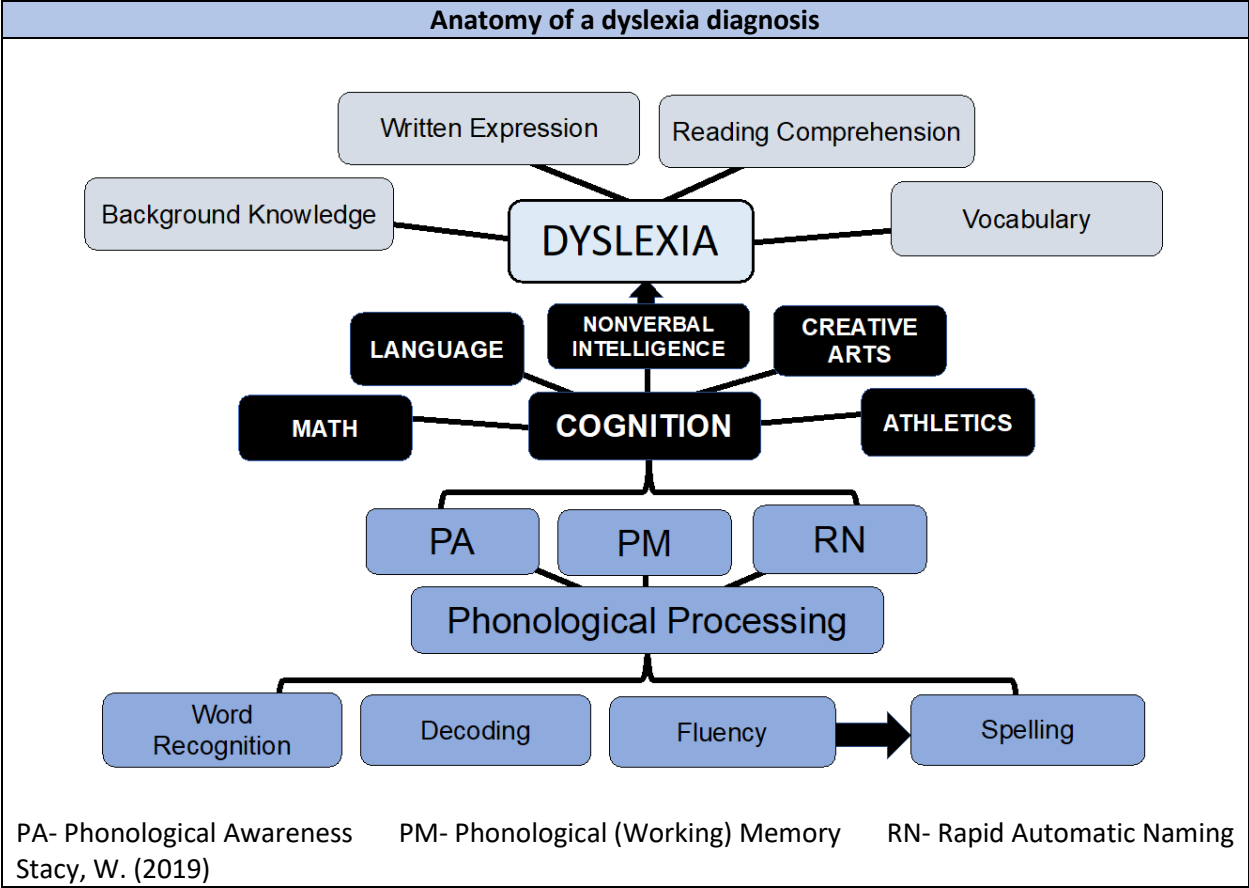
Student demonstrates average to above average cognitive skills (verbal/nonverbal intelligence, oral language, other academic or cognitive abilities). Student's ability to learn to read and spell are difficult in comparison to learning other subjects.

4. Are there secondary characteristics of dyslexia evident in reading comprehension and written expression?

Below average/Low average: understanding of what is read and/or ability to put thoughts on paper.

5. Does the student have strengths that could be assets? Are there coexisting deficits that may complicate identification and the response to intervention and may deserve further assessment and intervention?

Student demonstrates strengths and/or weaknesses in other subjects and areas of ability.



WHAT IS EVIDENCE OF "UNEXPECTEDNESS"

Unexpectedly low performance for the student's age and educational subject to

- Data show that the student has received effective classroom instruction;
- Data show that the student has academic difficulties in reading and written spelling;
- Data show that the student exhibits one or more of the primary characteristics of Dyslexia;
- Data show that student has/had a deficit in phonological processing/phonemic awareness

Data show that student demonstrates adequate cognitive abilities (i.e.: verbal/nonverbal intelligence, oral language) Data shows that the student's lack of progress is NOT due to:

- The student's primary language is not English
- Irregular attendance
- Lack of experiential background
- A brain injury, disease, surgery or other health factor that would interfere with learning

The Dyslexia Handbook--Revised 2007, Updated 2010 - Procedures Concerning Dyslexia and Related Disorders. Texas Education Agency, Austin, TX. February 2007, Updated 2010.

CHAPTER 7 USING STUDENT DATA TO DIFFERENTIATE INSTRUCTION DURING INTERVENTION

“When a flower does not bloom,
you fix the environment in which it grows,
not the flower.”

-Alexander Den Heijer, 2015

MYTH: An individual with dyslexia will never learn to read.

FACT: This is simply not true. The earlier children who struggle are identified and provided systematic, explicit, and intense instruction, the less severe their problems are likely to be (Torgesen, 2002). With the provision of intensive instruction, even older children with dyslexia can become accurate, albeit slow readers. (Torgesen et al., 2001)

MYTH: Retaining children with dyslexia will improve their academic struggles with reading.

FACT: According to several institutions (i.e., U.S. Department of Education, American Federation of Teachers, National Association of School Psychologists), there is little benefit to retaining students with dyslexia. Retention does not necessarily improve a child’s academic struggles in reading. It is not recommended that a child repeat another year of the same instruction.

MYTH: Most reading and resource teachers are highly trained in dyslexia and its remediation methods.

Fact: Unfortunately, this is not true. Recent graduate students with a Master’s degree in reading have not had any courses on dyslexia. Additionally, few literary coaches and resource specialists have had training in dyslexia either.

How Do We Deliver Tiered Intervention?

Educators should use their students' assessment data and to plan effective instruction and intervention. When a student is diagnosed with dyslexia or a student consistently struggles in reading without a diagnosis, these students need access to differentiated small group interventions based on the students' data and determined areas of need.

“Although dyslexia affects individuals over the life span and cannot be cured, reading skills can be increased with the right early intervention and prevention programs... It is clear from the consensus of scientifically based reading research that the nature of the educational intervention for individuals with reading disabilities and dyslexia is critical.” (Birsh, 2018)

Learning to read is a tremendous struggle for up to 20% of the population. The National Center for Learning Disabilities indicates as many as **one in five** people are dyslexic. Data-driven early intervention services utilizing evidence-based instructional strategies are necessary for students with dyslexia to become efficient readers. Students with dyslexia benefit from structured language-based instruction.

“Dyslexic readers need to learn how to apply the same strategies used by accomplished readers, but each strategy must be taught one at a time. After the introduction of a strategy, students must practice applying each strategy with authentic texts...The difference in teaching students with dyslexia and readers without dyslexia is not what is taught but how it is taught. Students with dyslexia require very explicit instruction and need more practice than do readers without dyslexia.” (Smith, 2001)

Structured Literacy™

The term Structured Literacy was chosen and adopted by the International Dyslexia Association (IDA) Board of Directors as a means of unifying the methods of reading instruction that conform to IDA's Knowledge and Practice Standards. Structured Literacy is an explicit, direct, systematic, cumulative, and diagnostic approach to teaching reading that includes principles of phonology, sound-symbol association, syllable instruction, morphology, syntax, and semantics.

MTSS/OTISS

Multi-Tiered Systems of Support (MTSS) is an inclusive term that addresses meeting the academic, behavioral, and mental health needs of all students. It is a framework that integrates assessment and intervention within a schoolwide, multi-level prevention system to maximize student achievement and reduce behavior problems. MTSS evolved from Response to Intervention (RTI). MTSS focuses on the early identification of reading difficulties and applying supporting evidence-based instruction to address those difficulties.

In Oklahoma, this is known as the Oklahoma Tiered Intervention Systems of Support, or OTISS. Information about OTISS can be found at www.otiss.net.

It is important to know that the three traditional approaches to teaching reading have little research to support them including the Whole-Word Approach, the Three-Cueing System, as well as the Alphabet Method. The science of reading wasn't known at the time of their inception but we must be critical consumers as many of our current approaches to reading are a repackaging of these flawed methodologies. Two of the three traditional methods of reading instruction that have been used for decades in the United States have few to none of the components of Structured Literacy. While the third, the alphabet method, which has evolved into present day phonics has components of the science of reading. However, it will not on its own meet all the needs of our struggling readers.

What Structured Literacy is NOT!	
<p>Whole-Word Approach</p> <ul style="list-style-type: none"> • Also known as look-say approach, sight-word approach, and basal reading approach 	<p>Three-Cueing System</p> <ul style="list-style-type: none"> • Also known as whole-language, literacy-based, and balanced instruction approaches including Reading Recovery and Leveled Literacy Intervention (LLI)

In *Essentials of Assessing, Preventing, and Overcoming Reading Difficulties*, Kilpatrick (2015) outlined the flaws of these methods. Below is a brief summary of his findings:

“It is fair to assume that all reading methods were developed based on one factor: the desire to do what works best for children. But to address the needs of weak readers, good intentions are not sufficient...This research has shown that nearly all of the major assumptions underlying the three classical approaches to reading instruction do not accurately represent how reading works. Only the phonics approach to encountering unfamiliar words has research support.” (pg. 42)

Phonics instruction must be combined with phonology, syllabication, morphology, syntax and semantic knowledge.

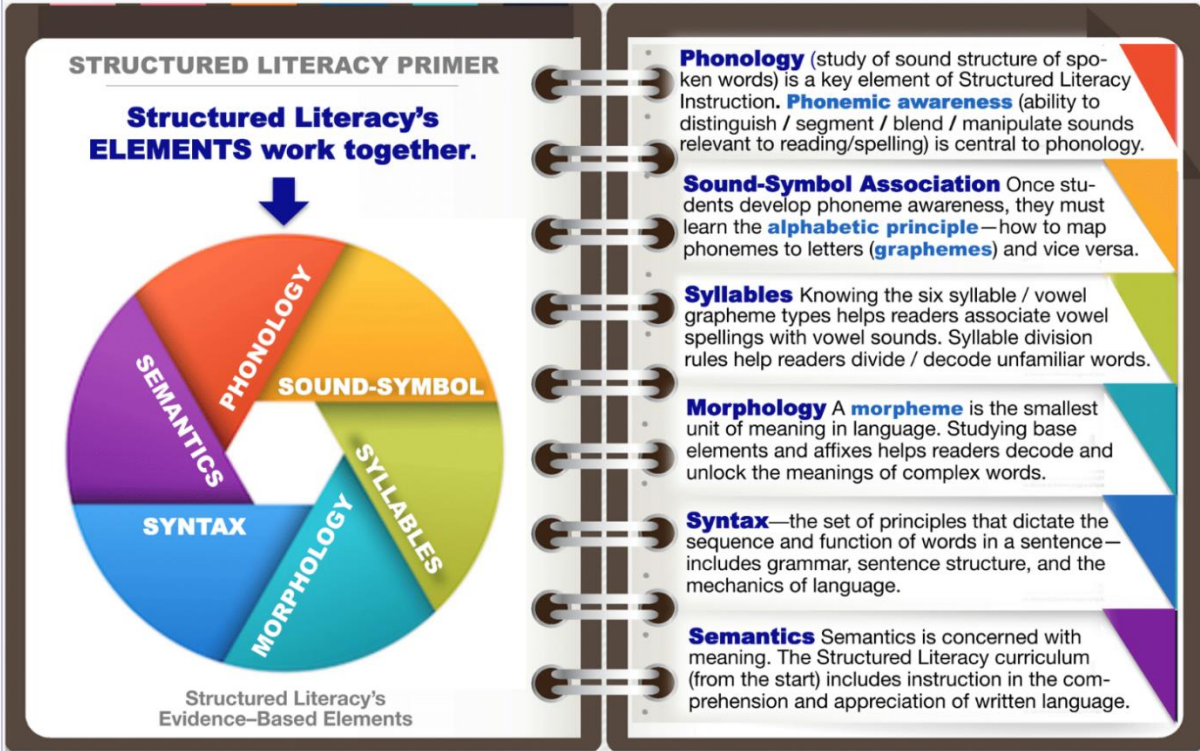
Many traditional phonics programs employ an explicit, systematic approach, yet prove to be ineffective for struggling readers due to the teacher-centered lessons and skill-and-drill activities which are not differentiated according to individual student needs. (Tunmer & Hoover, 2019).

Teachers who know, understand, and incorporate the elements as well as the guiding principles of Structured Literacy enable students to become active learners while acquiring the skills necessary to become successful readers.

Elements of Structured Literacy

The elements of Structured Literacy emphasize the structure of the English language. Each essential element is outlined in the graphic below. For additional information on these important reading components take a closer look at Chapter 4 and the strands of Scarborough's Reading Rope.

Key Elements of Structured Literacy



STRUCTURED LITERACY PRIMER

Structured Literacy's ELEMENTS work together.

PHONOLOGY (study of sound structure of spoken words) is a key element of Structured Literacy Instruction. **Phonemic awareness** (ability to distinguish / segment / blend / manipulate sounds relevant to reading/spelling) is central to phonology.

Sound-Symbol Association Once students develop phoneme awareness, they must learn the **alphabetic principle**—how to map phonemes to letters (**graphemes**) and vice versa.

Syllables Knowing the six syllable / vowel grapheme types helps readers associate vowel spellings with vowel sounds. Syllable division rules help readers divide / decode unfamiliar words.

Morphology A **morpheme** is the smallest unit of meaning in language. Studying base elements and affixes helps readers decode and unlock the meanings of complex words.

Syntax—the set of principles that dictate the sequence and function of words in a sentence—includes grammar, sentence structure, and the mechanics of language.

Semantics Semantics is concerned with meaning. The Structured Literacy curriculum (from the start) includes instruction in the comprehension and appreciation of written language.

Structured Literacy's Evidence-Based Elements

From “What is Structured Literacy? A Primer on Effective Reading Instruction” by C. Cowen, 2016, Baltimore, MD: International Dyslexia Association. Copyright 2016 by Cowen for IDA. Used with permission.

While it is necessary that students are provided instruction in the above content, it is also critical that the way in which the content is delivered be consistent with evidence-based practices.

Requirements for Effective Intensive Intervention include:

- Must be an evidence-based intervention that is effective for students who have dyslexia or other struggling readers
- Must be implemented by a trained or certified instructor
(the most qualified/knowledgeable person with access to the students)
- Must be taught with fidelity
- Must be sufficiently intensive (frequent sessions and extended time) to accomplish objectives
- Must include frequent assessment and progress monitoring

Principles in Teaching Structured Literacy

Principles That Guide Structured Literacy Elements

STRUCTURED LITERACY PRIMER

These PRINCIPLES guide how Structured Literacy's elements are taught.

↓

Structured Literacy's
Evidence-Based Teaching Principles

From "What is Structured Literacy? A Primer on Effective Reading Instruction" by C. Cowen, 2016, Baltimore, MD: International Dyslexia Association. Copyright 2016 by Cowen for IDA. Used with permission.

“Appropriate intervention provides startling results. Activation patterns were comparable to those obtained from children who had always been good readers. We had observed brain repair. And the children improved their reading.” Shaywitz (2003)
This statement was made after discussing patients’ fMRIs after intervention.

Explicit Instruction: Explicit instruction is explained and demonstrated by the teacher one language and print concept at a time, rather than left to a child’s own learning through incidental encounters with information. Explicit instruction is “An approach that involves direct instruction: The teacher

demonstrates the task and provides guided practice with immediate corrective feedback before the student attempts the task independently.” (Mather & Wendling, 2012).

Example...Introduction of the Sound-Symbol Association for Vowel Team <ee>	
Teacher Directions	Student Interaction/Response
Begins with an auditory discovery using a list of words such as eel, meet, and tee. Teacher says the words aloud and asks, “What did you hear alike in these words?”	Students respond with what sound they hear alike in the words dictated by teacher.
“Let’s look more closely at this sound.” “What is the position of your mouth?” “Is the sound voiced or unvoiced?” “Where do you hear the /ee/ sound in the words?”	Students use a mirror to investigate the /ee/ sound including noticing mouth position, open/blocked, voiced/unvoiced, position of sound in word, etc...
Words are written on the board for a visual discovery.	Students share out what they see alike in the words <ee>. The grapheme is discussed further and it’s determined that it fits the category of a digraph as students relate it to consonant digraphs they have studied like <th>, <ch>, <ck>. (Two graphemes that make one sound.)
The teacher presents an image of the letter on an index card, SmartBoard, or other surface (often with a keyword and a related picture).	A multisensory* reinforcement by students follows as they trace the letters and say the sound while trace, three times. Then they write the letters three times and say the sounds as they write.
As the student works, the teacher provides corrective feedback as needed,	Student code and read a short list of words with the <ee> pattern, spell a short list of words with the <ee> pattern, and then read a controlled text featuring the <ee> pattern.

***Multisensory Instruction:** In multisensory instruction, children learn language concepts by simultaneously using two or more learning pathways to the brain (visual, auditory, tactile, kinesthetic).

Multisensory Instruction	Feedback	How Is It Multisensory?
In the example above, using explicit instruction to introduce the sound symbol association for <ee>, instruction included:	Visual	from seeing the letters that represent the sound
	Auditory	from hearing the sound as it is said
	Kinesthetic*	from feeling the movements in the mouth as the sound is said
	Tactile	from the movements of muscles as the letters are traced and/or printed

“Kinesthetic awareness involves sensitivity to muscle movement... Students’ awareness of the position of the mouth, tongue, teeth, or lips and the activity of the vocal cords during the production of a sound assists the definitive learning of speech sounds...

Students’ awareness of how a letter feels when written in the air (i.e., sky writing) or on paper connects kinesthetic and visual information so that the letter shapes can be thoroughly learned.” (Birsh, 2011)

Multisensory strategies frequently used in Structured Literacy lessons include:	
<ul style="list-style-type: none"> • finger spelling (segmenting a word for spelling by putting one sound on each finger) • tracing letters to facilitate retrieving a sound from memory • tracing or writing letters while simultaneously saying the sound to reinforce learning the sound/symbol association. • using hand signals to represent concepts learned 	

Multisensory experiences allow a child to connect to their learning in new ways and build new pathways in the brain.

Systematic and Cumulative: Systematic and cumulative instruction requires that the sequence of instruction begin with the easiest concepts (that the student does not know) and progress to more difficult concepts. An example of a sequence for instruction is shown in the **Sample Scope, and Sequence Chart** provided in the Appendix D of this handbook.

Critical Aspects of the Systematic and Cumulative Elements of Structured Language	
Sequence of Skills Taught	Single letters are taught before consonant digraphs or vowel teams, the concept of closed syllable is taught before the concept of vowel team syllables, etc.
Components of Review in Lessons	Lessons must cumulatively review all concepts that have been introduced in order to provide adequate practice to mastery and to bolster memory of the specific sound symbol association. Typically, a newly introduced sound pattern would be reviewed in follow-up lessons through reading (in a set of sounds the student regularly reviews) and spelling in isolation, as well as in reading and spelling words with that pattern.
Instruction Is Cumulative	The content of lessons is controlled so that previously introduced concepts are systematically reviewed and concepts unknown to the student are never included in any part of the lesson. It is important to consider the consistency of elements of instruction across grade levels and different teachers within a school, as the child progresses.
Consistent Terminology Is A Must	Items such as scope and sequence of varying programs, different keywords for various sounds, and different markings for various syllable types, can be challenging for children who may have working memory, phonological processing or orthographic issues. Students who have these challenges may be the least likely to adapt to new programs, terminology, and techniques as they move from one grade/teacher to the next.

Diagnostic Teaching to Automaticity: Diagnostic teaching requires continuous monitoring. Expert clinicians agree that when a Structured Literacy lesson is calibrated to the student’s true level of mastery, 80% of student responses for spelling and 90% of student responses for reading or higher will be accurate. A hallmark of properly planned and implemented Structured Literacy lessons is students’ consistent success.

Elements of Diagnostic Teaching to Automaticity	
Informal Assessment of Concepts with Continuous Monitoring	Diagnostic teaching begins with identifying known and unknown concepts as a basis for instructional planning. Continually monitoring students’ levels of mastery of individual concepts and adjusting instruction accordingly.
Known Concepts	Are systematically included for review in future lessons.
Unknown Concepts	Are introduced, usually one concept at a time, in order of difficulty.
Teacher Monitoring	Student performance is monitored throughout the lesson for errors, or even hesitation, to identify already “learned” concepts that need more practice. When a reading skill becomes automatic (direct access without conscious awareness), it is performed quickly in an efficient manner. (Berninger & Wolf, 2009).

In [Appendix C](#) there is a checklist to use as a guide when making decisions about appropriate intervention programs.

Knowledge and Practice Standards for Teachers of Reading

The *IDA Knowledge and Practice Standards for Teachers of Reading* define what all teachers of reading need to know and be able to do to teach all students to read proficiently. The International Dyslexia Association standards were written for two main audiences: classroom educators and dyslexia specialists. IDA has written separate narratives for each audience. These can be accessed at <https://dyslexiaida.org/knowledge-and-practices/>

Included in [Appendix G](#) of this handbook is a **Knowledge and Practice Standards Self-Study Checklist**. The intent of including this checklist is to provide a document for professionals to use as a tool during self-study through professional learning communities and other peer collaboration groups. Areas of strength can be identified to determine staff to serve as coaches, model classrooms, and mentors. Areas of need in content knowledge can be identified to create professional development opportunities for staff at differentiated levels.

Guide on Structured Literacy by IDA

The International Dyslexia Association has published a guide on Structured Literacy. It can be found at www.dyslexiaida.org/structured-literacy-works-but-what-is-it/

Computer Programs for Instruction

Popularity in computer-based instruction for reading instruction is increasing. Computer programs can provide the teacher with information regarding areas of instructional need and possibly assign activities for targeted instruction. Such programs can offer students with dyslexia the additional repetitions they need to become efficient readers. Using computer-based programs as supplemental instruction may

assist a student in retaining information learned and accelerate overall growth. Using computer- based instruction as the only form of intervention is recommended only when other intervention is not available.

Instructional Considerations for Older Students

Older students who continue to struggle to read should not be considered lost causes. They deserve to benefit from a knowledgeable teacher who can fill in their literacy gaps. Using the quadrants mentioned in [Chapter 3](#), teachers can design effective evidence-based instruction that will help grow the older student into a successful reader!

Identifying and Addressing Instructional Need of Older Students

Informal Classroom Diagnostics in specific areas of word recognition or language comprehension will indicate all areas of reading that should be addressed. If an individual has not yet established sufficient word-level skills or what is referred to as word recognition skills in **Scarborough’s Reading Rope** then direct, explicit, and systematic instruction is necessary. Screeners and diagnostics that can be used on older students are outlined in the Universal Screening and Informal Classroom Diagnostic sections in [Chapter 5](#). They will need pull-out intervention focused on the word recognition skills as identified through the assessment.

“Under the right conditions, intensive and skillful instruction in basic word reading skills can have a significant impact on the comprehension ability of students in fifth grade and beyond,” (IDA). The Center on Instruction Report of Research Findings indicates the following are key recommendations for teaching word study to older students:

Teach Older Students:
<ul style="list-style-type: none">• to identify and break words into syllable types.*• when and how to read multisyllabic words by blending the parts together.• to recognize irregular words that do not follow predictable patterns.• the meanings of common prefixes, suffixes, inflectional endings, and roots.*• Instruction should include ways in which words relate to each other (e.g., “trans-”: “transfer,” “translate,” “transform,” “transition”).*• how to break words into word parts and to combine word parts to create words based on their roots, bases, or other features.*• how and when to use structural analysis to decode unknown words.
<p>*A lesson outline example for grades 3-5 can be found in Appendix D. This outline contains many of the components mentioned above and could be used as a guide for older students as well. For additional information: https://www.texasgateway.org/resource/six-syllable-types-and-morphology</p>

David Kilpatrick (2016) in *Equipped for Reading Success* states:

“High school students and adults who are weak in phoneme awareness (and therefore weak readers) should get training. In our public middle schools, high schools, and colleges, student who are weak readers are provided with strategies to ‘work around’ their weak reading skills. It is assumed that if they have not developed proficient reading by that point, they won’t ever develop it. However, as mentioned, these students almost always have phoneme awareness difficulties that were never detected or trained. This is a perfectly correctable cause of their difficulties and we are unknowingly letting them continue to struggle when they really do not need to.” (pg. 18)

David Kilpatrick in the quote above shares the importance of phoneme awareness. Students who have not worked through all levels of phoneme awareness a subset of phonological awareness need to spend three to five minutes during interventions times working through this skill. See [Chapter 4](#) under Lower Strand 1 in this handbook for more information about the hierarchy gradient of phonological tasks. The most benefit to the reader will come when they are successful at the advanced phoneme manipulation tasks however a student may need to work through the lower levels before they are ready to tackle the advanced phoneme manipulation tasks.

In addition to on-going effective intervention, older students who have continued difficulty with reading and spelling can learn to use technology to increase their ability to access printed material as well as how accesses to assistive technology can benefit them. Accommodations and Assistive Technology are further discussed in [Chapter 9](#). Allowing students choice in the types of assessments they encounter is especially beneficial to a dyslexic learner. **Flexibility of a teacher can change their world.** Some alternative forms for assessment include creating a PowerPoint, performing a skit/commercial, building a model, writing a song, using Kahoot, etc.

CHAPTER 8 WHAT ABOUT SPECIAL SITUATIONS?

“What’s not often well-known or well-understood is that students who are gifted may also have a special need or disability— just as students with disabilities may also be gifted. The term ‘twice-exceptional,’ also referred to as ‘2e,’ is used to describe gifted children who, have the characteristics of gifted students with the potential for high achievement and give evidence of one or more disabilities as defined by federal or state eligibility criteria. These disabilities may include specific learning disabilities (SpLD), speech and language disorders, emotional/behavioral disorders, physical disabilities, autism spectrum, or other impairments such as attention deficit hyperactivity disorder (ADHD).”

-National Association for Gifted Children

MYTH: Giftedness and challenges can’t be addressed at the same time.

FACT: Students can be gifted and have dyslexia at the same time. To succeed, both their giftedness *and* their challenges need to be addressed. They need to be challenged in areas in which they’re gifted. They also need support in the areas where they struggle, just like any other student with learning or attention issues.

MYTH: Smart children do not have dyslexia/all students with dyslexia are above average

FACT: Dyslexia is not a sign of low intelligence. It occurs in varying backgrounds and intelligence levels. With systematic, explicit, and intense instruction and support in reading, many children with dyslexia go on to higher education and are very successful in their careers. Students with above average IQ may mask their dyslexia with their talents; in turn, their giftedness may mask their dyslexia. Students may also look like an average student with good grades masking both their giftedness and their struggles.

Myth: Dyslexia only affects people who speak English.

Fact: Dyslexia appears in all cultures and languages in the world with a written language, including those that do not use an alphabetic script such as Korean and Hebrew. In English, the primary difficulty is the accurate decoding of unknown words. In consistent orthographies such as German or Italian, dyslexia appears more often as a problem with fluent reading – readers may be accurate, but very slow (Ziegler & Goswami, 2005).

Twice-exceptional or the gifted student with dyslexia

Twice-exceptional or 2e is a term used to describe students who are both intellectually gifted (as determined by an accepted standardized assessment) and learning disabled, which includes students with dyslexia. The NAGC (National Association for Gifted Children) recognizes three types of students who could be identified as 2e:

- Identified gifted students who have a learning disability
- Students with a learning disability whose giftedness has not been identified
- Unidentified students whose gifts and disabilities may be masked by average school achievement

Gifted Student with Dyslexia-Twice Exceptional
<p>Cognitive measures must be administered when twice-exceptional is suspected</p> <p>Often, either dyslexia or giftedness is missed</p> <p>Oral language and background knowledge compensate for weak decoding and mask the dyslexia</p> <p>OR</p> <p>The severe decoding and spelling issues mask the giftedness</p>

Characteristics of Twice-Exceptional Student
<ul style="list-style-type: none">• Superior oral vocabulary• Advanced ideas and opinions• High levels of creativity and problem-solving activity• Extremely curious, imaginative, and questioning• Discrepant verbal and performance skills• Clear peaks and valleys in cognitive test profile• Wide range of interests not related to school• Specific talent or consuming interest area• Sophisticated sense of humor
<p>International Dyslexia Association, Gifted and Talented: Identifying and Instructing the Twice-Exceptional Student Pact Sheet 2018</p>

English Learners (EL's)

The signs of dyslexia do not show up later in English Learners (EL); rather, they tend to be *identified* later. Teachers and even parents may think a child is having trouble with reading because she's struggling with a new language. A good indicator of dyslexia is if a child has trouble reading in her first language as well as the second language. The best way to evaluate bilingual kids is to give tests for dyslexia in both languages. Then, evaluators can see if a child is struggling with reading-related tasks in just one language, or in both.

English Language Learner with Dyslexia
<ul style="list-style-type: none">• Struggles are often attributed to lack of English language proficiency• Often identified 2-3 years later than English-only students• Must consider student's proficiency and instructional history in her first language to understand what is happening in the second language• Difficulties in first language indicate a possible learning disability may exist• Linguistic strengths in first language should transfer to the second

EL's are doing double duty all the time. Their cognitive workload is continuously stressed as they navigate and make connections between languages. A child who struggles to learn to read who is an English learner needs the same access to effective evidence-based Tier 1 core instruction as any other native English speaker. They need access to explicit instruction and modeling in all strands of **Scarborough's Reading Rope**, as outlined in [Chapter 4](#) of this handbook.

Concepts that Transfer from Language to Language:
<ul style="list-style-type: none">• Phonological/Phonemic Awareness
<ul style="list-style-type: none">• Alphabetic Principle
<ul style="list-style-type: none">• Decoding
<ul style="list-style-type: none">• Fluency
<ul style="list-style-type: none">• Comprehension Strategies

They also benefit when they receive feedback from trusted adults that is meaningful, specific and immediate thus giving the student a chance to learn new skills without confusion or incorrect learning. (Carnine, Silbert, Kame'enui, & Tarver, 2004) Feedback can be given with regard to pronunciation, grammar, and usage of English language by using three types of feedback.

EL Feedback Types:		
Type	Description	Example
Recasting	Doesn't focus on what is wrong. Instead give a recast of their response with appropriate pronunciation and grammar while adding additional information if appropriate.	Teacher: Tell me about how an animal can survive in its habitat. EL Student: He survived with camivloge. Teacher: Yes, animals can survive by using camouflage to blend in with their surroundings.
Change the Mode of Response	This technique gives the EL a choice when answering. It helps reduce the language demand but also allows a teacher to see whether the EL understands the material.	Teacher: What state of matter is coffee? Anna, is it a solid or liquid? Anna an EL student: A liquid. Teacher: You are right, coffee is an example of a liquid. It can take the shape of its container like coffee does when you pour it into a cup to drink it.
Reteaching	This is used in response to a wrong answer.	Teacher: What state of matter is coffee? Anna an EL student: A solid. Teacher: A solid takes up a defined shape like a piece of metal or the wood on the top of your desk. A liquid takes the shape of its container like coffee does when you pour it into a cup. Coffee is a liquid. Let's say it together. Anna and Teacher: Coffee is a liquid. Teacher: Now you say it. Anna: Coffee is a liquid.
Modified from Teaching English Learners: A Supplementary LETRS Module (Arguelles, Baker, & Moats, 2011, pgs. 13-18)		

EL students benefit from instruction using Structured Literacy. They need instruction that is diagnostic, explicit, systematic and cumulative. See [Chapter 7](#) for more information.

Dyslexia After Intervention

Providing students with effective reading instruction for a sufficient time can allow a student to be a proficient reader. A common error in teaching a student with dyslexia is removing the student prematurely from the effective instruction that is working according to progress monitoring. Students with dyslexia should complete the full Structured Literacy base intervention program. While students may meet benchmark levels prior to completion of the intervention, discontinuation of services is not recommended because students who are removed early will not be provided the level of repetition needed to fully remediate dyslexia.

For example, a child who is reading accurately but not fluently at grade level still requires effective reading instruction. Completing the program of effective reading instruction will help the students continue on the path of reading success.

After a student has completed a program of effective reading instruction, the student may continue to need assistance, especially in the area of accommodations. If the student was on an IEP, the student could transition to a 504 plan to ensure the accommodations are available in the classroom, and as they continue their education.

Coexisting Disabilities

Specific learning disabilities, including dyslexia, may occur in conjunction with other disorders or conditions. Within one individual, there may be multiple conditions that should be considered in the referral and evaluation process. Some examples for a student with a specific learning disability and dyslexia are included in the chart below created by the 95% Group, Inc.:



Dyslexia and Comorbidities

Comorbid Issues	What it is	Signs	Prevalence
ADHD	Inability to stay focused- includes three subtypes: ADHD Predominately Inattentive; ADHD Predominately Hyperactive-Impulsive; ADHD Combined Type	<ul style="list-style-type: none"> • Trouble finishing tasks • Difficulty following directions • Slow to respond / process • Forgetful • Difficulty sitting still • Easily distracted 	12-25% of those with Dyslexia (Shaywitz, 2005)
Dysgraphia	Impaired handwriting; impaired spelling; impaired ability to organize and express thoughts in writing.	Motor Processing : <ul style="list-style-type: none"> • Messy handwriting / improper spacing • Problems with pencil grip • Writing is slow and labored Information Processing:: <ul style="list-style-type: none"> • Poor spelling and grammar • Run on sentences • Lack of paragraphs 	
Dyspraxia	Developmental coordination disorder that Impacts fine and gross motor skills.	<ul style="list-style-type: none"> • Trouble using snaps, zippers • Poor pencil / utensil grip • Poor letter formation / Messy handwriting • Writing is slow and labored 	Up to 85% (Pauc, 2005)
Oppositional Defiant Disorder	Recurring patterns of defiant and hostile behaviors	<ul style="list-style-type: none"> • Temper outbursts • Persistent stubbornness • Unwillingness to compromise • Verbal or physical aggression (Greene & Doyle, 1999) 	17% (Pauc, 2005)
Anxiety	Excessive worry over what may be / possible situations or outcomes "What ifs"	<ul style="list-style-type: none"> • Headaches; stomachaches • Avoids activities or social situations • Obsessive thoughts or worries 	Up to 29% (Rosen, 2017)
2e Dyslexia and Gifted	Twice exceptional- students who are both intellectually gifted and learning disabled	<ul style="list-style-type: none"> • Superior oral vocabulary (Gilger, 2017) • Extremely curious, imaginative, & questioning 	2-5% of school age children (Gilger, 2017)

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95% Group, Inc. (n.d.). Dyslexia and Comorbidities. Retrieved June, 2017. Reprinted with permission. The 95% Group Dyslexia and Comorbidities chart can be found with citations at the [95% Group Website](#).

There is ongoing research in the area of dyslexia and comorbidities with an emphasis on family history and stacking of multiple identifications. Researchers are highlighting family history as a high indicator. In asking for family history, it is important to note that parents may not have been formally identified with dyslexia but will relate to them or a family member's struggling with reading in school.

Dyslexia Affects Beyond Reading?

Dyslexia is a reading difficulty that can impact additional areas of a student’s life beyond reading in the educational setting and workforce. These additional areas of impact may benefit from direct instruction or accommodations as discussed in [Chapter 9](#). The following is an overview of some of the potential additional areas of impact.

Spelling/Orthography

“Good spellers need only one or few exposures to a word to remember it. Unfortunately, students with dyslexia often lack this “fast mapping” of sounds to symbols. Reading involves creating maps between written words based on visual inputs and spoken words, based on auditory inputs.” (Berringer and Wolf, 2009)

Spelling is a complex process for students with dyslexia and other reading difficulties. Struggling readers do not benefit from memorizing lists of words for weekly spelling tests, as this process largely relies on rote memorization and visual recall. Instead, all students but especially those with reading difficulties should be taught using factors governing spelling. **“Approximately 50% of all English words can be spelled accurately by sound-symbol correspondence patterns alone, and another 36% can be spelled accurately except for one speech sound (usually a vowel).”** (Moats, 2009, pg. 6 in LETRS Module 3)

The action of writing words is related to sound sequences, letter patterns, and morphemes (base words and affixes). Spelling involves knowledge about the sounds of the language, the most frequent and reliable letter patterns, and rules of English orthography, morphology, and word origins.

A Structured Literacy approach to spelling should teach students the common orthographic patterns of English (phonograms) as well as the use of affixes and spelling rules including, etymology, morphology, and orthography. Structured literacy approaches can be appropriately taught to very young students. “For young children, research clearly indicates that spelling supports learning to read, and for older children, it’s likely that learning about the meaningful relationships between words will contribute to vocabulary growth and reading comprehension.” (Moats, 2005, pg. 42)

Principles of English Spelling – How Reading Supports Spelling (Moats, 2005, pg. 14)
Words’ language of origin and history of use can explain their spelling.
Words’ meaning and part of speech can determine their spelling.
Speech sounds are spelled with single letters and/or combinations of up to four letters.
The spelling of a given sound can vary according to its position within a word.
The spellings of some sounds are governed by established conventions of letter sequences and patterns.

Putnam concludes in her article, *Using Research to Make Informed Decisions About Spelling Curriculum* (2017), “The research and support for using word study as part of an integrated spelling curriculum is significant and compelling, yet many classrooms are still using traditional spelling methods, emphasizing rote memorization and rule-driven instruction (Fresch, 2003, 2007; Schlagal, 2002).”

Traditional Spelling Instruction:	Recommended Spelling Instruction
<ul style="list-style-type: none"> • Familiar to teachers and parents • Assigned weekly lists of words • Encourages memorization • Weekly tests • Does not generalize to their writing 	<ul style="list-style-type: none"> • Focuses on word study • Students learn spelling patterns that can be generalized to other words • Word knowledge can be generalized to students' writing

Handwriting/Writing

For a child with dyslexia handwriting can be a source of frustration and can be very messy. A child may use random capital letters, strange spacing, as well as improper letter formation. Cursive writing instruction can benefit students with dyslexia. The chart below explains the advantages of cursive writing.

Advantages of Cursive Writing Include the Following:
<ul style="list-style-type: none"> • It eliminates a student's need to decide where each letter should begin because all cursive letter shapes begin on the baseline.
<ul style="list-style-type: none"> • It provides directional movement from left to right.
<ul style="list-style-type: none"> • It provides unique letter shapes that are not mirror images of other letters.
<ul style="list-style-type: none"> • It reduces reversals by eliminating the need to raise the pencil while writing a single letter or series of letters in a word.
(Cox, 1992; Phelps & Stempel, 1987; TSRHC, 1996)

Written Expression

Expressing thoughts in writing is often stressful and overly complicated for a student with dyslexia. It can be more taxing and time consuming. Leaving out words such as conjunctions, plurals, and word endings are common errors. Simplified vocabulary may be used over what can be more eloquently shared orally. Assistive technology can free up a child's cognitive workload and decrease the time it takes to complete written expression tasks. For more information on Assistive Technology see [Chapter 9](#).

Organization/Executive Function

Students with dyslexia can have difficulties starting or breaking down work into manageable pieces. Frustration with reading can also lead to avoidance, leading to missing deadlines. Helping students to reign in the chaos with consistent routines can lessen anxiety by establishing their internal clock.

Students need to learn and develop organizational habits. Providing access to good organizers can begin to build these skills. When students utilize technology, they may be able to link directly with their teachers and use alarms to keep them on track.

Anxiety

As discussed in [Chapter 1](#), dyslexia can build anxiety within students with dyslexia. Supporting students with accommodations discussed further in [Chapter 9](#) can help alleviate anxiety for a student. Anxiety in students may present in a variety of way, acting out, being quiet, avoidance, stomachache or headaches.

Math

The Yale Center for Dyslexia and Creativity has great information to share about the possibilities that a learner with dyslexia could have math related struggles. Some information from their site is shared below.

“We often define dyslexia as an ‘unexpected difficulty in reading’; however, a student with dyslexia may also have difficulty with math facts although they are often able to understand and do higher level math quite well. The specific skills that an educational evaluation measures to determine where language glitches, both written and verbal, occur can also be helpful in predicting where math breakdowns might occur. Using this knowledge, we can also develop strategies to address an individual student’s struggles in math.

Math-specific skills, including the ability to recognize and relate quantities, should also be assessed and factored into the production of an effective program for students whose atypical learning profiles suggest the need for special attention.

Multi-step tasks can be difficult for students who have trouble organizing, naming, or sequencing; however, experience has shown that these students can be helped by using instructional methods that forge meaning and context through physically organizing objects, naming the action, and writing the process down.

Students’ learning styles must be acknowledged through the development of strategies that compensate for their individual difficulties. Woodin has found that using activities that involve visualizing, walking, and talking out problems are effective in developing vocabulary, organizational skills, and oral and written output.

Like reading, math involves many cognitive processes or systems. Ideally, teachers should diagnose and treat math breakdowns with the same specificity and strategies they apply to language-based instruction. When math remediation is most effective and efficient, it employs the same best practices that are used to address reading struggles. We know that using hand motions when teaching songs or poems may be helpful since it provides cues and context clues that reinforce learning of the content. Likewise, the best math instruction utilizes student strengths to mitigate weaknesses and uses context and the integration of multisensory techniques to help the student create meaning and improve memory.”

More information can be found at [Yale’s Dyslexia Website](#).

CHAPTER 9 HOW CAN STUDENTS WITH DYSLEXIA BE SUPPORTED?

“Fairness does not mean everyone gets the same.
Fairness means everyone gets what they need.”

-Rick Riordan, 2010

MYTH: Technology and accommodations are “crutches” for students.

FACT: “As assistive technology continues to develop and meet the needs of more students, it is important to realize that software, apps, and websites that aid with reading and writing are just tools. They provide alternative ways of receiving information and demonstrating knowledge and understanding.” - Jamie Martin.

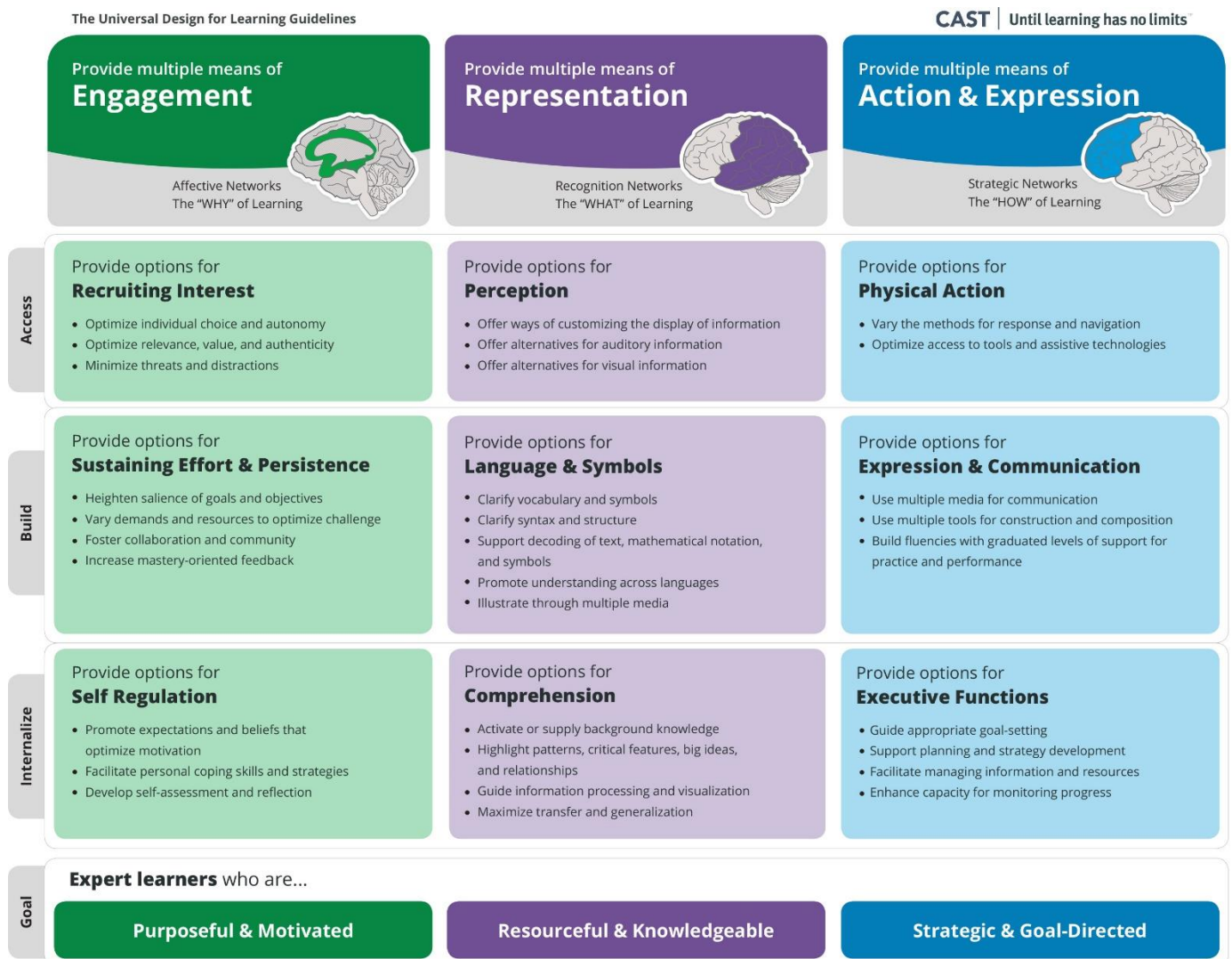
MYTH: Accommodations give students an unfair advantage over their peers.

FACT: There is research that providing accommodations to a student does not provide an unfair advantage. For example, studies have shown that when extended time on tests is given, grades of students without disabilities are not significantly improved beyond those they achieved with standard time. The extended time was demonstrated to enhance the grades of students with disabilities necessitating this.

UNIVERSAL DESIGN FOR LEARNING (UDL)

UDL is a set of principles for curriculum development and instructional planning that gives all students equal opportunities to learn. UDL provides a blueprint for creating instructional goals, methods, materials, and assessments that work for everyone – not a single, one-size-fits-all solution, but flexible approaches that can be customized and adjusted for individual needs. UDL provides guidance and examples for a wide range of instructional approaches and formats to stimulate and motivate learning, including the use of technology and assistive technology. UDL also incorporates principles of student choice and self-regulation as part of the design to foster independence in learning. UDL principles can benefit students in the classroom during effective literacy instruction, as well as during intervention periods.

The [Center for Applied and Special Technology](#) (CAST) has a wide-range of free resources for teachers, some developed by teachers, to build curricula utilizing the principles of UDL. Additionally, the OSDE has established a Universal Design for Learning Support page on their [website](#).



udlguidelines.cast.org | © CAST, Inc. 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 [graphic organizer]. Wakefield, MA: Author.

Implementation of UDL relies heavily on students having access to appropriate technology, including assistive technology. For example, students with dyslexia will benefit from access to grade-level content in a range of formats, including audio and text-to-speech.

The UDL Guidelines Checklist provides a review of the guiding principles of UDL; created in partnerships with the National Center on Accessing the General Curriculum (NCAC), Center for Applied Special Technology (CAST) and the U.S. Department of Education, Office of Special Education Programs (OSEP). Visit the CAST website to find out more [About Universal Design for Learning](#).

Differentiation in the Classroom

Classrooms should host a variety of reading instruction to offer appropriately differentiated instruction to all students addressing the following:

- As explained in [Chapter 7](#) of this handbook, Structured Literacy instruction is recommended for all students who fail to meet screening, benchmarks, or are observed by their teachers to struggle with reading and spelling. This instruction should be explicit, systematic, cumulative, and as individualized as possible within small group settings.
- Each classroom teacher should utilize a broad array of reading and writing instructional strategies (e.g., direct, explicit Structured Literacy instruction, small group, shared writing, and other evidence-based practices).
- There should be continuity and consistency of programs, language/terminology, and methods across grade levels and schools.
- Per state and federal statute, Bilingual, English as a second language, and English language services programs should be provided.
- All classrooms should be engaged in culturally responsive instruction.
- Early readers and struggling readers of all ages, may need much more support with one-on-one or in small groups, as they learn to make sense of text that is skillfully chosen to challenge them incrementally. For those same students, there are times that they will need to hear (and read) more complex text, building academic vocabulary, and increasing their ability to use more advanced reading strategies.

What are Accommodations?

Accommodations Promote Success

Accommodations provide students the opportunity to participate in the school environment fully and allow students to demonstrate their knowledge. The OSDE defines accommodations as *changes in the curriculum, instruction, or testing format or procedures that enable students with disabilities to participate in the general education curriculum. Accommodations should be considered to include assistive technology as well as changes in presentation, response, timing, scheduling, and settings that do not fundamentally alter the requirements. Accommodations do not invalidate assessment results.* Accommodations must be considered for students on IEPs and 504 Plans but should also be considered for students with dyslexia and students struggling to read with an Academic Progress Plan (APP). Accommodations are to be employed during instruction (learning process), testing, and extracurricular activities. Accommodations do not replace the need for evidence-based instruction. They enable students with disabilities to demonstrate knowledge, skills, and abilities without lowering learning or performance expectations and without changing the complexity of the target skills being taught or the test construct being measured. Accommodations may need to remain with a student after intervention for dyslexia and reading difficulties. Students reading ability may continue to be a hindrance to demonstrating their knowledge.

The [OSDE Accommodations Guide](#) provides a framework for the selection and use of accommodations for students.

Accommodations vs. Modifications

Accommodations and modifications provide students with different educational opportunities. The chart below is a comparison of how accommodations and modifications may affect a student's education. Modifications should be limited.

Accommodations	Modifications
<ul style="list-style-type: none">• Do NOT change the curriculum• Changes how a student interacts with and learns from the curriculum• Can include changes to: Presentation, Response, Setting, and/or Schedule• Can reduce assignment overload• Are NOT a Substitute for providing effective remediation• Include Assistive Technology• Can build independence and strengths to be used throughout the life span, even with completion of effective remediation• Remove the stigma, advocate for use and teach students to advocate using them	<ul style="list-style-type: none">• Change the curriculum by offering different or less content than regular classroom experience• Change the expectations for what the student will be learning• Build larger gaps between student and their peers• Reduce experience with grade-level content

Accommodations and Testing

Accommodations can also be accessed during state-level testing. Oklahoma state law requires students to participate in the [Oklahoma School Testing Program](#) (OSTP). OSDE updates the OSTP

Accommodations Manual yearly, and school staff should review the Manual for compliance with Standard and Non-Standard accommodations. A student should use accommodations for testing in the classroom to build their comfort and efficiency with the accommodations. Accommodations may be limited on a specific state test, but accommodations should not be removed from a student's daily use during the school year. The removal of accommodation due to a test restriction limits the student's independence in the classroom.

As students enter high school, ACT/SAT accommodations will need to be applied for and approval granted. The testing companies retain ultimate authority to determine whether a student will receive any testing accommodations and the accommodations the student will be permitted to use. One factor for approving accommodations that is reviewed is the uses of accommodation during the school career.

Common Classroom Accommodations

Below are some examples of accommodations grouped by task for students with dyslexia:

- **Homework:** assignments may include reducing homework; allowing students to dictate their answers; allowing typewritten work; and allowing extended time to complete assignments.
- **Mathematics:** may include the student's use of a calculator or graph paper, access to written or digital copies of notes/formulas used in class, and the teacher breaking assignments into smaller steps.
- **Reading:** may include providing the student with access to audiobooks and text-to-speech software; the teacher not calling on a student with dyslexia to participate in oral reading, unless the student volunteers; and allowing extra time to complete reading assignments.
- **Spelling:** may include the teacher reducing the number of items on spelling lists; providing access to spell-check and word prediction software; and not deducting points for spelling errors.
- **Testing:** may include providing students with dyslexia with extra time; allowing students to give answers orally; and providing a quiet testing area.
- **Writing:** may include providing a student with a scribe; providing access to speech-to-text software; offering written or digital copies of notes; minimizing the need to copy from the board; and providing graphic organizers.
- **Science/Social Studies:** access to written or digital copies of notes, extended time on assignments/projects, and access to textbook in an audio format.

Students who are unable to use traditional print materials to access their classroom curriculum may need specialized formats, such as large print, audio recordings, or digital text. "Accessible educational materials" or AEM is to provide to students as needed.

Additional resources Modifications and Accommodations can be found at [IDA](#), [Understood.org](#) or [Decoding Dyslexia](#).

Foreign Language/ Graduation Requirements

Students with dyslexia can be successful in high school and beyond when prepared and supported. Goals for future education, athletics, and career need to be reviewed to determine the impact of class choices. Foreign Language can be difficult for students, especially if they are still receiving intervention. Alternatives for fulfilling a Foreign Language requirement may include computer science or American Sign Language. For students wanting to pursue college admission, especially for NCAA sport participation need to work with the school's accreditation and counselor to ensure the student will meet the minimum requirements for acceptance. Students seeking to attend a military academy or enlist will need to work with recruiters to verify what documentation and possible appeals may need to be made in order to obtain acceptance. These discussions need to begin as early as possible even if the student is considering several options.

Reading Sufficiency Act (RSA)

The purpose of the Reading Sufficiency Act (RSA) is to ensure that all Oklahoma students are reading on grade level at the end of third grade. RSA follows a Multi-Tiered Systems of Support (MTSS) framework to address the needs of all learners. Within this framework, all students are universally screened three times a year to determine who might be struggling with reading difficulties. Students who are struggling are provided with an Academic Progress Plan (APP) to define the special supports they might need, and their progress is monitored. For more detailed information about RSA, please visit www.sde.ok.gov/reading-sufficiency.

Driven to Read (8th Grade Reading Test)

Driving is a right of passage in high school. Oklahoma has provisions to ensure students with reading difficulty are not prevented for obtaining a driver's license when they are on an IEP. Students on IEPs specifically for reading must meet the goals as outlined on the IEP. If the student satisfactorily demonstrates these goals have been met, then the school must provide documentation to the student to take to the DPS. Additional information is available from the OSDE on [Driven to Read](#) for requirements and exemptions.

Transitions and Revisions

It is important to review accommodations and modifications at all major changes in a student's life. This will include moving between classes, grades, and schools. As a student's class demands change the accommodation required will change. It is important to include students in their accommodation selection, especially as students become more independent in high school. At the end of their high school career, a student needs to understand their disability, the reasoning for accommodations, and be prepared with knowledge on how to ask for help in college or work environments. Building the self-advocacy within a student begins in the classroom and grows as they reach independence and can be fostered with conversations about accommodations.

Use of Assistive Technologies

Accommodations for students with dyslexia or a struggling reader can include Assistive Technology (AT). Assistive technology allows a student to overcome the weakness that dyslexia may highlight and provide them with time-saving ways of demonstrating their knowledge. With the expansion of devices in our classrooms AT is giving students independence. The next chapter is dedicated to Assistive Technology as an Accommodation.

“For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible”
IBM training manual 1991

What is Assistive Technology?

Assistive technology (AT) is any device that gives a student the ability to increase, maintain, or improve the capabilities in the classroom to help a student access learning and demonstrate their knowledge. Assistive technology must be considered for all students on an IEP or 504 and should be considered as needed for students on an Academic Progress Plan (APP) or struggling to read.

IDEA 2004 requires IEP teams to consider the technology needs of all children with disabilities "to maximize accessibility for children with disabilities." (20 U.S.C. 1414(d)(3)(B)(v) & (20 U.S.C. 1400(c)(5)(H)). Students on a 504 of the Rehabilitation Act are provided accommodations, including assistive technology as part of related aids and services to ensure a student is receiving an appropriate education. (34 C.F.R. Part 104)

The teams must make a decision on assistive technology devices and services based on student's individual needs during the development, review, and revision of the IEPs, 504, and APP or when a team member deems it necessary due to changes in the student's needs.

AT is a bridge between a students' areas of weakness and their abilities and skills. AT can assist students in a variety of ways including: enabling access to material at their grade through the use of text-to-speech software and audiobooks; enabling students to express their thoughts through the use of dictation, (e.g., speech-to-text software), keyboards and word processing or word prediction software; correcting spelling and grammar through electronic spelling and grammar checkers; as well as enabling assisting students in creating notes through the use of recording devices. AT is utilized as a tool to compensate for the impact of dyslexia on learning and demonstrating knowledge.

AT is not meant to be a replacement for direct instruction in the skills needed to alleviate reading, writing, and other deficits, nor is it intended to be used as a substitute for evidence-based remedial instruction. Rather, AT is designed to be used when the goal is to attain information or demonstrate knowledge that a student is unable to accomplish without such support.

Considerations for Effective AT Implementation

AT evaluations may be conducted to assist in determining a student's AT needs in the student's environment by teachers or a specialist familiar with available technologies. Students may also need AT to fully and effectively participate in elective courses or extracurricular activities. Students who struggle to read and wish to participate in their school's debate team or drama production may need print material provided to them in an accessible format.

[Quality Indicators for Assistive Technology](#) (QIAT), A Comprehensive Guide to AT Services, includes a comprehensive list of criteria for review when considering the appropriateness of AT for individual students. Training is critical to AT implementation as “software cannot be fully effective unless the children who need it have adequate time and support to use it well.” (Wise& Raskind, 2007) [Oklahoma AbleTech](#) provides training to schools on AT evaluation processes, such as QIAT, [SETT](#) (Student, Environment, Task, Tools) and [WATI](#) (Wisconsin Assistive Technology Initiative).

Assistive Technology Services Critical to Student's Effective Use of AT
Services include: <ul style="list-style-type: none">• selecting the programs or devices to effectively meet students' needs• trial period for exploration and evaluation• acquiring the devices and software programs

Providing students, teachers, and parents instruction in the use, implementation, and integration of the technology in all appropriate settings is imperative for AT to be successful. AT needs to be available in all situation where the student is to complete tasks that are assisted by the AT. Provided AT may be made available in the child's home or in other settings (if the IEP/504 team determines that the student requires AT to gain equal access or as an accommodation to receive a free and appropriate public education (FAPE)). School systems should develop policies, procedures, or operating guidelines in accordance with applicable regulations and laws that support the team's and/or district's ability to address and provide for the use of AT in all needed settings. AT should be coordinated with a student during transitions from school to college or workforce.

Assistive Technology may need to be listed as goals in a student’s IEP to help the student become proficient in the use and ensure dedicated time is being allocated in the student’s day to achieve proficiency.

When selecting devices, schools can consider devices in their own inventory or invitation of demonstration loaners. Many AT developers will provide trial access for short periods of time when they are requested. Oklahoma AbleTech maintains a large library of loaner devices that are free for schools and parents. Device loans will allow students and school to determine possible success before financial commitment. Oklahoma AbleTech can also discuss possible avenues for acquiring funds for procurement.

Common AT Tools

Tool selection is based on the need of the student, and there is not one perfect list of tools to try. The industry providing technology is constantly changing, providing better options for students. For this reason, the handbook does not contain a list of specific devices or application to use. The graphic below provides common tools that benefit a struggling student as a guide for identifying the needs of students.

Common AT Tools	
Learning In to the Student	Learning Out from the Student
<p>Text to Speech</p> <ul style="list-style-type: none"> ○ Audiobooks ○ Text Synced Audio Books <ul style="list-style-type: none"> ● Bookshare ● Learning Ally ● Device Built-in feature ○ Software integration <ul style="list-style-type: none"> ● Microsoft ● Google ○ OCR (Optical Character Recognition) <ul style="list-style-type: none"> ● Convert image and documents to Text to Speech ● Online and app-based options ● Scanning Pens 	<p>Speech to text</p> <ul style="list-style-type: none"> ○ Built-in Device Feature <ul style="list-style-type: none"> ● Siri - Apple ● Chromebook - Dictation ○ Software Integration <ul style="list-style-type: none"> ● Microsoft ● Google ○ Dragon <p>Writing/Note Taking</p> <ul style="list-style-type: none"> ○ Spellchecker <ul style="list-style-type: none"> ● Built-in ● Grammarly ○ Word Prediction ○ Apps/Software

Text to Speech/ Audiobooks

Text to Speech (TTS) is the most common assistive technology used to allow a student to work independently and can be referred to as “Ear Reading.” For some students, ear reading can be the first positive experience with reading and change a student’s perspective from torture to interest. The use of TTS or Audiobooks can build students vocabulary, provide access to classroom content, and promote independence for students. Students will need time and support to build their stamina and find their best way of accessing text. As students become proficient, they may even access text in multiple ways.

As the chart above indicates, there are multiple avenues to access Text to Speech for students. TTS can be used as an accommodation to provide a student with [Accessible Educational Materials](#) (AEM). Some resources have Federal Legal Copyright requirements for eligibility by the student for the use of the programs. Below are some key features of the most popular resources for accessing audiobooks.

Text-To-Speech / Audiobook Resources				
Resource	Cost	Book Count	Voice Style	Access
Bookshare	Free	700,000 Titles	Synthetic	Verified Print Disability
Learning Ally	Fee	80,000 Titles	Human	Verified Print Disability
Overdrive/Public Library	Free	Varies by Library	Synthetic /Human	Anyone
Audible	Paid		Human	Anyone

Synthetic vs. Human Voice

Integration of audio-assisted devices is growing in use in a wide variety of product in our home and work life. This is allowing those with disabilities to have improved quality in the devices being used to complete daily tasks.

Students will have a preference for a synthetic or human voice for accessing audiobook. The preference of voice is personal and should be considered over the preference of teachers and family. During AT evaluations, a student can be screened for preference using screening tools, including uPAR and PAR. A student's flexibility between synthetic and human readers can provide a broader selection of text availability. Synthetic voices are available in a variety of styles and in some cases, be customized. Human narrated textbooks can have multiple readers within the text that can be confusing for some students.

Applications using synthetic voiced text-to-speech often allow for customization, in text formatting and have features to bookmark or take notes. According to the National Assistive Technology in Education Network notes, "Research indicates this enhances student engagement, interest, and motivations." (Nate Network)

Educators are sharing the impact of using various assistive technology resources, including Bookshare. A [November 2018 article](#) in Edutopia, discussed the benefits of Ear-Reading including how students with dyslexia are becoming the Student-Led Tech Crew. The Tech Crew is delivering professional development to teachers, allowing the students to be recognized for their strengths and achievements.

Dyslexia Font

In the last few years, there has been much discussion on the new dyslexia fonts. While reports have shared the success of students using the font, the research has indicated the "Dyslexia font did not lead to improved reading compared to normal 'Arial' font, nor was it preferred by most students." (Kuster, S. M., et al.). Students will be presented with a wide variety of fonts over a lifetime, and they should not be dependent on a single source. If the font is used, it should be one of many that the student is interacting with.

Additional AT Resources

Organizations like Oklahoma AbleTech, Understood.org, and Decoding Dyslexia offer guidance and webinars on current and new applications and devices.

HOW AUDIO PROMOTES LITERACY
BENEFITS OF AUDIO TO LEARNING HOW TO READ

The single most important activity for building the knowledge required for eventual success in reading is reading aloud to children.
-Becoming a Nation of Readers: The Report of the Commission on Reading

INCREASES READING ACCURACY BY 52%

IMPROVES COMPREHENSION BY 76%
Provides context, helping children decode words and comprehend challenging text.

TEACHES INCREASES READING SPEED EXPANDS VOCABULARY

PRUH • NUHN • SEE • YE • SHUN

BENEFITS OF AUDIO TO OTHER TYPES OF LEARNING

TEACHES IMPROVES FLUENCY

Children who are better listeners are also better learners.
-North University of Texas professor emeritus Sara Lundsteen

85% of what we learn, we learn by listening.

TEST SCORES INCREASED **21%** when engaged in multi-modal learning versus single-mode.

Combining print and audio increases recall **40%** over print alone.

2 GRADE LEVELS Students can listen and comprehend 2 grade levels above their reading level.

INCREASES MOTIVATION BY 67%

27% of the K-12 population are auditory learners.

Sources available at audiopub.org/uploads/pdf/SoundLearning-Bibliography-2016.pdf
Audio Publishers Association Sound Learning Initiative: SoundLearning.org licensed for sharing with attribution.

[Audiopub.org](https://audiopub.org) has additional information resources for sound learning for educators and librarians.

CHAPTER 10 WHAT RESOURCES ARE AVAILABLE?

“There is a vast amount of empirical research on literacy acquisition and reading disabilities that has been largely untapped by those working in schools...Many educational professionals in general and special education can benefit tremendously from this information, not to mention developers of reading series and intervention materials.”

-David Kilpatrick, 2015

MYTH: You will not have and be responsible for teaching a student with dyslexia.

FACT: Dyslexia is one of the leading causes of reading difficulties among students. In a classroom of 25, one to 5 students could struggle with dyslexia ranging from mild to severe.

MYTH: Dyslexia is caused by not reading at home to your child.

FACT: It is important that reading happens in the home and your child being exposed to reading. But dyslexia is not from a lack of exposure. Dyslexia is seen in all economic status and has a strong familial connection. “Reading to children is important but not sufficient; children benefit from it, some quite a lot, but it neither obviates the role of instruction nor vaccinates against dyslexia. Children who are read to until the cow jumps over the moon can still have difficulty becoming readers.” (Seidenberg, 2017).

SCHOOL/DISTRICT RESOURCES

Pre-Service and In-Service Preparation for Educators

Although the problems experienced by students with dyslexia may originate with neurobiological differences, the most effective treatment for these students and for those who struggle with related reading and language problems is skilled teaching. For that reason, it is critical that educators receive accurate and current information about evidence-based instructional strategies as well as the science of reading. Effective classroom instruction informed by reliable research using evidence-based practices can prevent or reduce the severity of reading and language problems (IDA, 2010). Teachers must be taught to identify the characteristics of high-quality research and to distinguish between research that is trustworthy and research that is weak and ill-informed (Lyon 2002, 2016).

State statute, Title 70 Section 6-194, requires all schools to provide dyslexia awareness professional development beginning in the 2020-2021 school year. The OSDE will provide online modules and PD opportunities to assist districts with meeting this requirement. The dyslexia awareness professional development will include training in identifying dyslexia indicators, and in effective classroom instruction to meet the needs of students with dyslexia; as well as identify available dyslexia resources for teachers, students, and parents.

Both special and general educators must be prepared with evidence-based research about how children learn, why some children have difficulties, and how the most effective instructional approaches can be identified and implemented (Lyon 1997, 2002).

Learning to teach reading, oral language, and written expression is a complex undertaking. The competence and expertise of teachers can be cultivated with training that emphasizes the study of reading development, language structure, and individual patterns of language, learning strengths, and weaknesses. In addition, to learn to use instructional strategies effectively, teachers should have supervised practicum opportunities, especially if they are responsible for teaching students with dyslexia. (Information about nationally recognized certification for educators of dyslexia instruction is available in Appendix F of this manual.)

The Need for a Variety of Engaged Educators

There is a great need for all educators and related service providers to be prepared to meet the needs of students with dyslexia, including speech-language pathologists, school psychologists, psychometrics, school counselors, reading specialist, special education teacher, school administrators, and paraprofessionals. This preparation should be provided both at the pre-service and in-service levels. There needs to be a commitment on the part of university teacher preparation and educational credentialing programs to prepare individuals to directly address the needs of students with dyslexia in the classroom. Appropriate recognition and interventions for dyslexia are the responsibility of all educators and support personnel in a school system, not just the classroom teacher, reading specialist, or special education teacher.

More Information

IDA and the International Multisensory Structured Language Education Council (IMSLEC) [\(IMSLEC\)](#) accredit training courses that incorporate evidence-based curricula for teaching reading and written expression

to students with dyslexia. The International Dyslexia Association (IDA) maintains lists of University Programs Accredited by IDA and Independent Teacher Training Programs Accredited by IDA.

The Center for Effective Reading Instruction (CERI) was founded by IDA and offers accredited independent teacher training programs. Visit the CERI website for additional information about the purpose of the center and its teacher training programs.

The Florida Center for Reading Research at Florida State University (FCRR) provides resources and materials to educators. In addition, the center has partnered with the University of Oregon and RMC Research Corporation to create the National Comprehensive Center to Improve Literacy for Students with Disabilities.

National Comprehensive Center to Improve Literacy The [National Center on Improving Literacy](#) is a partnership among literacy experts, technical assistance providers, and researchers at the University of Oregon, Florida State University, and RMC Research, with funding from the United States Department of Education.

Wrightslaw Parents, educators, advocates, and attorneys come to [Wrightslaw](#) for accurate, reliable information about special education law, education law, and advocacy for children with disabilities.

STUDENT SECTION

The first thing to know is that you are not alone! Many people have a difficult time learning to read. In your classroom, there are most likely four or five other students who also find reading to be very difficult. There are even adults who struggle to read, even some teachers struggled to learn to read. You are not alone!

When people have a very difficult time learning to read, they might have dyslexia. The word dyslexia means difficult word. *Dys* means difficult and *lexia* means word. Dyslexia means to have difficulty reading words.

We are born with the ability to speak; we learn it naturally while listening to others speak at home or at school. However, we are not born with the ability to read. It takes work and practice to become a reader. We are all different; you may be better at drawing or at sports, while your friend may be better at music or at math. You have more in common with your peers, but you just learn a little differently. We all have strengths; you are better at something than your classmates.

At school you have a team, a parent, a teacher, or a coach to help you learn to read, and that team, includes you. You are the heart of that team, and it does not exist without you. Learning about your educational difficulties and communicating your needs is called self-advocacy. Self-advocacy is how you can share how you feel, what you need, and what is not working. As an important member of the team, it is important to know your strengths, weakness, and limits. Members of the team are there to help you achieve your goals in school and prepare you for your future.

Self-advocacy is not easy and it takes time to learn how to do it well. One way to share your feelings with teachers is by creating a document or video to share with your teacher. The *I'm determined* Project has created a guide called *It's All About Me! Understanding My IEP* to help you to create your own document or video. Check it out at [I'm Determined](#).

Learning new things takes time and work, but learning differently does make it harder. Mistakes will happen, learn from them, and keep moving forward. Make sure to celebrate your successes. It is important to know and understand how you learn best. Know what your accommodations are and who your support system is at school to ask for help, this may be a teacher, a counselor, or even a coach.

Want to learn more?

There are many books for students about dyslexia:

“I have Dyslexia” by Dr. David Hurford

“Thank You, Mr. Falker” by Patricia Polacco

Hank Zipzer Collection by Henry Winkler & Lin Oliver

“What is Dyslexia” by Alan M. Hultquist

“It's Called Dyslexia” by Jennifer Moore-Mallinos

“The Alphabet War: A Story about Dyslexia” by Diane Burton Robb & Gail Piazza

“My Name is Brain Brian” by Jeanne Betancort

[Learning Ally's Yes!](#) Program also has helpful videos on advocacy with lots of advice from students with dyslexia just like you.

PARENT SECTION

Your child is struggling at school or at home. What's next?

Partnerships between parents and teachers are critical in ensuring progress toward learning goals for students. If you think your child has dyslexia or struggles with reading you should talk with your child's classroom teacher. Information from your child's report card or benchmark reading scores in addition to your own observations about your child's learning, can help begin conversations with teachers and other school staff members regarding your child's progress. Developing a working relationship with the teacher(s), much like you have with a doctor, provides necessary supports for your child and will help them reach milestones and receive assistance when needed. It's important to remember that if you are presented with "educational jargon" or terminology you don't understand, it is your right to have that terminology explained to you in "real-world terms" by the educational professionals with whom you are working. It's also important to remember that children with dyslexia are very capable of succeeding in school and of achieving success in a wide variety of professions.

If your child is in Kindergarten through 3rd grade, ask your child's classroom teacher if they are on an Academic Progress Plan (APP) for reading support. For all grades, ask your child's teacher if your child is receiving support through the school's Response to Intervention (RTI) system. This will tell you if the school is documenting concerns about your child's reading or another academic area. If your child has an APP or is receiving RTI support, you can identify the area(s) of need your child is receiving support for, what intervention(s) they are receiving and their response to those interventions.

To prepare for and build your relationship with your child's teacher(s):

- Review the grades and comments on your child's report cards and progress reports
- Review their benchmark reading scores
- Consider your child's progress on early literacy indicators (If you are not sure what literacy milestones look like, review the [What Dyslexia Looks Like By Age and Grade](#) in Chapter 2)
- Discuss any homework battles and the amount of time your child spends on homework
- Complete the [Family Questionnaire](#)

Attend parent teacher conferences and be ready to listen and share information. If you feel your concerns are not being addressed as you'd like by the classroom teacher(s), talking with the school counselor or principal can be your next point of contact. When a student has been receiving supports in the APP or RTI process and is not making progress, additional testing and evaluation may be needed.

How do you request additional testing or evaluation?

School districts are responsible for establishing and implementing an ongoing Child Find system to locate, identify, and evaluate students suspected of having a disability, ages 3 through 21 years, who may need special education, regardless of the severity of the disability. Child Find activities include screening and early intervening services. Screening may include a variety of methods, including performance on assessments, curriculum-based measures, daily classroom work, observations, hearing and vision screeners, developmental milestones, and/or kindergarten readiness measures. When a school's screening process reveals that a student is at risk of not meeting grade level academic standards, their need for research-based interventions should be considered in order to help them succeed. Implementing interventions and monitoring student response to a series of increasingly intense interventions assists in identifying and addressing academic difficulties. Through these activities a student may be identified as possibly having a disability and needing special education services. If this

is the case, parents will be asked for their consent for further, formal, evaluation. This is what is referred to as an “initial evaluation” under the Individuals with Disabilities Education Act (IDEA).

Parents may also, regardless of any child find activities, request an initial evaluation for their child. Although a parent’s request does not automatically trigger a requirement to evaluate, the school must thoroughly investigate the possible existence of a disability and potential need for services before refusing to evaluate, especially when the request is from a parent and the student is not progressing well or not making adequate progress in the general education curriculum. If you would like to request an initial evaluation, you should write a letter or email to your school’s principal or your district’s special education director. Your school district is obligated to respond to your request in a reasonable amount of time (normally within 10 school days).

When a request has been made for an initial evaluation, qualified professionals (for example, certified school psychologists, school psychometrists, speech-language pathologists, and regular and special education teachers) and the parent must conduct a review of existing data to the extent appropriate. This data includes evaluations and information provided by the parents, current classroom-based, local, or State assessments, classroom-based observations, and observations by school staff, and the student’s response to scientifically research-based interventions. On the basis of the review, there must be a determination of whether or not additional data will be needed. If additional evaluations are needed before your child can be determined eligible under the IDEA, the school will request consent from you and provide details regarding each evaluation to be conducted. After your consent is obtained, the school will conduct the evaluations and determine eligibility within 45 school days. To be eligible for special education and related services your child must have a disability under the IDEA (which includes Dyslexia as a Specific Learning Disability), their disability must have an adverse impact on their education, and their unique, disability-related, needs must require specially designed instruction in order to access the general education curriculum.

If your child is not found eligible for special education under the IDEA, the results of the evaluations conducted should still be used to provide feedback on the educational needs of your child. If your child is identified as having a disability, but does not need special education services, a referral for a Section 504 of the Rehabilitation Act evaluation must be considered. A Section 504 plan can provide accommodations or other supports for your child. If you disagree with the school’s evaluation, you may request an Independent Educational Evaluation (at no cost to you).

For more information on the IDEA, special education services, initial evaluations, or independent educational evaluations, please contact the Oklahoma State Department of Education or the Oklahoma Special Education Handbook.

Can my child be retained?

Retention is a discussion between parents and schools, with the exception of the 3rd grade Reading Sufficiency Act (RSA). RSA has a particular list of requirements for promotion of students to 4th grade. Parents or Guardians of students at risk of not passing the RSA test are required to be notified by the district in writing on an Academic Progress Plan (APP) with documentation of assistance the student will be receiving. There are four pathways to promotion that are spelled out--(1) meeting RSA criteria on the state test, (2) meeting proficiency on an approved screener, (3) qualifying for one of the seven good cause exemptions, (4) or a unanimous decision by the Student Reading Proficiency Team that includes the parent. There are 6 Good Clause Exemptions in RSA that students may qualify for promotion to 4th grade. Beginning the 2019-2020 school year, students on an IEP do not need to be previously retained to

meet good cause exemption 5 and students who are making progress on their IEP should be promoted. Students who are not on an IEP and have been retained once will be eligible from promotion through good cause exemption 6.

In other grades, the parent has the final decision on retention. If a student is to be retained, parents and teachers should clearly outline change to the student's instruction. Defining the student's needs will ensuring time repeating will be used to close the gaps in reading proficiency.

For more detailed information about RSA, please visit www.sde.ok.gov/reading-sufficiency.

Buyer Beware

There are no silver bullets or cures. In your research, you may come across programs that claim the ability to help every student with reading. Be wary of programs or techniques that rely on approaches that have not been shown to be effective. These include:

- Things that don't include practice with reading in a systematic, explicit, multisensory phonetic method (some examples include colored lenses, overlays, vision therapy, spinal or cranial realignment therapy, crawling therapy, cognitive improvement therapy, midline crossover exercise therapy, diet related claims).
- Tutoring chains, ad hoc tutors, nannies, or volunteers who are not properly trained to work with children who have specific instructional needs. Individuals who effectively remediate reading difficulties use evidence-based practices in reading and language development. They have had specific training and coaching in evidence-based practices.
- Therapies that do not include actual practice reading with the student. Therapies designed to improve eye coordination, near and far focus, depth perception, etc. may improve students' use of their eyes while reading, but they are not a replacement for teaching the necessary components for reading.
- Programs that guarantee an outcome. Read the fine print. Many programs that guarantee results do not apply when the student has an identified reading disorder or disability. If a disability is identified during the tutoring, the guarantee may be disregarded. It is very difficult to know what will work for each child and how long it will take for interventions to begin to close the gap. Programs that require very large sums of money upfront before the therapy begins should be a red flag. Proceed with caution if the claims seem too good to be true.

The [Components of Structured Literacy Intervention Checklist](#) included in this handbook ([Appendix C](#)) can be used to guide decisions about appropriate intervention programs. The International Dyslexia Association fact sheets on Effective Reading Instruction for Students with Dyslexia & Evaluating Professionals can provide guidance for services for students.

STATE AND COMMUNITY RESOURCE SUPPORT

What services and supports are available through the school and community, and how can we get access to those services? Parents and teachers sometimes have difficulty understanding a path forward when their gut is telling them that something is wrong for the student. Both parents and teachers should know that there are multiple routes and options for support. Providing a holistic approach to support students with dyslexia or significantly behind in reading can benefit a student. In the following pages, we will describe the supports that can be used, starting with school supports.

Typically, parents and teachers look for resources offered outside of the school setting to broaden the scope of help for students with dyslexia. Multiple community resources are available that provide additional supports, rendering a more complete approach to assisting these students. The following list provides a glimpse of services and supports that may be helpful in meeting these needs:

- Tutoring Services
- Library Programs
- Psychologists
- Speech Pathologists
- Medical Doctors
- Alternate Educational Materials
- *Summer Reading Intervention
- *Assistive Technology
- *State services
- *Support Organizations
- *Advocacy Organizations

(List adapted from the *Holistic Approach to Support Students with Reading Difficulties* chart is taken from the Minnesota Department of Education handbook entitled: “Navigating the School System When a Child is Struggling with Reading or Dyslexia,” 2015) - *These items not in the original list for Community.

When utilizing community resources, teachers and parents must align students’ needs with what is being offered to maximize the effectiveness of those resources on their students’ academic and cognitive development. It is important for teachers and parents to recognize and identify specific areas of weaknesses and strengths for students who struggle with dyslexia in an effort to address the specific needs students may have. Being able to pinpoint the exact area(s) of difficulty is essential in helping students with dyslexia grow academically and reach their full potential at each level of growth.

The [Components of Structured Literacy Intervention Checklist](#) included in this handbook ([Appendix C](#)) can be used to guide decisions about appropriate intervention programs. The International Dyslexia Association fact sheets on Effective Reading Instruction for Students with Dyslexia & Evaluating Professionals can provide guidance for services for students.

Students with dyslexia generally become adept at covering up their cognitive weaknesses through intellectual strengths, which can make it difficult to detect areas where targeted instruction is needed. The effects or indicators of dyslexia may not be immediately apparent. However, taking into consideration noticeable difficulties in areas of cognitive ability, coupled with a student’s intellectual strengths, yield a better picture of the underlying learning disability.

Because difficulties associated with dyslexia sometimes coincide with other issues such as speech impairment, attention deficit disorder, and avoidance behaviors, the actual struggles with dyslexia can be hard to discern and possibly attributed to something else.

CHAPTER 11 WHERE CAN I LEARN MORE?

“Do the best you can until you know better.
Then when you know better, do better.”

-Maya Angelou

MYTH: Most teachers know the warning signs of dyslexia, so they can alert a parent if their child is showing symptoms.

Fact: An individual with dyslexia often is confronted with challenges when attending school. Most classroom teachers have not had formal training in dyslexia. Therefore, if your child is struggling and not achieving, it behooves you to talk with your child's teachers and building principal to begin the steps toward requesting additional help, and, if necessary, a special education referral for a suspected learning disability (LD).

Myth: Dyslexia can be cured or helped by special balancing exercises, fish-oils, glasses with tinted lenses, vision exercises, modeling clay letters, inner-ear-improving medications, training primitive reflexes, eye occlusion (patching), etc.

Fact: Students with dyslexia require explicit and systematic reading instruction in phonological awareness, phonics, and spelling patterns and rules. Additionally, they may need strategies for vocabulary, reading comprehension and writing, as well as verbal expression and word retrieval.

Seeking Effective Professional Development and Learning

Under ESSA programs for instruction should be “Evidence-Base” and we should look at professional development in a similar way. Doing better can only be achieved if we are learning effective ways of doing better. The OSDE provides free professional development opportunities throughout the year to meet the needs of students.

State statute, Title 70 Section 6-194, requires all schools to provided dyslexia awareness professional development beginning in the 2020-2021 school year.

National Dyslexia & Reading Organizations

The following National Organization share information on professional development free and paid professional development opportunities including conference, webinars, and book studies.

Bookshare (Bookshare.org)

BrightSolutions.US (<https://www.dys-add.com/>)

Decoding Dyslexia (<http://decodingdyslexiaok.org>)

Dyslexia Training Institute (<http://www.dyslexiatraininginstitute.org>)

International Dyslexia Association (<https://dyslexiaida.org>)

 Kansas Missouri Branch (www.ksmo.dyslexiaida.org)

 Upper Midwest Branch (<https://umw.dyslexiaida.org/>)

Learning Ally (<https://learningally.org/>)

LETRS Training (<https://sde.ok.gov/reading-and-literacy>)

Lindamood-Bell Learning Centers (<http://www.lindamoodbell.com>)

National Center for Learning Disabilities (<http://www.nclد.org/archives/reports-and-studies/idea-parent-guide-2>)

National Center for Improving Literacy (<https://improvingliteracy.org/>)

Neuhaus Education Center (<http://neuhaus.org/resources/>)

Reading Rockets (www.readingrockets.org)

RTI (<https://www.rti4success.org>)

Slingerland Institute for Literacy (<http://slingerland.org/Home>)

The Reading League :<https://www.thereadingleague.org/>)

Understood (<https://www.understood.org/en>)

University of Michigan (<http://dyslexiahelp.umich.edu/>)

Yale Center for Dyslexia and Creativity (<http://dyslexia.yale.edu/>)

The 95% Group, INC (<https://www.95percentgroup.com/>)

Books for Learning

There are many books available about dyslexia. This is another incidence though where “buyer or reader beware” as many books contain false or inaccurate information. Below is a list of our top 10 books about dyslexia. Get ready to grow in what you know about dyslexia and how to support those with dyslexia.

Cynthia Coletti. *Blueprint for a literate nation how you can help*. XLIBRIS, 2013.

Coletti approaches reading instruction and dyslexia from the perspective of a parent and CEO. Drawing heavily from researchers in the field, Ms. Coletti outlines how schools, districts, communities, and the government can change America’s reading profile. As a call to arms, this book is effective. The last third of the book has endless resources and the “blueprint” for a literate nation.

Dehaene, Stanislas. *Reading in the Brain: The new science of how we read*. Penguin, 2010.

Fascinating book from the perspective of a neuroscientist regarding the brain and reading. Although often heavy in technical terminology, Dehaene is able to incorporate enough human experiences to bring the science to life. He also explores the oft overlooked implications of vision on the reading experience.

Foss, Ben. *The Dyslexia Empowerment Plan: A blueprint for renewing your child’s confidence and love of learning*. Ballantine Books, 2016.

Foss is an articulate and relatable advocate for children and families dealing with dyslexia and the school system. Through personal stories, Foss manages to commiserate while providing actionable ways to improve outcomes in school, work, and life. This is an excellent book for parents or students who are feeling overwhelmed by the implications of dyslexia and need encouragement.

Henry, Marcia K. *Unlocking Literacy: Effective Decoding and Spelling Instruction*. Brooks Publishing, 2010.

After tutoring countless students with dyslexia, there is one thing that becomes apparent: poor spelling can linger long after decoding improves. Many English words do not respond to conventional sound to symbol spelling methods or syllable types. Students with dyslexia will need a solid foundation of morphology, etymology, and orthography that are the keys to truly unlocking encoding. Henry’s book provides a logical and effective way of approaching English spelling that offers every student the opportunity to spell (and understand) more words with confidence.

Kilpatrick, David. *Essentials of Assessing, Preventing and Overcoming Reading Difficulties*. John Wiley and Sons, Inc., 2015.

Perhaps one of the best books available to walk educators and parents through the often-complicated landscape of screening, assessing, and treating dyslexia. Kilpatrick provides foundational understanding of why students may struggle with reading and how to interpret various screeners to improve instructional outcomes. Kilpatrick also provides well-researched evaluations of many of the latest and most popular reading programs.

Sandman-Hurley, Kelli. *Dyslexia advocate! How to advocate for a child with dyslexia within the public education system*. Jessica Kingsley Publishers, 2016.

This book should be on the shelf of every school administrator, educator, and parent. It contains sensible and well-researched approaches for helping students with dyslexia within the public education system. Every SPED employee should be required to read this book before assessing and completing an IEP for students with reading

difficulties. Read this book and banish useless reading goals forever.

Seidenberg, Mark. *Language at the speed of sight: how we read, why so many can't, and what can be done about it*. Basic Books, 2017. This is one of the more narrative books on reading issues. Language often reads more like a good novel, but don't make the mistake of thinking it's not equally well-researched and informative. Seidenberg explores the educational world to discuss why so many teachers aren't given the basic educational understanding to teach reading well in the United States.

Selznick, Richard. *Dyslexia Screening: essential concepts for schools and parents*. Bookbaby, 2015.

If a school wants to get started with some practical interventions for students with dyslexia, then this book is a must. It's a thin volume that outlines exactly how any school can get started with screening and intervening on dyslexia.

Shaywitz, Sally. *Overcoming Dyslexia: a new and complete science-based program for reading problems at any level*. Vintage, 2005.

Considered one of the first and perhaps best introductions to the latest fMRI research regarding dyslexia and the

brain, Shaywitz's *Overcoming Dyslexia* has become synonymous with understanding how reading occurs in the brain. Shaywitz distills much of the "new" science into actionable items for parents, teachers, and administrators. For her latest research and writing, go to the Yale Center for Dyslexia & Creativity website.

Willingham, Daniel. *The Reading Mind: a cognitive approach to understanding how the mind reads*. Jossey-Bass, 2017.

One of the latest reading books to enter the market, *The Reading Mind* benefits from its predecessors and seems to sum up the latest research with perspective of hindsight being 20/20. Willingham fills in the gaps from other books and clarifies some of the misunderstandings all with well-researched examples that make fine points about the need for solid reading instruction across the grades.

Wolf, Maryanne. *Proust and the Squid: the story and science of the reading brain*. Harper Perennial, 2008.

Although fairly dated, Wolf's book is a must-read for anyone interested in the science behind reading and dyslexia. Many reviewers consider this the book you "actually want to read about brain science."

Wolf, Maryanne. *Reader, come home: the reading brain in a digital world*. Harper Collins, 2018.

APPENDICES

Appendix A: Assembling a Battery for Dyslexia Screener and Assessments

UNDERLYING CAUSE

Phonological Awareness

CTOPP-2 (Comprehensive Test of Phonological Processing-2) Phonological Awareness Composite - Elision, Blending Words and Phoneme Isolation or Sound Matching subtests make up this composite

PAT-2 (Phonological Awareness Test-2) - first six subtests

KTEA-3 (Kaufman Test of Educational Achievement - 3rd edition)

WRMT-III (Woodcock Reading Mastery Test III) - Phonological Awareness

WJ-IV (Woodcock-Johnson Tests of Oral Language-4th edition) - Segmentation and Sound Blending

Rapid Naming

CTOPP-2 - Rapid Naming Composite

KTEA-3 - Rapid Automatized Naming, Letter Naming Facility, Object Naming Facility

WRMT-III - Rapid Automatic Naming

WJ-IV Tests of Oral Language - Rapid Picture Naming

RAN/RAS (Rapid Automatized Naming and Rapid Alternating Stimulus)

Letter Knowledge

PAT-2 - Graphemes

WRMT-III - Letter Identification

WJ-IV (Woodcock-Johnson Tests of Achievement-4th edition) - Spelling of Sounds (Phoneme knowledge)

WIST (Word Identification and Spelling Test) – Sound-symbol knowledge

CHARACTERISTICS

Decoding

PAT-2 - Decoding

KTEA-3 - Nonsense Word Decoding

WIAT-III (Wechsler Individual Achievement Test-3rd edition) - Pseudoword Decoding

WJ-IV Ach - Word Attack

WRMT-III - Word Attack

Word Recognition

KTEA-3 - Letter & Word Recognition

WIAT-III - Word Reading

WJ-IV Ach - Letter-Word Identification

WRAT-4 (Wide Range Achievement Test-4th edition) - Reading

WRMT-III - Word Identification WIST – Word identification

Fluency

Oral Reading Accuracy

GORT-5 (Gray Oral Reading Test-5th edition) - Accuracy score

Oral Reading Rate
GORT-5 - Rate score

Oral Reading Fluency (Rate and Accuracy as a Composite only)
KTEA-3 Word Recognition Fluency, Associational Fluency, Silent Reading Fluency
TOWRE-2 (Test of Word Reading Efficiency- 2nd edition) - Sight Word Efficiency, Phonemic Decoding Efficiency, and Total Word Reading Efficiency
WIAT-III - Oral Reading Fluency
WJ-IV Ach - Oral Reading Fluency, Sentence Reading Fluency
WRMT-III - Oral Reading Fluency

Spelling

KTEA-3 – Spelling, Orthographic Processing Cluster - Spelling, Letter Naming Facility, and Word Recognition Fluency
TWS-5 (Test of Written Spelling-5th edition) - Spelling
WIAT-III - Spelling
WJ-IV Ach - Spelling and Spelling of Sounds (spelling nonsense words)
WRAT-4 - Spelling WIST – Spelling

OUTCOMES

Reading Comprehension

GATES (Gates-MacGinitie Reading Tests) - Silent reading comprehension
GORT-5 - Oral reading comprehension
GSRT (Gray Silent Reading Tests) - Reading comprehension
KTEA-3 - Reading Comprehension WIAT-III - Reading comprehension
WJ-IV Ach - Passage Comprehension
WRAT-4 - Sentence Comprehension
WRMT-III - Passage Comprehension
TORC-4 – silent reading comprehension

Written Expression

KTEA-3 Written Expression
TOWL-4 (Test of Written Language-4th edition) - Overall writing quotient
WIAT-III - Written Expression
WJ-IV Ach - Writing Samples

Adapted from the Characteristic Profile of Dyslexia – Revised 7/2014, Texas Scottish Rite Hospital for Children

Appendix B: Characteristic Profile of Dyslexia

Characteristic Profile of Dyslexia – Revised 2007, Updated 2014										
NAME:	DATE OF BIRTH:	AGE:								
SCHOOL:	DATE OF TEST:	GRADE:								
<table style="margin: auto; border: none;"> <tr> <td style="border: none;">55</td> <td style="border: none;">70</td> <td style="border: none;">85</td> <td style="border: none;">90</td> <td style="border: none;">100</td> <td style="border: none;">115</td> <td style="border: none;">130</td> </tr> </table>				55	70	85	90	100	115	130
55	70	85	90	100	115	130				
UNDERLYING CAUSE:										
PHONOLOGICAL PROCESSING										
PHONOLOGICAL AWARENESS										
EI =	BW=	PI=								
PHONOLOGICAL MEMORY										
RAPID NAMING										
LETTER KNOWLEDGE										
		BELOW AVERAGE Below 90	AVERAGE 90 - 109	ABOVE AVERAGE 110+						
CHARACTERISTICS										
DECODING										
WORD RECOGNITION										
ORAL READING FLUENCY RATE=										
ACCURACY=										
SPELLING										
OUTCOMES: Variable Impact										
READING COMPREHENSION										
WRITTEN EXPRESSION										
COGNITIVE/ACADEMIC ABILITY										
COEXISTING COMPLICATIONS OR ASSETS										
		COMPLICATION	ASSET							
Oral Language										
Attention										
Mathematics										
Handwriting										
Behavior / Emotions										

The Characteristic Profile of Dyslexia – Revised 2007, Updated 2014 may be duplicated and utilized in educational settings as a tool for presenting test scores and observations. If it is edited or adapted, please credit the source by including the statement: “Adapted from the Characteristic Profile of Dyslexia – Revised 2007, Updated 2014, Texas Scottish Rite Hospital for Children.”

Appendix C: Components of Structured Literacy Intervention Checklist

Components of Structured Literacy Intervention Checklist

This rubric is designed to help educators evaluate intervention programs. It identifies the necessary components of structured literacy interventions and will help to identify areas that may need to be supplemented with additional evidence-based instructional practices.

Intervention Name: _____

Date: _____

Does the intervention program include all components of structured literacy instruction?

Yes	No	Phonological Awareness
		Segmenting Sentences Into Words
		Syllable Segmentation and Blending
		Phonemic Awareness - Segmentation, Blending & Manipulation

Yes	No	Fluency
		Attention to Accuracy, Rate and Prosody
		Use of Normative Data to Ensure Adequate Progress

Yes	No	Sound-Symbol Association
		Sounds & Letters Connected for Both Reading (visual) and Spelling (auditory) to Mastery
		Blending of Sounds & Letters into Words to Mastery
		Segmenting Whole Words into Individual Sounds to Mastery

Yes	No	Reading Comprehension
		Process of Deriving Meaning & Establishing a Coherent Mental Model of the Text's Content
		Attention to Integration of Ideas Within Text and Between Texts
		Use of Text Structure to Accomplish a Goal (i.e., explaining main idea or recalling details)
		Purposeful Teaching of Strategies Related to the Text Structure with Opportunities to Apply in New Situations
		Access Background Knowledge & Identify Language in Text that May be Problematic (indirect meanings, figurative language, complex sentences, pronoun referents, new vocabulary)
		Use of Graphic Organizers

Yes	No	Syllable Instruction
		6 Basic Syllable Types: Identify the Sound of the Vowel Within a Syllable
		Syllable Division Rules: Enhance Accuracy for Reading Unknown Words to Mastery

Yes	No	Delivery of Instruction
		Training Standards and Fidelity of Implementation Measures Defined
		Explicit Instruction is Provided One Language Concept at a Time
		Sequence of Instruction is Systematic and Cumulative
		Provides Multisensory Instruction
		Includes Assessments for Diagnostic Teaching (Pre/Post Tests, Mastery Checks)
		Establishes Guidelines for Student Grouping (Size, Homogenous Needs)

Yes	No	Orthography
		Focus on Spelling Patterns and Rules as well as Word Meanings, Parts of Speech and Word Origins
		Explicit Instruction in Letter Formation

Yes	No	Morphology
		Study of Base Words, Roots, Prefixes and Suffixes

Yes	No	Grammar/Syntax
		Focus on Grammar & Sentence Variations
		Study of Mechanics of Language & Function of Word Order to Convey Meaning

YES	NO	Vocabulary
		Words Taught Explicitly in Multiple Settings
		Synonyms, Antonyms and Multiple Meanings Integrated into Discussions
		Essential Features with Visual Representations for Concepts Identified During Discussions
		Idioms Integrated When Appropriate to Situations

Notes

Appendix D: Sample Lesson Plan and Sample Scope and Sequence Chart

Until students are reading without effort, each reading lesson should consist of teacher-directed, explicit, and systematic instruction in:

- phonological awareness,
- applying phonics (alphabetic principle) and morphology to decoding,
- applying background knowledge already learned to unfamiliar words or concepts in material to be read (activating prior knowledge),
- How do I Incorporate the Strands for Word Recognition into the Classroom?
- both oral reading and silent reading, with appropriate instructional materials, activities to develop oral reading fluency, and
- questioning and discussion to clarify reading comprehension.

Example of K-2 Word Recognition Lesson:

Warm-Up Activities	-Review Materials – Can vary based on need of students.	2 Minutes
Phonological Awareness and Articulation of Skill	-Work through one phonological tasks using gradient of difficulty based on need of students in classroom. Spiral as needed. -Articulation of new sound introduction using list of words including mouth position and voicing using mirror. Ex. New Learning (short a) map, an, fad, rat	3 Minutes
Letter-Sound Correspondence	-Write words from list above on board. Discuss spelling for new sound. -Syllable type identification. (Closed)	2 Minutes
Word Reading/Blending Routines	-Blend words with new learning using “I Do,” “We Do,” “You Do.” Ex. cab, gas, dad, tax, had, Jan, cap	5 Minutes
Word Work	-Word Chains or Phoneme Graphing Mapping with new learning. Ex. ram, jam, jab, lab, cab, can	5 Minutes
Dictation	-Write phrases or sentences using new learning.	3 Minutes
Text Application	-Look for words that have new learning in text. -Read words. -Read decodable/connected text.	10 Minutes

Example of 3-5 Word Recognition Lesson for Multi-Syllable Words:

Warm-Up Activities	-Review Materials – Can vary based on need of students.	2 Minutes
Phonological Awareness	-Advanced Phonemic Awareness Manipulation Task (deletion, substitution, reversing, etc...)	3 Minutes
Choose One for Weekly Focus and provide new experiences daily: 1. Syllable Type and/or Division Work 2. Greek or Latin Base Introduction with Morphology	-Introduce new syllable type and/or syllable division rule (Ex. Closed & Open – 2 syllable words) List: reptile, estate, stampede, trombone, confuse -Analyze a group of words for morphology and discover the Greek or Latin base that all contain. Ex. List: designed, signal, resigning, signify -Find meaning of base and other words with base	5 Minutes
Word Reading/Blending Routines	-Blend words with new learning using “I Do,” “We Do,” “You Do.”	5 Minutes
Word Work	-Phoneme-Graphing Mapping with new learning -Greek/Latin Focus Create Word Sums -Greek/Latin Focus Create Word Matrix	5 Minutes
Dictation	-Write phrases or sentences using new learning.	3 Minutes
Text Application	-Look for words that have new learning in text. -Read words. -Read connected text.	10 Minutes

Sample lesson plans are adapted from the [West Virginia Phonics](#) lesson structure housed on the *Tool 4 Learning* website.

Sample Scope and Sequence Chart

Structured Literacy instruction is systematic and cumulative. This sample scope and sequence illustrates what a progression of skills might typically look like in such programs. It is not, however, a comprehensive sample.

Level I
Group 1: a /ă/, b, c, f, h, i /i/, j, k, m, p, t
Group 2: g, o /ō/, r, l, n, th, u /ū/, ch, e /ě/, s, sh, d, w, wh, y (consonant), qu, v, x, z
Suffixes – -s /s/ and /z/, -ed /d/, /ěd/ and /t/
FLOSS Rule – ff, ll, ss, zz
Concepts – digraph, short and long vowel sound, trigraph
Syllable Types – closed (one and two syllables), open, and vowel-consonant-e
Level II
Closed syllable exceptions: ind, ild, ost
Vowel Teams: ai, ay, ee, ea, oi, oy, oo, ow, ie, ou, y (vowel)
r-controlled sounds: ar, or, ir, er, ur
Suffixes – es, er, est, ly, y, ful, less, ness, en, ment
Prefixes – un, dis, mis, in, non, pre, re
Concepts – diphthong, compound word, base word, present tense, past tense, singular, plural, contraction
Syllable Types – r-controlled, vowel team
Level III
Vowel Sounds: ea /ě/ and /ā/, oe, igh, ew, au, aw, ue, ou, eu
Additional Sounds: c before i, e, y and g before i, e, y
Suffixes – -able, -ive, -ion
Prefixes – anti-, con-, de-, ex-, inter-, per-, pre-, pro-, semi-, sub-, super-
Roots – cept, dict, duct, fort, ject, port, rupt, sist, spect, vert, flex, fic, fin, gen, mit, pos, plic, scrib, vis
Syllable Types – consonant-le and other final stable syllables
Level IV
Vowel Sounds: ei, eigh, ey, ar (beggar), or (doctor), wa (want), u (push, pull), ou (country, cousin)
Silent Letters – wr, kn, gn, mb, gh, stle, ps, pn, alk, ough, augh
Additional Sounds: ch (Greek like in Christmas), ch (French like in chef), ture, ti, si, ci
Suffixes – -ture, -ous, -al, -ic, -ure, -age, -an, -able, -ible, -ate, -ite, -ine, -ology
Roots – uni, bi, micro, hyper, hydro, tele, phone, auto

Appendix E: A Quick Guide to Evidence-Based Literacy Instruction

A Quick Guide to Evidence-Based Literacy Instruction		
Key Principle	All Students Need:	Dyslexic or Struggling Readers Need:
<p>Instructional decisions should be guided by assessment of individual student knowledge and progress.</p>	<ul style="list-style-type: none"> • Universal Screening • Ongoing progress monitoring • Formative assessment • Summative assessment 	<ul style="list-style-type: none"> • Use of Informal Classroom Diagnostic if below benchmark on Universal Screening. Consideration of Informal Classroom Diagnostic, if at or above benchmark, but poor classroom performance. • Early and immediate intervention beginning in K-1 and continuing in higher grades when deficiencies are found in foundational skills of print concepts, phonological awareness, alphabetic knowledge, phonics, spelling, word recognition or fluency. • More frequent progress monitoring to gauge effectiveness of interventions and to make instructional changes if progress is not sufficient. <p>For more information, see the Universal Screening section and Informal Classroom Diagnostic section of this handbook in Chpt. 5.</p>
<p>Explicit instruction is necessary to build skills and strategies for reading, spelling and writing.</p>	<ul style="list-style-type: none"> • Teacher modeling with explanation (e.g., thinking aloud with step by step demonstration) • Active responding techniques (e.g., choral responding, turn and talk, quick writes) • Guided practice • Content needs to be aligned with the National Reading Panel's findings (e.g. systematic and explicit instruction) 	<p>Structured Literacy interventions in small groups (Tiers 2 & 3) to build foundational skills not yet mastered and differentiated core instruction (Tier 1). The instruction has the following characteristics:</p> <ul style="list-style-type: none"> • Explicit instruction that is explained by the teacher one language and print concept at a time. Information is taught directly. • Sequential instruction that begins with the easiest concepts that the student does not know, and remains on these to mastery before progressing to more difficult concepts. • Cumulative instruction that consistently reviews all concepts that have been introduced, and concepts unknown to the student are not included in the lesson. • Instruction that frequently uses multisensory strategies such as tracing, writing, fingerspelling and manipulatives to enhance learning for sound-letter correspondences; blending and segmenting sound-letter combinations; and learning syllable patterns to read and spell unknown decodable words, as well as to learn high frequency words. • Diagnostic instruction that requires continually monitoring a student's level of mastery of individual concepts and adjusts accordingly. • Repeated modeling and guided practice for students in small, flexible, homogeneous groups. • More frequent and longer periods of instruction. <p>See the Structured Literacy section of this handbook in Chpt. 7.</p>
<p>Coaching and specific feedback should be provided to address individual needs.</p>	<ul style="list-style-type: none"> • Individual prompts, cues and specific feedback foster independent application of new skills and strategies. • Gradual reduction in the frequency and type of prompts as students gain proficiency. 	<p>More extensive coaching and specific feedback which may include re-teaching, teaching alternative strategies and/or use of alternative materials.</p>

A Quick Guide to Evidence-Based Literacy Instruction

Key Principle	All Students Need:	Dyslexic or Struggling Readers Need:
Metacognitive skills are essential to the development of word solving strategies as well as higher order thinking skills.	Awareness of what strategy is needed, when a strategy is needed, and when to change or modify a strategy.	More explicit instruction and coaching to develop skills in self-monitoring and self-correction for word recognition and comprehension strategies.
Students need not only explicit instruction in skills and strategies but also extensive practice in reading connected text.	To build reading stamina, reading accuracy, vocabulary, fluency and comprehension through: <ul style="list-style-type: none"> • Opportunities to read connected text at their instructional level with teacher support. • Opportunities to read connected text independently with comprehension. 	<ul style="list-style-type: none"> • More time to engage in reading connected text to apply foundational skills and strategies in a meaningful context. • Texts with controlled vocabulary and phonics patterns should be part of reading instruction to support practice in decoding and word recognition skills. • Teacher guidance to select texts and to monitor student engagement and comprehension during independent reading time.
Literacy learning is enhanced through social interaction and collaboration with peers.	Exchanging and responding to others' ideas helps all students solidify and extend their knowledge and comprehension skills.	Opportunities for conversations with peers can be a motivating and supportive pathway to explore challenging grade level content.
Motivate interest in reading through rich literacy environments, activities and materials.	<ul style="list-style-type: none"> • Classrooms filled with books and other media representing different genres, at different reading levels, organized, labeled and presented in attractive, accessible ways. • Teachers use of exemplary texts containing rich language and content through read alouds, book talks, peer discussions (e.g., literature circles) and independent reading activities. 	<ul style="list-style-type: none"> • Assistive technology to access books on topics of interest and grade level texts. • "Text-to-Speech", multi-media, audio and read aloud can be used as accommodations to develop comprehension skills, vocabulary, background knowledge and knowledge of text structure as part of independent and guided reading. See Assistive Technology section of this handbook in Chpt. 9.

Appendix F: Nationally Recognized Certifications for Educators of Dyslexia Instruction

Nationally Recognized Certifications for Educators Providing Dyslexia Services								
Dyslexia Certification/License	Licensing Body	Degree Required	Training Program	Course Contact Hours	Practicum Hours	Direct Observations	Certification Exam	Continuing Education Requirement
*Currently in the state of Oklahoma, teachers, such as reading specialists, master reading teachers, general education classroom teachers, or special education teachers are not required to hold a specific license or certification to provide dyslexia intervention for students.								
Certified Academic Language Therapist (CALT)	Academic Language Therapy Association (ALTA)	Bachelors	IMSLEC Accredited or other MSLE Program	200	700	10	yes	10 hrs/1 yr
Certified Academic Language Practitioner (CALP)	Academic Language Therapy Association (ALTA)	Bachelors	IMSLEC Accredited or other MSLE Program	45	60	5	yes	10 hrs/1 yr
Certified Structured Literacy/ Dyslexia Specialist	Center for Effective Reading Instruction (CERI)	Bachelors	IDA Accredited	135	30	3	yes	10 hrs/1 yr
Certified Structured Literacy/ Dyslexia Interventionist	Center for Effective Reading Instruction (CERI)	Bachelors	IDA Accredited	90	30	3	yes	10 hrs/1 yr
Associate Member AOGPE	Academy of Orton-Gillingham Practitioners and Educators	Bachelors	Fellow and Centers	60-70	100	10		
Associate Member AOGPE	Academy of Orton-Gillingham Practitioners and Educators	Bachelors Associate Member AOGPE	Fellow and Centers	100	200	10	yes	

Appendix G: Knowledge and Practice Standards Self-Study Checklist

Knowledge and Practice Standards Self-Study Checklist	
Aligned to the IDA Knowledge and Practice Standards for Teachers of Reading, this checklist can assist teachers in assessing their current knowledge base about the science of reading in order to develop meaningful professional development plans.	
Name:	Date:

Rating Scale: This simple rating scale may help teachers evaluate the amount of knowledge they possess for each of the competencies and identify areas where they may benefit from professional development.

3 – I Know It Well Enough to Use It: I have sufficient understanding and experience to operate at a full professional level with this information and I can generalize basic principles to effectively function in both predictable and new situations with my students.

2 – I Have Some Knowledge: My knowledge is newly developing in this area. I have a general understanding of key principles but limited or no applied experience using this with my students. I am capable of using this with coaching and support, in simple situations.

1 – I Have No Knowledge: I have no understanding of this information and will need to learn more.

Level Identification: Many of the competencies are followed by the designation of Level 1 or Level 2. These designations indicate whether a competency should be met by:

Level 1: teachers or any staff member whose responsibilities include general reading instruction for all students, such as a classroom teacher

Level 2: specialists or any staff member whose responsibilities include delivering reading interventions to struggling readers, such as a therapist, a reading specialist, an intervention teacher, a basic skills instructor, a Learning Disabilities Teacher-Consultant, a special education teacher, etc.

Foundation Concepts of Oral and Written Learning				
Rating			Content Knowledge	Application
3	2	1		
			1. Understand and explain the language processing requirements of proficient reading and writing <ul style="list-style-type: none"> • Phonological (speech sound) processing • Orthographic (print) processing • Semantic (meaning) processing • Syntactic (sentence level) processing • Discourse (connected text level processing) 	a. Explain the domains of language and their importance to proficient reading and writing (Level 1). b. Explain a scientifically valid model of the language processes underlying reading and writing (Level 2).
			2. Understand and explain other aspects of cognition and behavior that affect reading and writing <ul style="list-style-type: none"> • Attention • Executive function • Memory • Processing speed • Graphomotor control 	a. Recognize that reading difficulties coexist with other cognitive and behavioral problems (Level 1). b. Explain a scientifically valid model of other cognitive influences on reading and writing, and explain major research findings regarding the contribution of linguistic and cognitive factors to the prediction of literacy outcomes (Level 2).
			3. Define and identify environmental, cultural, and social factors that contribute to literacy development (e.g., language spoken at home, language and literacy experiences, and cultural values).	Identify (Level 1) or explain (Level 2) major research findings regarding the contribution of environmental factors to literacy outcomes.
			4. Know and identify phases in the typical developmental progression of <ul style="list-style-type: none"> • Oral language (semantic, syntactic, pragmatic) • Phonological skill • Printed word recognition • Spelling • Reading fluency • Reading comprehension • Written expression 	Match examples of student responses and learning behavior to phases in language and literacy development (Level 1).

Knowledge and Practice Standards Self-Study Checklist Cont.

			5. Understand and explain the known casual relationships among phonological skill, phonic decoding, spelling, accurate and automatic word recognition, text reading fluency, background knowledge, verbal reasoning skill, vocabulary, reading comprehension, and writing.	Explain how a weakness in each component skill of oral language, reading, and writing may affect other related skills and processes across time (Level 2).
			6. Know and explain how the relationships among the major components of literacy development change with reading development (i.e., changes in oral language, including phonological awareness; phonics and word recognition; spelling; reading and writing fluency; vocabulary; reading comprehension skills and strategies; written expression).	Explain how a weakness in each component skill of oral language, reading, and writing may affect other related skills and processes across time (Level 2).
			7. Know reasonable goals and expectations for learners at various stages of reading and writing development.	Given case study material, explain why a student is/is not meeting goals and expectations in reading or writing for his or her age/grade (Level 1).

Knowledge of the Structure of Language				
Rating			Content Knowledge	Application
3	2	1		
			Phonology (The Speech Sound System)	
			1. Identify, pronounce, classify, and compare the consonant and vowel phonemes of English.	a. Identify similar or contrasting features among phonemes (Level 1). b. Reconstruct the consonant and vowel phoneme inventories and identify the feature differences between and among phonemes (Level 2).
			Orthography (The Spelling System)	
			2. Understand the broad outline of historical influences on English spelling patterns, especially Anglo-Saxon, Latin (Romance), and Greek.	Recognize typical words from the historical layers of English (Anglo-Saxon, Latin/ Romance, Greek) (Level 1).
			3. Define grapheme as a functional correspondence unit or representation of a phoneme.	Accurately map graphemes to phonemes in any English word (Level 1).
			4. Recognize and explain common orthographic rules and patterns in English.	Sort words by orthographic "choice" pattern; analyze words by suffix ending patterns and apply suffix ending rules (Level 1).
			5. Know the difference between "high frequency" and "irregular" words.	Identify printed words that are the exception to regular patterns and spelling principles; sort high frequency words into regular and exception words (Level 1).
			6. Identify, explain, and categorize six basic syllable types in English spelling.	Sort, pronounce, and combine regular written syllables and apply the most productive syllable division principles (Level 1).
			Morphology	
			7. Identify and categorize common morphemes in English, including Anglo-Saxon compounds, inflectional suffixes, and derivational suffixes; Latin-based prefixes, roots, and derivational suffixes; and Greek based combining forms.	a. Recognize the most common prefixes, roots, suffixes, and combining forms in English content words, and analyze words at both the syllable and morpheme level (Level 1). b. Recognize advanced morphemes (e.g., chameleon or assimilated + prefixes)(Level 2).
			Semantics	

Knowledge and Practice Standards Self-Study Checklist Cont.

			8. Understand and identify examples of meaningful word relationships or semantic organization.	Match or identify examples of word associations, antonyms, synonyms, multiple meanings and uses, semantic overlap, and semantic feature analysis (Level 1).
			Syntax	
			9. Define and distinguish among phrases, dependent clauses, and independent clauses in sentence structure.	Construct and deconstruct simple, complex, and compound sentences (Level 1).
			10. Identify the parts of speech and the grammatical role of a word in a sentence.	a. Identify the basic parts of speech and classify words by their grammatical role in a sentence (Level 1). b. Identify advanced grammatical concepts (e.g., infinitives, gerunds) (Level 2).
			Discourse	
			11. Explain the major differences between narrative and expository discourse.	Classify text by genre; identify features that are characteristic of each genre, and identify graphic organizers that characterize typical structures (Level 1).
			12. Identify and construct expository paragraphs of varying logical structures (e.g., classification, reason, sequence).	Identify main idea sentences, connecting words, and topics that fit each type of expository paragraph organization (Level 2).
			13. Identify cohesive devices in text and inferential gaps in the surface language of text.	Analyze text for the purpose of identify the inferences that students must make to comprehend (Level 2).

Structured Language Teaching: Phonology

Rating			Content Knowledge	Application
3	2	1		
			1. Identify the general and specific goals of phonological skill instruction.	Explicitly state the goal of any phonological awareness teaching activity (Level 1).
			2. Know the progression of phonological skill development (i.e., rhyme, syllable, onset-rime, phoneme differentiation).	a. Select and implement activities that match a student's developmental level of phonological skill (Level 1). b. Design and justify the implementation of activities that match a student's developmental level of phonological skill (Level 2).
			3. Identify the differences among various phonological manipulations, including identifying, matching, blending, segmenting, substituting, and deleting sounds.	Demonstrate instructional activities that identify, match, blend, segment, substitute, and delete sounds (Level 1).
			4. Understand the principles of phonological skill instruction: brief, multisensory, conceptual, and auditory-verbal.	a. Successfully produce vowel and consonant phonemes (Level 1). b. Teach articulatory features of phonemes and words; use minimally contrasting pairs of sounds and words in instruction; support instruction with manipulative materials and movement (Level 2).
			5. Understand the reciprocal relationships among phonological processing, reading, spelling, and vocabulary.	a. Direct students' attention to speech sounds during reading, spelling, and vocabulary instruction using a mirror, discussion of articulatory features, and so on as scripted or prompted (Level 1). b. Direct students' attention to speech sounds during reading, spelling, and vocabulary instruction without scripting or prompting (Level 2).
			6. Understand the phonological features of a second language or dialect, such as Spanish, and how they may interfere with English pronunciation and phonics.	Explicitly contrast first and second language phonological systems, as appropriate, to anticipate which sounds may be most challenging for the second language learner (Level 2).

Knowledge and Practice Standards Self-Study Checklist Cont.

Structured Language Teaching: Phonics and Word Recognition				
Rating			Content Knowledge	Application
3	2	1		
			1. Know or recognize how to order phonics concepts from easier to more difficult.	Plan lessons with a cumulative progression of word recognition skills that build one on another (Level 1).
			2. Understand principles of explicit and direct teaching, model, lead, give guided practice, and review.	Explicitly and effectively teach (e.g., information taught is correct, students are attentive, teacher checks for understanding, teacher scaffolds students' learning) concepts of word recognition and phonics; apply concepts to reading single words, phrases, and connected text (Level 1).
			3. State the rationale for multisensory and multimodal techniques.	Demonstrate the simultaneous use of two or three learning modalities (to include listening, speaking, movement, touch, reading, and/or writing) to increase engagement and enhance memory (Level 1).
			4. Know the routines of a complete lesson format, from the introduction of a word recognition concept to fluent application in meaningful reading and writing.	Plan and effectively teach all steps in a decoding lesson, including single-word reading and connected text that is read fluently, accurately, and with appropriate intonation and expression (Level 1).
			5. Understand research-based adaptations of instruction for students with weaknesses in working memory, attention, executive function, or processing speed.	Adapt the pace, format, content, strategy, or emphasis of instruction according to students' pattern of response (Level 2).
Structured Language Teaching: Fluent, Automatic Reading of Text				
Rating			Content Knowledge	Application
3	2	1		
			1. Understand the role of literacy in word recognition, oral reading, silent reading, comprehension of written discourse, and motivation to read.	Assess students' fluency rate and determine reasonable expectations for reading fluency at various stages of reading development, using research-based guidelines and appropriate state and local standards and benchmarks (Level 1).
			2. Understand reading fluency as a stage of normal reading development, as the primary symptom of some reading disorders; and as a consequence of practice and instruction.	Determine which students need a fluency-oriented approach to instruction, using screening, diagnostic, and progress-monitoring assessments (Level 2).
			3. Define and identify examples of text at a student's frustration, instructional, and independent reading level.	Match students with appropriate texts as informed by fluency rate to promote ample independent oral and silent reading (Level 1).
			4. Know sources of activities for building fluency in component reading skills.	Design lesson plans that incorporate fluency-building activities into instruction at sub-word and word levels (Level 1).
			5. Know which instructional activities and approaches are most likely to improve fluency outcomes.	Design lesson plans with a variety of techniques to build reading fluency, such as repeated readings of passages, alternate oral reading with a partner, reading with a tape, or rereading the same passage up to three times (Level 1).
			6. Understand techniques to enhance student motivation to read.	Identify student interests and needs to motivate independent reading (Level 1).
			7. Understand appropriate uses of assistive technology for students with serious limitations in reading fluency.	Make appropriate recommendations for use of assistive technology in general education classes for students with different reading profiles (e.g., dyslexia versus language disabilities) (Level 2).

Knowledge and Practice Standards Self-Study Checklist Cont.

Structured Language Teaching: Vocabulary				
Rating			Content Knowledge	Application
3	2	1		
			1. Understand the role of vocabulary development and vocabulary knowledge in comprehension.	Teach word meanings directly using contextual examples, structural (morpheme)analysis, antonyms and synonyms, definitions, connotations, multiple meanings, and semantic feature analysis (Levels 1 and 2).
			2. Understand the role and characteristics of direct and indirect (contextual) methods of vocabulary instruction.	Lesson planning reflects: a. Selection of material for read-alouds and independent reading that will expand students' vocabulary. b. Identification of words necessary for direct teaching that should be known before the passage is read. c. Repeated encounters with new words and multiple opportunities to use new words orally and in writing. d. Recurring practice and opportunities to use new words in writing and speaking (Levels 1 and 2).
			3. Know varied techniques for vocabulary instruction before, during, and after reading.	
			4. Understand that word knowledge is multifaceted.	
			5. Understand the sources of wide differences in students' vocabularies.	
Structured Language Teaching: Text Comprehension				
Rating			Content Knowledge	Application
3	2	1		
			1. Be familiar with teaching strategies that are appropriate before, during, and after reading and that promote reflective reading.	a. State purpose for reading, elicit or provide background knowledge, and explore key vocabulary (Level 1). b. Query during text reading to foster attention to detail, inference-making, and mental model construction (Level 1). c. Use graphic organizers, note-taking strategies, retelling and summarizing, and cross-text comparisons (Level 1).
			2. Contrast the characteristics of major text genres, including narration, exposition, and argumentation.	Lesson plans reflect a range of genres, with emphasis on narrative and expository texts (Level 1).
			3. Understand the similarities and differences between composition and text comprehension, and the usefulness of writing in building comprehension.	Model, practice, and share written responses to text; foster explicit connections between new learning and what was already known (Level 1).
			4. Identify in any text the phrases, clauses, sentences, paragraphs and "academic language" that could be a source of miscomprehension.	Anticipate confusions and teach comprehension of figurative language, complex sentence forms, cohesive devices, and unfamiliar features of text (Level 2).
			5. Understand levels of comprehension including the surface code, text base, and mental model (situation model).	Plan lessons to foster comprehension of the surface code (the language), the text base (the underlying ideas), and a mental model (the larger context for the ideas) (Level 2).
			6. Understand factors that contribute to deep comprehension, including background knowledge, vocabulary, verbal reasoning ability, knowledge of literary structures and conventions, and use of skills and strategies for close reading of text.	Adjust the emphasis of lessons to accommodate learners' strengths and weaknesses and pace of learning (Level 2).

Knowledge and Practice Standards Self-Study Checklist Cont.

Structured Language Teaching: Handwriting, Spelling, and Written Expression				
Rating			Content Knowledge	Application
3	2	1		
Handwriting				
			1. Know research-based principles for teaching letter naming and letter formation, both manuscript and cursive.	Use multisensory techniques to teach letter naming and letter formation in manuscript and cursive forms (Level 1).
			2. Know techniques for teaching handwriting fluency.	Implement strategies to build fluency in letter formation, and copying and transcription of written language (Level 1).
Spelling				
			3. Recognize and explain the relationship between transcription skills and written expression.	Explicitly and effectively teach (e.g., information taught is correct, students are attentive, teacher checks for understanding, teacher scaffolds students' learning) concepts related to spelling (e.g., a rule for adding suffixes to base words) (Level 1).
			4. Identify students' levels of spelling development and orthographic knowledge.	Select materials and/or create lessons that address students' skill levels (Level 1).
			5. Recognize and explain the influences of phonological, orthographic, and morphemic knowledge on spelling.	Analyze a student's spelling errors to determine his or her institutional needs (e.g., development of phonological skills versus learning spelling rules versus application of orthographic or morphemic knowledge in spelling) (Level 2).
Written Expression				
			6. Understand the major components and processes of written expression and how they interact (e.g., basic writing/transcription skills versus text generation).	Integrate basic skill instruction with composition in writing lessons (Levels 1 and 2).
			7. Know grade and developmental expectations for students' writing in the following areas: mechanics and conventions of writing, composition, revision, and editing processes.	a. Select and design activities to teach important components of writing, including mechanics/conventions of writing, compositions, and revision and editing processes. b. Analyze students' writing to determine specific instructional needs. c. Provide specific, constructive feedback to students targeted to students' most critical needs in writing. d. Teach research-based writing strategies such as those for planning, revising, and editing text. e. Teach writing (discourse) knowledge, such as the importance of writing for the intended audience, use of formal versus informal language, and various schemas for writing (e.g., reports versus narratives versus arguments) (Levels 1 and 2).
			8. Understand appropriate uses of assistive technology in written expression.	Make appropriate written recommendations for the use of assistive technology in writing (Levels 1 and 2).

Knowledge and Practice Standards Self-Study Checklist Cont.

Interpretation and Administration of Assessments for Planning Instruction						
Rating			Content Knowledge	Application	Observable Competencies for Teaching Students with Dyslexia and Related Difficulties	
3	2	1				
			1. Understand the differences among screening, diagnostic, outcome, and progress-monitoring assessments.	Match each type of assessment and its purpose (Level 1).	Administer screenings and progress monitoring assessments (Level 1).	
			2. Understand basic principles of test construction, including reliability, validity, and norm-referencing, and know the most well-validated screening tests designed to identify students at risk for reading difficulties.	Match examples of technically adequate, well-validated screening, diagnostic, outcome, and progress-monitoring assessments (Level 1).	Explain why individual students are or are not at risk in reading based on their performance on screening assessments (Level 1).	
			3. Understand the principles of progress-monitoring and the use of graphs to indicate progress.	Using case study data, accurately interpret progress-monitoring graphs to decide whether or not a student is making adequate progress (Level 1).	Display progress-monitoring data in graphs that are understandable to students and parents (Level 1).	
			4. Know the range of skills typically assessed by diagnostic surveys of phonological skills, decoding skills, oral reading skills, spelling, and writing.	Using case study data, accurately interpret subtest scores from diagnostic surveys to describe a student's patterns of strengths and weaknesses and instructional needs (Level 2).	Administer educational diagnostic assessments using standardized procedures (Level 2).	
			5. Recognize the content and purposes of the most common diagnostic tests used by psychologists and educational evaluators.	Find and interpret appropriate print and electronic resources for evaluating tests (Level 1).	Write reports that clearly and accurately summarize a student's current skills in important component areas of reading and reading comprehension (Level 2).	
			6. Interpret measures of reading comprehension and written expression in relation to an individual child's component profile.	Using case study data, accurately interpret a student's performance on reading comprehension or written expression measures and make appropriate instructional recommendations.	Write appropriate, specific recommendations for instruction, and educational programming based on assessment data (Level 2).	

Knowledge and Practice Standards Self-Study Checklist Cont.

Knowledge of Dyslexia and Other Learning Disorders				
Rating			Content Knowledge	Application
3	2	1		
			1. Understand the most common intrinsic differences between good and poor readers (i.e., cognitive, neurological, and linguistic).	a. Recognize scientifically accepted characteristics of individuals with poor word recognition (e.g., overdependence on context to aid word recognition, inaccurate non-word reading) (Level 1). b. Identify student learning behaviors and test profiles typical of students with dyslexia and related learning difficulties (Level 2).
			2. Recognize the tenets of the NICHD/IDA definition of dyslexia.	Explain the reasoning or evidence behind the main points in the definition (Level 1).
			3. Recognition that dyslexia and other reading difficulties exist on a continuum of severity.	Recognize level of instructional intensity, duration, and scope appropriate for mild, moderate, and severe reading disabilities (Level 1).
			4. Identify the distinguishing characteristics of dyslexia and related reading and learning disabilities (including developmental language comprehension disorder, attention deficit hyperactivity disorder, disorders of written expression or dysgraphia, mathematics learning disorder, nonverbal learning disorders, etc.).	Match symptoms of the major subgroups of poor readers as established by research, including those with dyslexia, and identify typical case study profiles of those individuals (Level 2).
			5. Identify how symptoms of reading difficulty may change over time in response to development and instruction.	Identify predictable ways that symptoms might change as students move through the grades (Level 2).
			6. Understand federal and state laws that pertain to learning disabilities, especially reading disabilities and dyslexia.	a. Explain the most fundamental provisions of federal and state laws pertaining to the rights of students with disabilities, especially students' rights to a free, appropriate public education, an individualized educational program, services in the least restrictive environment, and due process (Level 1). b. Appropriately implement federal and state laws in identifying and serving students with learning disabilities, reading disabilities, and dyslexia (Level 2).

Adapted from: Moats et al. (2010). Knowledge and Practice Standards for Teachers of Reading. International Dyslexia Association. <https://dyslexiaida.org/knowledge-and-practices/>

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GLOSSARY -

Accessible Educational Materials – educational materials and technologies usable for learning across the widest range of individual variability, regardless of format or features; this includes technology designed to be accessible for all learners or is made accessible for learners with disabilities.

Accommodation – changes in the curriculum, instruction, or testing format or procedures that enable students with disabilities to participate in the general education curriculum. Accommodations should be considered to include assistive technology as well as changes in presentation, response, timing, scheduling, and settings that do not fundamentally alter the requirements. Accommodations do not invalidate assessment results.

Accuracy – ability to recognize words correctly.

Adaptation – the broader application of altering curriculum to meet the needs of learners, either by providing accommodations or modifications to what is being taught. Changes to curriculum, instruction, or assessments that fundamentally alters the requirements, but that enable a student with an impairment an opportunity to participate in general education. Adaptations include strategies that change the level of learning expectation.

Adequate Progress – based on an individual student's trajectory toward expected grade level performance within a reasonable time period, consistent with national or local growth rate comparisons.

Alphabet Knowledge – the ability to automatically recognize and name the 26 lowercase and 26 uppercase letters with ease and accuracy.

Alphabetic Principle – ability to associate sounds with letters and use those sounds to form words.

Alternate Assessment – a specific assessment, developed by the state in lieu of statewide assessments or by the district in lieu of districtwide assessments, designed to measure functional skills within the same domains required by the regular statewide or districtwide assessments. It is designed for students who are unable to demonstrate progress in the typical manner and who meet the state-established criteria.

Analytic Instruction – pertaining to instruction or a process that separates the whole into its constituent parts to reveal the relationship of its parts (Birsh, 2011).

Assistive Technology Device – any item, piece of equipment, or product system whether acquired commercially, off a shelf, modified, or customized that is used to increase, maintain, or improve the functional capabilities of a student with a disability. Excludes surgically implanted medical devices.

Assistive Technology Service – any service that directly assists a student with a disability with the assessment, selection, acquisition, or use of an assistive technology device.

Automaticity – ability to perform a skill easily with little attention, effort, or conscious awareness.

Background Knowledge – connections formed between the text and the information and experiences of the reader.

Base Words – words from which many other words are formed. Base words can stand alone, unlike root words. Examples of a base word and various forms are “migrate”: “migration,” “migrant,” “immigration,” “immigrant,” “migrating,” “migratory” (Hougen & Smartt, 2012).

Benchmark – a standard or point of reference against which things may be compared or assessed. A major milestone which describes the progress the student is expected to make toward annual goals within a specified time-period.

Blending – The ability to combine individual sounds together to create spoken words (Mather & Wendling, 2012).

Characteristics – strengths and weaknesses in the various components of literacy associated with dyslexia. The characteristics are included in the definition of dyslexia as poor decoding, poor word recognition, poor fluency, and poor spelling.

Comprehension – understanding the intended meaning of language. Core Instruction - the curriculum and instructional practices that are provided to all students in the general education setting.

Connected Text – words that are linked as in sentences, phrases, and paragraphs.

Consonant – one of a class of speech sounds in which sound moving through the vocal tract is constricted or obstructed by the lips, tongue, or teeth during articulation (Birsh, 2011).

Controlled Text – reading materials in which a high percentage of words can be identified using their most common sounds and use sound-letter correspondences that students have been taught.

Cumulative Instruction – approach that builds upon previously learned concepts.

Decoding – process of using sound-letter correspondences to sound out words or nonsense words.

Diagnostic Assessment – assessments used to measure current skills and knowledge, often for the purpose of educational planning.

Differentiated Instruction – varying educational practices to meet the needs of different students.

Digraphs – a combination of two letters representing one sound, as in ph and ey.

Diphthong – a sound formed by the combination of two vowels in a single syllable, in which the sound begins as one vowel and moves toward another (as in coin, loud and side).

Dyslexia – a specific learning disability characterized by difficulties with accurate and fluent word recognition, poor spelling and decoding abilities that typically result from the phonological component of language, and are often unexpected in relation to other cognitive abilities.

Elision – the ability to identify the remaining word when a specified sound is deleted.

Encoding – process of using sound-letter correspondences to spell.

Evaluation – a term that means using all required procedures to determine whether a child has a disability and the nature and extent of the special education and related services that the child needs.

Evidence Based Research – An intervention, tool, or practice that meets one of the four evidence levels in the federal Elementary and Secondary Education Act, as amended by ESSA (strong, moderate, promising, or demonstrates a rationale).

Explicit Instruction – direct, structured, systematic approach to teaching that includes both instructional design and delivery procedures.

Expressive Language – language that is spoken.

Fidelity – means the intervention is done as the author of the program intended.

Fidelity of Implementation – degree to which instruction follows the intent and design of the program.

Fluency – the ability to read the words in text effortlessly and efficiently (automaticity) with meaningful expression that enhances the meaning of the text (prosody).

Formative Assessments – formative assessment is a planned, ongoing process used by all students and teachers during learning and teaching; it is used to elicit and use evidence of student learning to improve student understanding of intended disciplinary learning outcomes and support students in becoming more self-directed learners (ADE, Balanced Assessment Framework).

Grapheme – a letter or letter cluster that represents an individual phoneme (i, i-e, igh, ch, tch...).

Guided Practice – approach in which students practice newly learned skills with the teacher providing prompts and feedback.

High Frequency Word – a word that is encountered numerous times in text and is important to know (Birsh, 2011).

Independent Educational Evaluation (IEE) – one or more assessment(s) conducted by a qualified examiner(s) who is not employed by or contracted by the public agency or district responsible for the education of the student in question.

Indicator – a sign that shows or suggests the condition of something. Indicators of dyslexia are the early warning signs that indicate a child might have dyslexia. Indicators of dyslexia may differ at different ages.

Individualized Education Program (IEP) – a written document (developed collaboratively by parents and school personnel) which outlines the special education program for a student with a disability. This document is developed, reviewed and revised at an IEP meeting at least annually.

Individualized Instruction – instruction that is designed to meet the specific needs of the student in a small group setting. Individualized instruction is intensive and highly concentrated instruction that focuses on the student's area(s) of primary difficulty and the instructional delivery necessary to assist students in accelerating their learning, maximizing student engagement in the process of learning.

Individuals with Disabilities Education Act (IDEA) – the law that outlines rights and regulations for students with disabilities in the U.S. who require special education.

Interventions – sets of teaching procedures used by educators to help students who are struggling with a skill or lesson succeed in the classroom.

Instructional Intervention – an action or strategy based on an individual student's problem that is designed to remedy, improve, or eliminate the identified problem.

Learning Disabilities – a disorder in one or more of the basic psychological processes in understanding or using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations.

Linguistic Instruction – instruction aimed toward improving student proficiency and fluency with the patterns of language so that words and sentences are carriers of meaning.

Metacognitive Skills – strategies that help students to “think about their thinking” before, during, and after they read.

Morpheme – smallest meaningful unit of a language.

Morphological Awareness – awareness of the semantically meaningful units and structure of words.

Morphology – study of words, how they are formed, and their relationship to other words in the same language.

Multisensory Instruction – instruction that incorporates the simultaneous use of two or more sensory pathways (visual, auditory, kinesthetic, and tactile) during teacher presentations and student practice.

Nonsense Word – a word having no meaning by itself, the spelling of which is usually phonetic (e.g., “vop”). Reading and spelling nonsense words are phonic reinforcement for students who have already memorized a large number of words. Nonsense words can be used for teaching older students to apply phonetic decoding.

Norm – standard of performance on a test that is derived by administering the test to a large sample of students.

Norm-referenced Test – an assessment that provides an estimate of the student’s performance compared to other students in the population of the same age or grade.

Onset – the initial written or spoken single consonant or consonant cluster before the first vowel in a syllable (e.g., /s/ in “sit,” /str/ in “strip”). Some syllables do not have an onset (e.g., “on,” “ask”).

Onset-rime Awareness – awareness of the two separate elements in syllables, the consonant sounds before the vowel sound (onset) and the vowel sound and any consonant sounds that follow (rime); a subcategory of phonological awareness.

Orthographic Knowledge – information in memory of how to represent spoken language in a written form.

Orthographic Processing – use of the visual system to form, store, and recall words.

Orthography – conventional spelling system/writing system of a language.

Phoneme – smallest unit of sound within spoken words.

Phoneme-grapheme Connections – the relationships between the speech sounds (phonemes) and the spellings (graphemes) (Mather & Wendling, 2012).

Phonemic Awareness – awareness of individual sounds/phonemes in spoken words; a subcategory of phonological awareness.

Phonics – a systematic process for teaching sound-symbol relationships and their use in reading and spelling words.

Phonological Awareness – the ability to recognize and manipulate the sound system in spoken language; encompasses the entire continuum of skills related to the awareness of the phonological structure of language.

Phonological Processing – use of the sounds of one’s language to process spoken and written language.

Phonology – study of how sounds are organized and used in natural languages.

Phonology Disorders – phonology disorders are errors involving phonemes, sound patterns and the rules governing their combinations.

Prefix – an affix attached to the beginning of a word that changes the meaning of that word (e.g., “tri-” in “tricycle”) (Birsh, 2011).

Present Levels of Performance – a statement of the student’s current level of achievement or development in an area of need and how the student’s disability affects his or her involvement and progress in the general education curriculum. Present levels of academic achievement and functional performance (PLAAFP) typically shortened to ‘present levels’-is a central component of the IEP and is intended to comprehensively describe a child’s abilities, performance, strengths, and needs. It is based on all the information and data previously collected and known about the child, most especially the full and individual evaluation of the child that must be conducted in accordance with IDEA’s evaluation/eligibility provisions.

Procedural Safeguards – the formal requirements of Part B of the IDEA 2004 that are designed to allow a parent/adult student to participate meaningfully in decisions concerning an appropriate educational program for a student with a disability and, if necessary, dispute such decisions. Also referred to as special education rights.

Progress Monitoring Assessments – used to determine whether students are making adequate progress. May be curriculum embedded (measuring to what extent students have mastered curriculum) or general/external (measuring critical reading skills, such as phonemic awareness, phonics fluency, vocabulary, or comprehension). They serve to predict success in meeting grade-level expectations (Hougen & Smartt, 2012).

Progress Monitoring – is used to assess students' academic performance, to quantify a student rate of improvement or responsiveness to instruction, and to evaluate the effectiveness of instruction.

Prosody – reading with expression, proper intonation and phrasing.

Rapid Naming – or rapid automatized naming (RAN) is the ability to quickly name aloud a series of familiar items (colors, objects, letters, or numbers). Variations in rapid naming time in children provide a strong predictor of their later ability to read. For more information: <https://www.understood.org/en/school-learning/evaluations/types-of-tests/rapid-automatized-naming-tests-what-you-need-to-know>.

Reading Comprehension – a multicomponent, highly complex process that involves many interactions between readers and what they bring to the text (previous knowledge, strategy use), as well as variables related to the text itself (interest in the text, understanding of text types) (Hougen & Smartt, 2012).

Reading Rate – speed of reading at the single word level or at the connected text level. (Mather & Wendling, 2012).

Receptive Language – language that is heard.

Reliability – consistency with which a tool classifies students from one administration to the next.

Research-based Instruction – instruction that is based on the findings of scientific research.

Response to Intervention (RtI) – a formal process for evaluating student response to scientifically research-based interventions, consisting of the core components of: (1) problem identification, (2) problem analysis, (3) applying research-based interventions, and (4) progress monitoring/decisions rules.

Root – main part of a word; affixes are added to the roots to make new words (e.g., “sect”: “intersect,” “intersection,”) (Hougen & Smartt, 2012).

Scope and Sequence – blueprint that provides an overall outline of an instructional program including the range of teaching content and the order or sequence in which it is taught.

Screening – an informal, although organized process, of identifying students who are not meeting or who may not be meeting Oklahoma Academic Content Standards.

Screening Assessment – an efficient assessment given to all students to identify students who are at risk for not meeting grade-level standards.

Sensory impairment – a vision or hearing impairment, or a combination of both, that cannot be corrected to a degree that the student can receive educational benefit from print and/or auditory information.

Segmentation – the ability to break apart spoken words into syllables or phonemes (Mather & Wendling, 2012).

Semantics – study of the meaning of morphemes, words, phrases and sentences.

Sequencing – in multisensory structured language education, the orderly presentation of linguistic concepts based on frequency and ease of learning in a continuous series of connected lessons (Birsh, 2011).

Sight Word – word immediately recognized “on sight” regardless of whether it is phonically regular or irregular.

Small-group – a typical classroom reading group will include a maximum of 5-6 students. If a student exhibiting the characteristics of dyslexia hasn't been successful in the typical small reading group, he or she will likely need a smaller group for the dyslexia intervention. The group size for dyslexia intervention begins with the program guidelines, but should also take into consideration the severity of the reading deficiency and may need to be adjusted based on the individual student's progress monitoring data.

Sound Symbol Recognition – to automatically produce sound(s) or grapheme names (grade level letters or letter clusters) during recognition, production, and/or writing tasks.

Sound-letter Identification – a phoneme (sound) associated with a letter or letters (grapheme); also called sound-letter correspondence.

Specially Designed Instruction – adapting the content, methodology, or delivery of instruction to address the unique needs of an eligible student that result from the student's disability and to ensure access to the general education curriculum so that the student can meet the education standards of that district that apply to all students. As defined in IDEA, specially designed (tiered) instruction is the unique set of supports provided to an individual student based on his or her learning needs to remove barriers that result from the student's disability. The supports are reflected in the student's individual educational plan (IEP) and are infused throughout the student's learning experiences and environments as described in the IEP.

Specific Learning Disability (SLD) – an IDEA disability category in which a specific disorder of one or more of the basic psychological processes involved in understanding or in using spoken or written language may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations, adversely affecting the student's educational performance. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include a student who has needs that are primarily the result of visual, hearing, or motor disabilities; cognitive impairment; emotional disturbance; or environmental, cultural, or economic disadvantage.

Speech or Language Impairment (SLI) – an IDEA disability category that includes articulation/ phonology, voice, and fluency disorders.

Speech-Language Pathologist (SLP) – a professional who can assess and treat persons with speech, language, voice, and fluency disorders. This professional coordinates with and may be a member of the evaluation and IEP teams.

Strategy-based Instruction – providing instruction in the step-by-step processes needed for students to independently complete complex tasks.

Structural Analysis – the perception and examination of syllables and morphemes. Structural analysis enables the reader to recognize different syllables and decode long, unfamiliar words (Birsh, 2011).

Structure of the English Language – English language structure consists of morphology (understanding the meaningful roots and affixes that make up words in the language), semantics (understanding how language carries meaning), syntax (understanding the conventions and rules for structuring meaningful sentences), and pragmatics (understanding how language conveys meaning in specific situations).

Suffix – a morpheme attached to the end of a word that creates a word with a different form or use (e.g., “-s” in “cats,” “-ing” in “lettering”); suffixes include inflected forms indicating tense, number, person, and comparatives (Birsh, 2011).

Syllabication – act of breaking words into syllables.

Syllable – word part that contains a vowel sound in spoken language.

Syntax – way in which words are put together to form phrases, clauses, or sentences.

Systematic Instruction – sequential, cumulative instruction that follows a logical plan and progresses from easiest to most complex with careful pacing to ensure students successfully master each step in the process. Systematic instruction includes scaffolded support for accomplishing each learning step by breaking down complex skills into manageable learning steps and providing temporary supports to control the level of difficulty as students gain mastery.

Universal Design for Learning (UDL) – A scientifically valid framework for guiding educational practice that:

(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and

(B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient. (Definition of UDL included in the Higher Education Opportunity Act 2008)

Universal Screening Assessments – type of criterion-referenced assessments that are designed to be teacher friendly so that they can be quickly administered to all children in a class several times per year; the screening assessments help a teacher determine which students are achieving as expected and which are at risk for specific components of reading (Hougen & Smartt, 2012).

Validity – extent to which a tool accurately measures the underlying construct that it is intended to measure.

Vocabulary – words understood and used when listening, speaking, reading, and writing.

Voiced Consonant – consonant sound produced in which vibration of vocal cords is present (e.g., /b/, /d/) (Hougen & Smartt, 2012).

Vowel – speech sound produced by the free flow of air through the vocal tract (Hougen & Smartt, 2012).

Word Recognition – the ability of a reader to recognize written words correctly and effortlessly.

ACRONYMS & ABBREVIATIONS

****Acronyms:**

White – Taken from the Oklahoma State Department of Education Special Education Handbook

Black – Taken from other sources

<i>Acronym</i>	<i>Description</i>
504	Section 504 of the Rehabilitation Act of 1973
ADA	Americans with Disabilities Act
ADA	American Dyslexia Association
ADD	Attention Deficit Disorder
ADHD	Attention Deficit Hyperactivity Disorder
AEM	Accessible Educational Materials
ALTA	Academic Language Therapy Association
APD	Auditory Processing Disorder
APP	Academic Progress Plan
ASHA	American Speech-Language-Hearing Association
AT	Assistive Technology
CALT	Certified Academic Language Therapist
CAST	Center for Applied Special Technology
CFR	Code of Federal Regulations
DSM	Diagnostic and Statistical Manual of Mental Disorders
EC	Early Childhood
ECE	Early Childhood Education
ESEA	Elementary and Secondary Education Act
EL	English Learner
ESSA	Every Student Succeeds Act
FAPE	Free Appropriate Public Education
FERPA	Family Educational Rights and Privacy Act
GT	Gifted/Talented
IDA	International Dyslexia Association
IDEA	Individuals with Disabilities Education Act 2004
IEE	Independent Educational Evaluation
IEP	Individualized Education Program
IQ	Intelligence Quotient
IMSLEC	International Multisensory Structures Language Education Council
LEA	Local Education Agency
MEEGS	Multidisciplinary Evaluation and Eligibility Group Summary
MSL	Multisensory Structured Language
MTA	Multisensory Teaching Approach
MTSS	Multi-Tiered System of Supports
NCIL	NCIL - National Center on Improving Literacy
OAPP	Oklahoma Alternate Assessment Program
OG	Orton Gillingham

OPC	Oklahoma Parent Center
OSDE	Oklahoma State Department of Education
OSEP	Office of Special Education Programs
OSERS	Office of Special Education and Rehabilitative Services
OSTP	Oklahoma School Testing Program
OT	Occupational Therapy
OTISS	Oklahoma Tiered Intervention System of Support
PA	Phonological Awareness
QIAT	Quality Indicators for Assistive Technology
RD	Reading Disorder
RAN	Rapid Automatized Naming
RED	Review of Existing Data
RtI	Response to Intervention
SES	Special Education Services
SLI	Speech/Language Impairment
SLP	Speech-Language Pathologist
SLD	Specific Learning Disability
SRD	Specific Reading Disability
UDL	Universal Design for Learning