Dyslexia Screening, Intervention, and Teacher Training Roadmap 1.0

A Guide for School Districts Serving Learners with Dyslexia

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International Dyslexia Association Central Ohio
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“Literacy is a civil right and the foundation for all other learning.”
Introduction

Getting Started: Five Questions

What’s your why?

What do you want to achieve?

How will change happen?

How will you assess progress?

Who will join you?

As knowledge regarding human development and learning to read has grown at an accelerated pace, the opportunity to shape more equitable and effective instructional practices and educational systems has also increased. Indeed, we have arrived at an important inflection point in the teaching of reading.

Cognitive neuroscience has provided significant insight into the development of the brain, reading skills, and the underlying causes and consequences of reading difficulties and dyslexia. The Science of Reading (SOR) focuses on the relationship between cognitive neuroscience and educational outcomes. Dr. Louisa Moats describes the Science of Reading as “the emerging consensus from many related disciplines, based on literally thousands of studies, supported by hundreds of millions of research dollars, conducted across the world in many languages. These studies have revealed a great deal about how we learn to read, what goes wrong when students don’t learn, and what kind of instruction is most likely to work the best for the most students (Moats, 2019).”
Persistent reading achievement gaps, renewed calls for equity, and the rise in public awareness regarding instruction aligned to the Science of Reading (SOR) create an unprecedented, large scale opportunity to develop systems that are more productive for students and teachers by ensuring that the right instruction, resources, and interventions reach the right students at the right time.

Shifting away from “balanced literacy” to the SOR is a complex project that changes roles, historical practices, staffing, and budgets. It requires training for staff, the development of new mental models, and change management support.

*It is a journey worth the investment.*

The Dyslexia Identification, Training, and Intervention Roadmap is a guide designed to introduce you to some of the policies and practices that several Central Ohio school districts are already implementing in their transition to evidence-aligned language and literacy instruction. It is the product of IDA Central Ohio and five area school districts, born through a series of convenings in 2019-2020.

We encourage you to take inspiration from our work, lean into the future, and promote evidence-aligned language and literacy teaching and learning for all students, K-12 and especially for those with dyslexia. We invite you to download this roadmap, take it back to your communities, put it to use, and provide feedback.

In Each Child, Our Future, the Ohio Department of Education’s strategic plan, equity is a core principle that requires each child to have access to relevant and challenging academic experiences and the educational resources necessary for success across race, gender, ethnicity, language, family background and/or income and disability (Ohio Department of Education, 2018).
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTA</td>
<td>Academic Language Therapy Association</td>
</tr>
<tr>
<td>AOGPE</td>
<td>Academy of Orton-Gillingham Practitioners and Educators</td>
</tr>
<tr>
<td>CERI</td>
<td>Center for Effective Reading Instruction</td>
</tr>
<tr>
<td>iCALP</td>
<td>Instructor of Certified Academic Language Practitioners</td>
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<tr>
<td>IDA</td>
<td>International Dyslexia Association</td>
</tr>
<tr>
<td>IMSLEC</td>
<td>International Multisensory Structured Language Education Council</td>
</tr>
<tr>
<td>KPSTR</td>
<td>Knowledge and Practice Standards for Teachers of Reading</td>
</tr>
<tr>
<td>MSLE</td>
<td>Multisensory Structured Language Education</td>
</tr>
<tr>
<td>OG</td>
<td>Orton Gillingham</td>
</tr>
<tr>
<td>SLD</td>
<td>Specific Learning Disability</td>
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<tr>
<td>SOR</td>
<td>Science of Reading</td>
</tr>
<tr>
<td>SVR</td>
<td>Simple View of Reading</td>
</tr>
<tr>
<td>QI</td>
<td>Qualified Instructor</td>
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</table>
Dyslexia

Definition of Dyslexia

Scientists working under the direction of the National Institute of Child Health and Human Development have conducted thousands of scientifically rigorous studies to understand the nature of typical reading development and the nature and causes of reading difficulties. One of the longest and broadest educational research efforts ever undertaken, the studies have been conducted through 41 universities and have examined the reading development of over 75,000 good and poor readers in hundreds of different schools and thousands of classrooms over a span of 30 plus years across the nation. The studies established that three specific neurological capabilities are critical to the development of early reading skill in decoding and encoding: phonemic awareness, phonological memory, and rapid retrieval of phonological information from memory (rapid naming). It has been established that, in the presence of at least average cognitive ability, deficits in these areas form the core identifiable neurological component of dyslexia.

A child with an affected parent has a **40-60% risk** of developing dyslexia. This risk is increased when other family members are also affected.

-Daniel and Ronald Barr 2007

Dyslexia affects 20 percent of the population and represents **80-90%** of all those with learning disabilities. It is the most common of all neuro-cognitive disorders.

-Yale University
Most students with dyslexia have measurable phonological deficits in at least one of the following areas (Wagner et al. 2013):

- **Phonological Awareness**
- **Phonological Memory**
- **Rapid Naming**

The State of Ohio uses the International Dyslexia Association’s definition of dyslexia, which was adopted by the United States National Institutes of Child Health and Human Development:

“**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.**”

Ohio specifically references dyslexia as a diagnosis included in the category of specific learning disability.

**Dyslexia and Phonological Processing**

Most students with dyslexia have measurable phonological deficits in at least one of the following areas (Wagner et al. 2013):

- **Phonological Awareness**
- **Phonological Memory**
- **Rapid Naming**

**Phonological Awareness**

Poor phonological awareness, especially phonemic awareness, indicates a high risk for dyslexia (Catts & Adolf, 2011). Phonemic awareness is the most advanced skill under the phonological awareness umbrella and is the component of phonological processing most directly linked to acquisition of decoding and spelling skills. It includes the ability to:

- **Discriminate and segment individual sounds (phonemes) within spoken words**
- **Blend sounds together into pronounceable units**
- **Manipulate sounds through deleting, substituting, and reversals**
Phonological Memory

Individuals with dyslexia often have deficits in their ability to repeat nonsense words and longer words with accuracy (Hulme and Snowling, 2009). Phonological memory is critical for “sounding out” words, as it enables the reader to hold the beginning sounds of a word in mind while decoding and blending subsequent sounds (Wagner et al. 2013).

Rapid Naming

Rapid naming is strongly associated with reading fluency (Manis, Doi and Cutting, 1999) and poor naming speed is the main cognitive correlate of dyslexia (Brizzolara et. al., 2006). The ability to rapidly and accurately (fluently) recall and employ phonological knowledge is a critical component of fluent decoding; weak performance indicates that the individual cannot retrieve decoding information stored in memory quickly enough to use it efficiently in identifying words.
Structured Literacy

Core and intervention literacy instruction in many schools is not highly explicit or systematic. Important foundational skills often receive limited emphasis, even for striving readers. (Moats, 2017). Many teachers lack access to integrated texts and instructional materials that enable direct, explicit, systematic teaching in all areas of literacy. Structured Literacy is a comprehensive approach to literacy instruction that research has shown to be effective for all students and essential for students with dyslexia. It is also beneficial for English learners (Baker et al., 2014; Gersten et al., 2008; Kamil et al., 2008; Vaughn et al., 2006). Structured literacy addresses all aspects of literacy in a manner that is crystal clear and straightforward for the student.

Structured literacy emphasizes:

- Direct, explicit, systematic teaching of phonics through a phoneme grapheme level approach
- Teaching phonemic awareness skills from beginning to advanced levels
- Coordinated decoding and encoding instruction using integrated materials
- Shifting away from the use of leveled, predictable readers to the use of decodable texts as part of an integrated set of literacy materials
- Shifting away from teaching and assessing meaning, structure, and visual cues to encouraging close attention to the text and application of decoding skills (Spear-Swerling, 2019)
- Giving all students access to grade level reading and critical thinking of texts that build knowledge and vocabulary though a knowledge-building curriculum
Structured Literacy instruction is marked by several elements that work together (IDA, 2016):

**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 three evidence-based teaching principles guide how the elements are taught (IDA, 2016):

**Systematic & Cumulative:** Structured Literacy teaching is systematic and cumulative. Systematic means that organization of material follows the logical order of language. The sequence begins with the easiest and most basic concepts and elements and progresses methodically to the more difficult. Cumulative means each step is based on concepts previously learned.

**Explicit:** Structured Literacy instruction requires direct teaching of concepts with continuous student-teacher interaction and does not assume students deduce concepts. (Multisensory instruction, the simultaneous association of auditory, visual, kinesthetic-motor modalities, helps a student learn faster and remember what s/he has learned.) (Birsh, 2011, pp. 39-40).

**Diagnostic:** Teachers must be adept at individualizing instruction (even within groups) based on careful and continuous assessment, both informal (e.g., observation) and formal (e.g., with standardized measures). Content must be mastered to the degree of automaticity needed to free attention and cognitive resources for comprehension and oral/written expression.
Structured Literacy encompasses all approaches to language and literacy instruction that conform to IDA’s Knowledge and Practice Standards. This includes Orton Gillingham (OG) and Multisensory Structured Language Education (MSLE). The term Structured Literacy is not designed to replace OG or MSLE, but is an umbrella term designed to describe all of the approaches and programs that provide a strong core of highly explicit, systematic teaching of foundation skills as well as explicit teaching of other core components of literacy (Malchow, 2019).

Structured Literacy instructional approaches are consistent with the wider scientific research base for explicitly and systematically teaching the structure of language across listening, speaking, reading and writing domains. It addresses all of the foundational elements outlined in the Simple View of Reading and the Scarborough Reading Rope model.

**Simple View of Reading**

Structured Literacy is not just about phonics. It includes much more. The Simple View of Reading (SVR) is a framework to understand reading first proposed by Philip Gough and William Tunmer in 1986. In the simple view, reading comprehension is the product of decoding ability and language comprehension. If a student can’t decode, it doesn’t matter how much background knowledge and vocabulary he/she understands, he/she won’t be able to understand what’s on the page. The opposite is also true: If a student can decode but doesn’t have a deep enough understanding of oral language, he/she won’t be able to understand the words he/she can read. While Gough and Tunmer first proposed this framework, numerous studies have confirmed that comprehension and decoding are separate processes (Schwartz and Sparks, 2019). Because inefficiency in one component may lead to reading failure, Structured Literacy addresses the skills that underpin both oral language and decoding:

**Oral Language Comprehension**

The first factor in the Simple View of Reading equation is oral language comprehension. A student’s capacity for comprehending text cannot surpass the student’s oral language skills. There are multiple skills that underlie oral language comprehension:
Attention, comprehension monitoring, and working memory also affect language comprehension. (Kilpatrick, 2015)

<table>
<thead>
<tr>
<th>Vocabulary Knowledge</th>
<th>Vocabulary refers to the body of word meanings known to a student.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntactical-Grammatical Knowledge</td>
<td>Syntax is the study of sentences and phrases, or how people put words into the right order so that they can communicate meaningfully. Grammar refers to the rules that govern word, phrase, and sentence formation.</td>
</tr>
<tr>
<td>Inferencing</td>
<td>Verbal reasoning refers to the ability to infer what was not explicitly stated.</td>
</tr>
<tr>
<td>Background Knowledge</td>
<td>Background knowledge refers to a student’s knowledge about the world, factual and conceptual understanding of specific topics, and knowledge of the genre that the student is listening to or reading.</td>
</tr>
</tbody>
</table>

**Decoding and Word Recognition**

In addition to oral language comprehension, the second factor in the Simple View of Reading equation is decoding.

In SVR, decoding is divided into two subcomponents.

- The first part is how we use the code of written English to pronounce written words.
- The second part is our bank of sight words or parts of words (patterns) that we can read instantly and effortlessly.
**Decoding**

When we use the code of English to pronounce written words (phonic decoding), the following factors are at play:

<table>
<thead>
<tr>
<th>Letter-Sound Knowledge</th>
<th>Orthographic Knowledge</th>
</tr>
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<tbody>
<tr>
<td>Letter-Sound Knowledge is understanding the correspondence between graphemes (letters) and phonemes (sounds).</td>
<td>Orthographic Knowledge is understanding the rules that govern spelling in English as well as memory of common patterns within words.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phonological Awareness</th>
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<tbody>
<tr>
<td>Phonological awareness is the ability to notice the sound structure of spoken words. Phonemic awareness is the most advanced skill under the phonological awareness umbrella and is the component of phonological processing most directly linked to acquisition of decoding and spelling skills. It includes the following:</td>
</tr>
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</table>

- **Early Phonics:** (Level 1: Letters and Sounds: Children learn letter names and sounds.)
  - Rhyming
  - Segment words into syllables
  - Onset Fluency (alliteration & isolating the first sound)

- **Basic Phonemic Awareness:** (Level 2: Phonic Decoding - Children combine phonics with phonological blending to sound out unfamiliar words.)
  - Blending
  - Segmentation

- **Advanced Phonemic Awareness:** (Level 3: Orthographic Mapping: Children efficiently expand their sight vocabulary and develop proficiency in manipulating sounds through:
  - Deleting
  - Substituting
  - Reversals
Phonological Blending is the ability to identify a word after hearing it.

Working memory is the ability to hold the information we are thinking about in memory.

Phonological Memory enables the reader to hold the beginning sounds of a word in mind while decoding and blending subsequent sounds.

Rapid Automatized Naming is the ability to rapidly and accurately (fluently) recall and name a series of familiar items; weak performance indicates that the individual cannot retrieve decoding information stored in memory quickly enough to use it efficiently in identifying words.

When we phonetically decode words, we look at the letters in a word and translate them into possible phonemes (the smallest unit of sound in spoken words). We blend those phonemes to form words. This process involves going from part to whole. (Kilpatrick, 2015)

### Word Recognition

In SVR, the second subcomponent of decoding is our bank of sight words or parts of words (patterns) that we can read instantly and effortlessly (our sight word vocabulary). Being able to read words from memory by sight is valuable because it allows readers to focus their attention on constructing the meaning of the text while their eyes recognize individual words automatically. (Kilpatrick, 2015)
Orthographic Mapping

Dr. David Kilpatrick says the most important scientific discovery regarding reading that is least known to educators is the research regarding orthographic mapping. Orthographic mapping is “the formation of letter-sound connections to bond the spellings, pronunciations, and meanings of specific words in memory. It explains how children learn to read words by sight, to spell words from memory, and to acquire vocabulary words from print” (Ehri, 2014).

Orthographic mapping shares some similarities with phonic decoding, but is actually a different process. Phonetically decoding words is a part-to-whole process that involves blending phonemes into words. Orthographic mapping is a whole-to-part process. It requires analysis of a word’s pronunciation in the phonological long-term memory. Phonological long-term memory refers to the sounds produced by spoken language that are stored in memory. The sequence of the separated phonemes become the anchor for storing the individual letters of the written word in memory. When the reader matches a stored phoneme sequence with a word in print, the word can become familiar. (This is why phonological awareness is so important to developing a growing sight word vocabulary bank.) After one to four exposures, for typical readers, the word becomes a “unit” stored in memory for fast, efficient retrieval. Orthographic mapping is consistent with neurophysiological research. This research helps explain why people with dyslexia struggle to develop a sufficient bank of sight words for fast, efficient retrieval. The part of the brain that becomes active when typical readers read text (the left fusiform gyrus, which is responsible for storage and retrieval of the sequence of separated phonemes) is not as active in people with dyslexia who have not received proper phonological awareness instruction. After receiving direct, explicit, and systematic instruction that characterizes Structured Literacy, including proper phonemic awareness instruction, this part of the brain becomes active when people with dyslexia read text (Kilpatrick, 2015).

Resource Highlight

Ohio’s Plan to Raise Literacy Achievement is based on the components of the Simple View of Reading and Scarborough’s Rope. (Retrieved from Ohio Department of Education website, 2020.)
Scarborough’s Reading Rope

The genesis of the Reading Rope (see an illustration here) dates back to Dr. Hollis Scarborough’s lectures on the complexities involved in learning to read. Originally, she spoke of skilled reading as resembling the “strands” of a rope, using pipe cleaners to illustrate the interconnectedness and interdependence of all the components.

The word-recognition strands (phonological awareness, decoding, and sight recognition of familiar words) work together as the reader becomes accurate, fluent, and increasingly automatic with repetition and practice. Concurrently, the language-comprehension strands (background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge) reinforce one another and then weave together with the word-recognition strands to produce a skilled reader. This does not happen overnight; it requires explicit instruction and practice over time (IDA, 2018).

Learning to read can be a tremendous challenge for students with dyslexia. This challenge, however, can usually be overcome with effective reading instruction. If not overcome, lifelong consequences can be harsh (IDA, 2016). Unfortunately, popular reading approaches (i.e. Guided Reading or Balanced Literacy) are not effective for students with dyslexia because these approaches do not incorporate the kind of explicit, direct, and systematic teaching of the decoding and word recognition skills struggling readers need to succeed (IDA, 2016).
When Should We Screen Children for Dyslexia?

In order to identify students who may be at-risk for dyslexia, school districts should administer valid and reliable universal screening measures of literacy skills to all students in grades K-5 by fall of each school year.

This is critical as a diagnosis of dyslexia in elementary school has been historically based on what Dr. Nadine Gaab, Harvard Medical School researcher and developmental cognitive neuroscientist, calls a “wait-to-fail-approach” (Gaab, 2017). This approach requires a child to struggle to learn to read over a prolonged period of time before more intensive (qualitatively and quantitatively) interventional strategies are instituted. Gaab notes that although...
a diagnosis of dyslexia usually is not given before the end of second grade or the beginning of third grade (after the prolonged period of failing), intensive interventions are most effective in kindergarten or first grade (Wanzek & Vaughn, 2007).

A Case for Early, Universal Screening

In 2018, more than 380,000 students were not proficient on Ohio’s English Language Arts tests in grades 3 through 8 and high school, including more than 50,000 (38.9%) of Ohio’s third-graders. Ohio’s disadvantaged students are overrepresented among the state’s struggling readers. Among those students in grades 3-8 who are not proficient on the English language arts assessments:

- 71.4% are economically disadvantaged;
- 30.3% are students with disabilities;
- 4.6% are English learners;
- more than half attend high-need schools.

By the time struggling readers reach high school, the cumulative effects are apparent and can have a profound effect on students’ postsecondary options.

In 2018, 68% of the students taking Ohio’s English end-of-course high school exam scored proficient; and 53% of Ohio’s ACT test-takers scored below the remediation-free level on the English language arts assessment (Ohio Department of Education, 2020).

How Should We Select a Universal Screener?

Buyer beware. Choosing the right screening tool is critical. Rigorously validated, not brilliantly marketed instruments, are needed.

Consider that of late, many school districts are opting to use seemingly low-cost survey or questionnaire-type screeners (asking teachers a series of questions) for assessing dyslexia risk instead of assessing the child directly (Gaab, 2020). This is problematic as several research studies have shown that teacher surveys are poorly correlated with the actual performance of a child, especially at the beginning of Kindergarten (or in any grade as teachers are still getting to
know the student). In *Examining the Accuracy of Teachers’ Judgments of DIBELS Performance*, researchers note that teachers’ judgments of students’ early literacy skills alone may be insufficient to accurately identify students at risk for reading difficulties. Dr. Nadine Gaab, Harvard Medical School researcher and developmental cognitive neuroscientist, indicates that survey or questionnaire-type screeners are biased, often poorly designed and not rigorously validated. They may be cheaper, but are in fact “wasting resources, harming students and hurting advocacy efforts since these tools will lead to inaccurate screenings and will lead to misconceptions that screeners don’t work.” These types of survey assessments should not be used as the sole means of identifying struggling readers in the classroom, but rather could be used to complement direct assessment (Martin and Shapiro, 2011; Graney, 2008; Cabell et al., 2009).

**Intensive interventions are most effective in kindergarten or first grade.**

Dr. Jan Wasowicz, CCC-SLP cites sensitivity and specificity as two factors that determine the effectiveness of a screening tool (Wasowicz, 2020).

“The accuracy of a screening test is measured by its sensitivity and specificity. It seems that the first question to ask when evaluating a screening tool is whether the screening tool has **strong sensitivity** and **strong specificity**.

- **Sensitivity** refers to the ability of the test to correctly identify those with a condition (in this case, those with dyslexia). It is measured as the percentage of individuals with a condition who correctly test positive (true positive) when screened. A test with poor sensitivity will yield many false-negatives (in this case, failing to identify individuals who have dyslexia).

- **Specificity** refers to the ability of the test to correctly identify those who do not have a condition (in this case, those who do not have dyslexia). It is measured as the percentage of individuals without a condition who correctly test negative (true negative) when screened. A test with poor specificity will yield many false-positives.”

To determine which screener is best for your school or school district. We recommend using the following:

- **National Center on Intensive Intervention (NCII) Academic Screening Tools Chart** (NCII Tools Chart) to evaluate the scientific evidence of available screeners.
Early Literacy Assessments Table created by the research teams at the Gaab Lab at Boston Children’s Hospital and the Gabrieli Lab at MIT. The list of screeners for dyslexia risk and early literacy milestones provided in the table is the most comprehensive list available. Gaab and Gabrieli Labs note that the table is not a list of recommended screeners. The purpose of their current list is to give you an overview about ALL screeners so you can compare various screeners since not all screeners are on the NCII Tools Chart (it only reviews screeners which were directly submitted for evaluation). The NCII Tools Chart will ultimately help you to determine a good screener for your district or school.

What Should Early Screening Look Like?

Gaab (2017) recommends incorporating eight key characteristics when determining an optimal screening battery for an individual classroom, school or district. SCREENED.

- Short
  No longer than 30 minutes

- Comprehensive
  Includes phonological awareness, letter-sound knowledge, rapid naming, listening comprehension, and family history

- Resourceful
  Typically already part of school resources

- Early
  No later than kindergarten

- ESL/Dialect Inclusion
  All learners are assessed

- Neurobiology/Genetics
  Family history is examined

- Evidence-based response to screening
  Screening is followed by evidence-based intervention for the students identified in need

- Developmentally appropriate
  Developmentally appropriate for the age of the students being assessed
Screening vs. Diagnosing Dyslexia

“Screening focuses on a specific set of skills that indicate reading readiness or skills that can predict future reading success, such as phonemic awareness and letter-naming fluency. Diagnosis focuses on gathering clinical evidence to make a clinical determination. Diagnostic tests of reading examine more complex skills, such as comprehension and cognitive processes. A screener can lead to a diagnosis, but a diagnosis will need to come from a professional who is approved to diagnose dyslexia (Pons, 2016).”

Rewiring the Brain as Soon as Possible

The central goal of screening early for dyslexia is to begin research-based intervention to rewire the brain as soon as possible. Districts should place a greater focus on putting supports in place across intervention Tiers (I, II and III) instead of simply qualifying students for special education. An IEP should not serve as a gatekeeper for intensive, explicit, and systematic Structured Literacy intervention. (Duty, 2019).

One Size Doesn’t Fit All. When MTSS teams deeply understand the importance of identifying risk, probing for additional information, planning SOR-aligned, targeted interventions tailored to the student’s needs, and monitoring student performance in areas like phonemic awareness, all students benefit.

Screening and assessment data should be used in conjunction with local decision-making rules to place students into specific tiers of intervention, match them with specific programming options based on their needs that increase in intensity, and progress monitor.

This process facilitates early identification of students at risk for dyslexia and decreases the percentage of students in need of special education services.
**SOR-Aligned Intervention: How Should We Align Core and Intervention Planning for Each Student?**

It is critical to align core and intervention planning for each student to avoid any confusion. Carefully differentiated literacy plans are structured so that the approach, strategies, skills, and materials align for individual students in core and intervention services.

*Districts should aim to work solely in the explicit, systematic, direct column which is aligned to the SOR.*

<table>
<thead>
<tr>
<th>Overall Approach</th>
<th>Constructivist</th>
<th>Explicit, Systematic, Direct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies taught to help students correct errors while reading</td>
<td>Using cues (i.e. 3-cueing system)</td>
<td>Employs skills that govern the structure of written English</td>
</tr>
<tr>
<td>Skills taught to build expertise</td>
<td>Identified through incidental errors</td>
<td>Identified through diagnostic assessment and taught in building block fashion until the student demonstrates automaticity</td>
</tr>
<tr>
<td>Instructional materials</td>
<td>Authentic literature</td>
<td>Authentic literature + decodable books that contain the targeted skills, are at the students’ instructional level, and contain controlled vocabulary that builds on the skills taught to date</td>
</tr>
</tbody>
</table>
How can a district align its approach, strategies, skills, and materials for individual students in core and intervention?

Through the choices we make, and the actions we take, we can respond to students’ backgrounds, neurodiversity, and individual needs and ensure that equitable access to reading success becomes the norm.

Consider the following:

- How might we refine our literacy plan to better reflect the neurodiversity of our student population?
- To what degree are our intervention options SOR aligned, informed by the Simple View of Reading, and differentiated to meet the diverse needs of our student population?
- What SOR-aligned intervention options should we offer at each tier for students at risk for dyslexia? What decision-making rules should we establish to place students based on screening and assessment data?
- How might we frame these options along a continuum that increases in intensity towards Tier 3?
Structured Literacy Curriculum

The effect size of a strong curriculum is larger than that of many other common education reforms. High-quality instructional materials can help boost teachers’ content knowledge and improve teaching practice and save teachers time (teachers in the U.S. spend an average of 12 hours per week searching for or creating their own materials). The cost of better instructional materials is often no higher than the cost of less effective materials.

Three Critical Questions

With that in mind, districts should ask three important questions when looking at any curriculum components.

- First, is the curriculum aligned to the Science of Reading and all 5 of the Big Ideas in Reading as outlined by the National Reading Panel? This necessitates adoption of a knowledge-based curriculum. (Curricular pieces may be vetted through third party research, i.e. EdReports, ODE adoption rubrics or your own literacy framework aligned to the 5 Big Ideas in Reading).

- Second, how quickly can the district scale the program to meet the needs of all readers?

- Third, can the district sustain the program over time from an implementation and professional development standpoint?
Mistakes Districts Make

The biggest mistake a district can make is to play the “reading wars” and allow opinion to drive decision making. Adopting materials without a clear plan for implementation and support for teachers is a major mistake as well. Many quality products purchased collect dust in classrooms because plans for implementation, training and accountability did not exist. Sustainability must be considered as well. Factors such as administrator and teacher turnover rates play a huge role in the sustainability and thus viability for some approaches and curriculums. Districts should try to avoid reading war-type conversations that drive “faith based reading decisions” where teachers “believe” there is one best program for all students. Instead, align material adoptions to the student reading profiles that exist in your district and make sure teachers have the necessary curriculum and pedagogy to meet the needs of every student. With that said, certain universal truths apply.

For example, the faster your district adopt materials and instructional practices fostering the development of orthographic mapping, the better off students will be in terms of academic achievement and social emotional health. Make sure to align to the SOR in areas of vocabulary and comprehension as well. The SOR too often is thought about only as phonemic awareness, alphabetic principle and fluency. Vocabulary and comprehension instruction also needs to be carefully aligned to the science regarding language development, content, background knowledge, mental-models and both micro and macro comprehension skills.
Building Educator Capacity

There are considerable differences in approaches to teacher training across the districts informing this guide, yet no one approach is superior to another.

Professional training in Structured Literacy is a personal choice. Just like treating dyslexia, there is no one-size-fits-all answer.

Educators and other professionals must be trained and skilled in screening and Structured Literacy methodology as it is imperative to students’ success. Most undergraduate and graduate teaching programs, however, have not yet embraced the SOR—meaning districts must build, hire and support staff, often from scratch. Dyslexia-specific training at the school level is critical.

Getting Started

When considering training, teachers should first familiarize themselves with the Knowledge and Practice Standards for Teachers of Reading (KPSTR) that have been developed by IDA for classroom educators and dyslexia specialists. The KPSTR include the information and skills that education professionals need to be able to demonstrate in order to effectively teach all students to read (International Dyslexia Association, 2019). It is important to select a teacher training program that aligns to the KPSTR.

*When selecting a training option, some possible questions to ask regarding Structured Literacy training include:*

- Does the training align to the IDA KPSTR?
- Is the training program accredited by IDA, IMSLEC, ALTA or AOGPE?
• Does the program provide a supervised practicum with feedback?
• Does the program have demonstrated results?
• Do individuals need to stay current by completing CEUs for renewing certification?

Next, before investing in professional development, consider whether the training program suits your needs, contains a supervised practicum with feedback to educators, whether the training program is accredited, and if it demonstrates results. Accrediting organizations have an extensive and rigorous process to ensure their programs meet the highest standards in dyslexia education (Cork and Wagner, 2015).

An advantage to selecting an accredited program is that teachers can expand their program-level certification by receiving an additional nationally recognized certification. Teachers can’t obtain a nationally recognized certification if their initial courses were not accredited (Cork and Wagner, 2015).

**Certification/Qualifications**

Districts can create sustainability by creating a tiered system of experts in the area of reading instruction. Each district should maintain an in-house trainer, advanced and initial level practitioners. By hiring a certified trainer, the district is able to train staff to meet the needs of students within the district. For example, if each building in the district has an advanced level teacher, there is a point person for teachers with initial level certification.

Regardless of the certifying agency, a district can build capacity by building this tier of experts. Please see the charts below for an explanation of the agencies in our communities.

We stress that it is important for a teacher not only to complete a training course, but that the course must include a practicum with feedback from a qualified instructor. Additionally, high quality certifying programs require continuing education for certified individuals. It is important to understand training is not the same thing as certification. You must complete practicum and sit for an exam to receive certification.
The International Multisensory Structured Language Education Council (IMSLEC) graduate: IMSLEC accredited training programs, but not individuals. A graduate from an IMSLEC accredited course, is able to sit for the ALTA examination and become individually certified. IMSLEC training programs consist of courses along with a supervised practicum.

Academic Language Therapy Association (ALTA) certification: This agency accredits individuals. One must be vetted in order to take the examination to insure he/she has received appropriate training with a practicum.

Academy of Orton-Gillingham Practitioners and Educators (AOGPE): This agency also accredits individuals. It includes coursework as well as a practicum.

International Dyslexia Association (IDA) This agency accredits training programs. IDA programs without an approved practicum are labeled accredited. Programs with an approved practicum are labeled Accredited Plus.

Wilson Language Training is a program that is accredited through IDA and IMSLEC.

Levels of Certification within Each Agency

**IMSLEC Certification Levels**

<table>
<thead>
<tr>
<th>Course Work</th>
<th>Teaching</th>
<th>Instructor of Teaching</th>
<th>Therapy</th>
<th>Instructor of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of 45 hrs.</td>
<td>Minimum of 90 hrs.</td>
<td>200 clock hrs. (90 hours from Teaching &amp; Instructor of Teaching may apply).</td>
<td>2,100 (including therapy) practicum hrs.</td>
<td></td>
</tr>
<tr>
<td>Practicum/ Internship</td>
<td>Min. of 60 practicum hrs.</td>
<td>Complete 1 cycle of teacher</td>
<td>700/500/300 (min. of 40 minute lesson) At least 3 different cases + experience in beginning and upper levels of instruction</td>
<td></td>
</tr>
<tr>
<td>Time Period</td>
<td>Min. of 9 months</td>
<td>Min. of 2 years (Must have 600 hrs of experience)</td>
<td>24 months</td>
<td>3 years as Therapist 2 years Internship</td>
</tr>
<tr>
<td>CEUs Required</td>
<td>30 hrs. every 3 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATLA Certification Levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Certified Academic Language Practitioner (CALP)</strong></td>
<td><strong>Instructor of Certified Academic Language Practitioner (ICALP)</strong></td>
<td><strong>Certified Academic Language Therapist (CALT)</strong></td>
<td><strong>Qualified Instructor of Certified Academic Language Therapists and Practitioners (QI)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Course Work</strong></td>
<td><strong>Teach two supervised lectures</strong></td>
<td><strong>200 instructional hrs.</strong></td>
<td><strong>CALP for one year, teach 3 lectures</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Practicum/Internship</strong></td>
<td><strong>Min. of 60 hrs.</strong></td>
<td><strong>600 hrs. beyond CALP hrs.</strong></td>
<td><strong>1,400 hrs.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>5 guided evaluations</strong></td>
<td><strong>Give 10 guided evaluations</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>5 independent evaluations</strong></td>
<td><strong>Give 10 independent evaluations</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Provide 5 final exam questions for students</strong></td>
<td><strong>Provide 5 final exam questions for students in introductory level</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Read and respond to 5 current research articles</strong></td>
<td><strong>Provide 5 final exam questions for students in advanced level</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Read and respond to 5 current research articles</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td><strong>Pass competency exam</strong></td>
<td><strong>Pass competency exam</strong></td>
<td><strong>Pass competency exam</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CEUs Required</strong></td>
<td></td>
<td></td>
<td><strong>10 CEUs each year</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### AOGPE Certification Levels

<table>
<thead>
<tr>
<th></th>
<th>Educator Level OGCE/AOGPE</th>
<th>Associate Level A (B/AOGPE)</th>
<th>Associate Level B (B/AOGPE)</th>
<th>Certified Level (C/AOGPE)</th>
<th>Fellow Level (F/AOGPE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Work</strong></td>
<td>30 hours</td>
<td>60 hours</td>
<td>70 hours</td>
<td>100 hours</td>
<td>90 hours</td>
</tr>
<tr>
<td><strong>Practicum/Internship</strong></td>
<td>50 hrs. with 5 observations</td>
<td>100 (1 student with 10 observations)</td>
<td>100 hrs. (50 with 1 student and 50 with a group of students) with 10 observations</td>
<td>200 hrs. (beyond the initial 100) with 10 observations</td>
<td>300 hrs. (beyond the initial 300) with 10 observations</td>
</tr>
<tr>
<td><strong>CEUs Required</strong></td>
<td>Beginning in 2021, 10 CEUs will be required</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### IDA Certification Levels

<table>
<thead>
<tr>
<th></th>
<th>Classroom Teacher Knowledge Certificate</th>
<th>Dyslexia Practitioner</th>
<th>Dyslexia Therapist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Work</strong></td>
<td>45 hours</td>
<td>90 hours</td>
<td>135 hours</td>
</tr>
<tr>
<td><strong>Practicum/Internship</strong></td>
<td>N/A</td>
<td>24 sessions (1 student with 3 formal observations)</td>
<td>24 sessions (1 student with 3 formal observations)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Pass the KPEERI exam</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CEUs Required</strong></td>
<td>10 CEUs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Who should become certified?

Every teacher in every building who is responsible for teaching reading should understand and apply the Science of Reading. The level of training required depends upon the needs of the population served. A Tier 3 teacher who serves students identified with a specific learning disability in basic reading or reading fluency and/or due to a lack of response to Structured Literacy in previous tiers, will need a higher level of training in comparison to a core ELA teacher.

Tier 2 and 3 instruction for all students who display potential characteristics of dyslexia should be provided by any of the following:

- an IDA Tier 3–Level I–Certified Dyslexia Practitioner
- an IDA Tier 3 - Level II–Certified Dyslexia Therapist
- graduate of an IDA accredited program
- an ALTA, AOGPE, or Yoshimoto OG Association certified tutor; or
- graduate of an IMSLEC accredited program

Schools or districts can have someone certified at the Instructor of Teaching or the Fellow level so that they can provide in-district training to their staff (See Credential Options in Ohio and Levels of Certification below). Following are three options:

- Hire a certified trainer from an IDA accredited organization to train your teachers and complete their practicum in classrooms in your district;
- Hire a certified trainer from an IDA accredited organization to train your teachers and complete their practicum at their accredited training site, or,
- Hire or train an educator to conduct in-district training and practicums. Apply to become a certified training site.
Hiring Teachers— What Should We Look For

Before hiring, one should confirm the prospective teacher has the appropriate certifications and knowledge to work with children with dyslexia. This can be done by checking the certification of an individual as well as asking interview questions to confirm knowledge competency.

Interview Questions:

- Where did you receive your training? (Be sure it included a practicum with feedback)
- What are the five essential components of effective reading instruction and how do you incorporate them in your teaching?
- What do you include in your multisensory lesson plan?
- How do you keep track of data from each lesson?
- What assessments do you use? Why?
- You may want to include questions related to the structure of English in order to confirm the prospective teacher has a solid understanding of his/her content. For example, you could ask, “How would you introduce a new morpheme to a student?”

Other Possible Requirements:

- Some districts require a prospective employee to complete a lesson while being observed.
- The candidate could be required to submit a lesson plan he/she previously taught with student work included (with the name of the student redacted).

Possible Incentives for Staff Members to Train in Structured Literacy

It may be challenging to find all the trained staff you need; incentives to train in Structured Literacy may be helpful. Consider:

- Paying for staff to attend conferences relevant to Structured Literacy (e.g. IDA, ALTA, AOGPE, Reading League)
- Paying for staff application fees for AOGPE or to sit for the CALP/CALT exams
- Paying annual dues for AOGPE, ALTA, CERI memberships
- Paying staff hourly rates for Extended School Year Services at a rate that is commensurate with their level of OG certification

Additional Supports for Providing Services to Students with Dyslexia

While building capacity of in-house trained staff, districts may need to hire additional certified staff to meet the needs of their students with dyslexia.

Districts can explore:
- Resources for finding ALTA certified staff
- Resources for finding AOGPE certified staff
- Resources for finding IDA certified staff

Commonalities Across Districts: Educator Training

Looking across the districts that informed this guide, the following conditions largely hold true, and may prove helpful in others’ planning:

- Very few to none of the districts’ teachers had training in Structured Literacy approaches in the beginning, and hence didn’t have the tools to help their students narrow the gap
- Most have made broad participation in Structured Literacy training voluntary, offering an “invitation to staff” to train
- Districts have the expectation that intervention specialists are required to train in Structured Literacy
• Districts set goals to have certified intervention staff in all school buildings

• Substitutes are used to free up, for example, intervention specialists for in-house training

• Structured Literacy training is delivered at the district’s expense

• Some version of an in-district trainer/program is in place and evolving

• Staff are expected to successfully meet the teaching practicum expectations

• Trainers establish ongoing professional relationships with trainees, leveraging connections long after, for example, a practicum has been completed

• Staff earn certifications

• Districts provide/arrange for graduate course credit

• Districts invest in staff certifications that sometimes end up benefiting other communities as educators change employers

• While it’s an extra and often heavy load to carry in achieving the pinnacle of certification, there are very few individuals that don’t want to do it-- and they are extremely happy after having certification in Structured Literacy

On a daily basis, staff have the amazing opportunity to see children read for the first time, to maximize their reading/spelling ability, to apply for college and to reach for dreams which may not have been available to them in the past (Arganbright and Duty, 2019).

Change Management

When you address educator training, you are addressing human development. Individuals arrive-- or do not arrive at change-- in very personal, identity-driven ways. It’s important not to lose sight of this fact.

In a recent blog by Marnie Ginsberg, a critical point related to managing the shift to the Science of Reading is well made. Under the banner Attracting More Flies with Honey, Ginsberg (2019) notes that “If the water that teachers are swimming in is balanced literacy and the 3-cueing system, confusion and fear are obvious reactions to being scolded for not using research-based
strategies. As reading teachers, leaders, researchers, and advocates, we need to tread cautiously and sensitively into conversations with those awash in the balanced literacy worldview.”

The blog goes on to direct attention to Margaret Goldberg from the Right to Read Project, who aptly notes the differences in the ways voices for balanced literacy vs. the SOR can make classroom teachers feel. Goldberg reflected on her own transition, saying:

“I understand why advocates, researchers, and policymakers who feel the urgency of our literacy crisis are frustrated when teachers don’t embrace reading science. But my entry into the world of reading research was difficult, and while I take pride in my determination to learn, I understand why other teachers might be deterred. If we want teachers to apply research, it may be helpful to think about why they aren’t. I’ll open my own experience up as an example” (Goldberg, 2019).

<table>
<thead>
<tr>
<th>Hierarchy of Expertise</th>
<th>In the Balanced Literacy Community I felt that...</th>
<th>Teachers were described as “unprepared” and “ineffective.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I was an expert because I was told, “You know your students best.”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Understanding Reading</th>
<th>In the Balanced Literacy Community I felt that...</th>
<th>In the Reading Science Community I found that...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading was described in terms that matched my own memory of learning to read: “natural” and “magical.”</td>
<td>Reading was a complex neurological process that I didn’t understand and phrases like “curriculum casualties” and “reading failure” terrified me.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility of the Teacher</th>
<th>In the Balanced Literacy Community I felt that...</th>
<th>In the Reading Science Community I found that...</th>
</tr>
</thead>
<tbody>
<tr>
<td>My role was simple and pleasurable because I believed students learned to read by reading. I matched students with books while observing and encouraging their progress.</td>
<td>I’d be to blame if any of my students did not become skilled readers.</td>
<td></td>
</tr>
</tbody>
</table>
## Overall Approach

**Vocabulary** refers to the body of word meanings known to a student.

**I was a good reader.** Books and articles were enjoyable, easy to read, and often included anecdotes to which I could relate.

**I was welcomed and spoken to with respect, if not with admiration, by the presenters.** They understood my job.

**I left with concrete strategies to try with my students the next day.**

**Articles included words I’d never encountered before (saccade), concepts I didn’t understand (effect size), graphs I couldn’t read, and references to studies I didn’t know.**

**At conferences, I was not the intended audience and comments about teachers not only made me feel unwelcome, but discouraged me from inviting my colleagues.**

**I left rethinking important ideas, but without knowing how to apply what I had learned.**

**I became an outsider in my district and until I connected with others, I felt alone.**

---

### Chart from Goldberg’s article: “Teachers Won’t Embrace Research Until It Embraces Them.”

Goldberg’s experience should inform our larger approach to change, and our everyday conversations with those committed to our children.
**Shared Leadership**

This building of capacity at all levels across multiple professionals for the student with dyslexia is a defining contributor to student success. In districts that are successful in mobilizing the SOR, reading is everybody’s business (Duty, 2019).

Blurring the lines between instructional tiers (I, II and III) and professional titles can serve children best. Consider how this impacts training. For example, while reading specialists provide most of the heavy lifting when it comes to providing Tier II interventions, so can classroom teachers, speech-language pathologists and intervention specialists. Taking a collaborative team approach removes the “turfdom” existing in reading. Specialized instruction can occur across all tiers. This feathering out of services and vertical alignment of programming, in turn, allows Intervention Specialists to better streamline their special education caseloads, providing more robust services to students on IEPs with the most severe reading needs. True collaboration and a common vision is key-- as is supporting the structures that support the teachers. Ask yourself: What training are principals getting?

Shared leadership is needed across multiple levels to ensure sustainable systems and structures are in place to facilitate effective and efficient reading instruction for all levels of learners. This includes achievement and fidelity assessments, allocated time for instruction, instructional materials, accredited training, coaching, feedback and support systems, and data-based problem solving processes at all levels.
Financing the Shift

Can districts really afford to enact early screening, intervention and teacher training aligned to the Science of Reading?

In truth, they can’t afford not to. As you’ll see below, it makes financial sense as well.

Over the course of four school years (2015-2016 to 2018-2019) the Marysville Exempted Village School District (MEVSD) shifted its foundational reading programs, curriculum, staffing, and Multi-Tiered Systems of Support (MTSS) from a primarily top down, meaning based climate to a diagnostic prescriptive approach aligned to evidenced based practices in the screening, including differential diagnosis and treatment of language based reading disorders. These changes occurred in between scheduled 5-year permanent improvement/ language arts materials adoption cycles.

*MEVSD built its work on five Core Tenants:*

1. Dyslexia can be identified at a very early age (K-2).

2. Equitable access to Structured Literacy for all students.

3. Our efforts are driven by the social-emotional wellness of our students and community -not just reading.

4. Lean and dynamic systems for effectively addressing the needs of every reader (Tier 1 & 2) allow Special Education (Tier 3) to operate as it was originally designed. In other words, we’ve unshackled ourselves from the Reading Wars and a bureaucratic nightmare.

5. This begins, and ends, with leadership (state, district, building).
The MEVSD cost/benefit analysis is provided below.

**Cost/Benefit Analysis**

**Target**
- K-5 students receiving reading intervention services
- Students with (and without) identified disabilities

**Financial Sources**
- General, Title I, IDEA
- Salary, benefits, supplies, training

**Relevant Figures in the cost/benefit analysis**

**Students Served**
- 447 students without disabilities served for reading needs (19.42%)
- 212 students with disabilities served for reading needs (9.21%) - 391 total (16.99%)
- 659 total served for reading needs (28.63%)

**Time**
- Average of $791.13 per evaluation and $183.90 per IEP for a Specific Learning Disability
- Average meeting cost of $291.56 per hour (admin, psych, SLP, IS, and teacher)
- Total average cost of $1558.15 (1 evaluation, 1 IEP, 2 x 1 hour meetings)

**Materials**
- $17,356.10 for Structured Literacy/phonemic awareness materials & CTOPP-2 screening protocols
- $15,000 for Orton-Gillingham Level 1 practicum training (5 professionals)

**Support Costs**

**Total MTSS Funding to Support Reading**
- $1,964,649.79 total
- $4,395.19 per student served
Total SPED Funding to Support Reading

- $2,183,891.49 total
- $10,301.37 per student with a disability served

Cost Differential

- $219,241.69 total Year 1 funding
- -$5,906.19 (-57.33%) spending per student (rate of 2.34)

*Includes SPED personnel costs that support students without disabilities through the MEVSD MTSS process

- 30% of IS caseload includes serving students without disabilities, as well as students with disabilities.
- 50% of SLP caseload includes serving students without disabilities, as well as students with disabilities.

Yearly Savings

25 Year Cost Savings - MEVSD Model
- Conservative savings based upon MTSS systems maintaining equivalent dismissal and influx values (+10 students per year, -10 students per year) and dismissing 2 students per year from SPED services

- Realistic savings based upon MTSS services receiving influx of 10 students per year, dismissing 12 students per year, and dismissing 3 students per year from SPED services

- Aggressive savings based upon MTSS services adding 10 students per year, dismissing 15 students per year, and dismissing 4

**Total Savings**

**Total Savings at 25 Years - MEVSD Model Implemented at K-5**

- Total conservative savings of $6,180,824.96 over 25 years for K-5 student population at MEVSD (2,302 students)

- Total realistic savings of $11,908,351.25 over 25 years for K-5 student population at MEVSD (2,302 students)

- Total savings of $18,954,434.45 over 25 years for K-5 student population at MEVSD (2,302 students)

*Savings related to IDEA funding and Ohio School Medicaid reimbursement.*
Ohio’s Dyslexia Pilot Project operated for three years, beginning in the 2012-2013 school year, and involved eight school districts. The goal of the pilot project was to evaluate the effectiveness of early screening and reading assistance programs for children at risk for reading failure, including those students exhibiting risk factors associated with dyslexia, and to evaluate whether those programs can reduce future special education costs. The external evaluator of the pilot found a cost savings attributable to the Pilot. In addition, all participating school districts that met the requirements for the project in Year 3 demonstrated meaningful gains in student rates of improvement that will likely be sustained. Over time, all school districts will have cost savings that exceed the initial investment (Morrison, 2015).

The reading improvement results as reported by the Ohio Department of Education included several school districts in urban, rural, and suburban areas. The project was extended to a fourth year inclusive of additional findings.

**Financial Lessons Learned**

- It was less about finding new money as it was about finding the will to reallocate existing money.
- Total staffing adds over the 4 years to support the process = 2 FTE. (one FT SLP, one additional instructional coach). These staffing adds allowed us to go one-to-one with both SLPs and coaches in 4 of 5 elementary buildings.
- Collaboration amongst central office administration was essential, especially curriculum and special educational directors (the work shrinks when done together).
- Superintendent’s leadership and support of the vision was essential.
- Quality curriculum/programs allowed us to scale quickly but coaching and professional development made the real differences in student outcomes.
- Incentivizing the practicum training eventually spurred organic interest and growth.
- Return on investment of new money is now apparent because of quality systems in place. It’s easier to spend when you know you are not throwing good money after bad.
- If the leaders will lead, the people will follow.

We can surmise that the cost of screening, training teachers and addressing dyslexia early is significantly less than the cost of intensive remediation in the later school years. Above all, it’s the right thing to do for children.
Achieving Equity for Students with Dyslexia District Rubric

The rating and discussion of the presence or absence of the following seven factors is intended to provide insight into a school district’s current practice as it relates to achieving equity for students with dyslexia. Perhaps most importantly, the tool invites conversation and the consideration of a range of influential policies and practices that can inhibit or accelerate success. Ultimately, the rubric should help inform strategic planning over time.

<table>
<thead>
<tr>
<th>Universal Dyslexia Screening Procedure</th>
<th>Equity Not Evident for Students with Dyslexia (1)</th>
<th>Approaching Equity for Students with Dyslexia (2)</th>
<th>Achieving Equity for Students with Dyslexia (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Has universal screening procedures for reading intervention, but the procedures do not consider/specify dyslexia. Universal screening procedures include assessment of few of the items listed in the Achieving Equity (3) column. Has not yet identified criteria used to identify students who display potential characteristics of dyslexia.</td>
<td>Has universal dyslexia screening procedures, but the procedures lack clarity and are somewhat difficult to follow. Universal screening procedures include assessment of most, but not all items listed in the Achieving Equity (3) column. Criterion used to identify students who display potential characteristics of dyslexia is somewhat clear and evidence-based, but contains minor inaccuracies.</td>
<td>Has exceptionally clear, easy to follow written universal dyslexia screening procedures. Kindergarten screening measures include assessment of Phonological Awareness, Phonological Memory, and Rapid Naming. Procedures clearly outline specific, accurate, evidence-based criteria used to identify students who display potential characteristics of dyslexia. Universal dyslexia screening is completed by mid-</td>
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<td><strong>Universal Dyslexia Screening Procedure (cont.)</strong></td>
<td><strong>Equity Not Evident for Students with Dyslexia (1)</strong></td>
<td><strong>Approaching Equity for Students with Dyslexia (2)</strong></td>
<td><strong>Achieving Equity for Students with Dyslexia (3)</strong></td>
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<tr>
<td>Few or no students who display potential characteristics of dyslexia promptly access appropriate research-based dyslexia intervention (Structured Literacy that conforms with IDA's KPSTR.)</td>
<td>Few or no team members are effectively trained how to administer dyslexia screening tools and identify students who display potential characteristics of dyslexia.</td>
<td>Most students who display potential characteristics of dyslexia promptly access appropriate research-based dyslexia intervention (Structured Literacy that conforms with IDA's KPSTR.)</td>
<td>Kindergarten and continues in first and second grade.</td>
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<tr>
<td>Most team members are effectively trained how to administer the dyslexia screening tools and identify students who display potential characteristics of dyslexia.</td>
<td>Most team members are effectively trained how to administer the dyslexia screening tools and identify students who display potential characteristics of dyslexia.</td>
<td>All team members are effectively trained how to administer the dyslexia screening tools and identify students who display potential characteristics of dyslexia.</td>
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<tr>
<td>Tier 2 and 3 instruction for few or no students who display potential characteristics of dyslexia is provided by: an IDA Tier 3—Level I—Certified Dyslexia Practitioner or Tier 3—Level II—Certified Dyslexia Therapist; an ALTA, AOGPE, IMSLEC, NILD, or Yoshimoto OG Association certified tutor; or a teacher who is trained or certified to implement a</td>
<td>Tier 2 and 3 instruction for most students who display potential characteristics of dyslexia is provided by: an IDA Tier 3—Level I—Certified Dyslexia Practitioner or Tier 3—Level II—Certified Dyslexia Therapist; an ALTA, AOGPE, IMSLEC, NILD, or Yoshimoto OG Association certified tutor; or a teacher who is trained or certified to implement a</td>
<td>Tier 2 and 3 instruction for all students who display potential characteristics of dyslexia is provided by: an IDA Tier 3—Level I—Certified Dyslexia Practitioner or Tier 3—Level II—Certified Dyslexia Therapist; an ALTA, AOGPE, IMSLEC, NILD, or Yoshimoto OG Association certified tutor; or a teacher who is trained or certified to implement a</td>
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<tr>
<td>Training for Tiers 2 and 3 Teachers (cont.)</td>
<td>Equity Not Evident for Students with Dyslexia (1)</td>
<td>Approaching Equity for Students with Dyslexia (2)</td>
<td>Achieving Equity for Students with Dyslexia (3)</td>
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<tr>
<td>Instructional Materials</td>
<td>Little to no curriculum is aligned to evidence based practices in Structured Literacy. Curricular pieces are selected via “faith based reading decisions” where there is a belief that there is one best program for all students.</td>
<td>A majority of the curriculum is aligned to evidence based practices in Structured Literacy that contain the evidence of the Science of Reading across many of the Big Ideas in Reading. Many curricular pieces are vetted through third party research, and aligned to the 5 Big Ideas in Reading. Many material adoptions occur with student reading profiles in mind.</td>
<td>Curriculum is aligned to evidence based practices in Structured Literacy and contain the evidence of the Science of Reading across all 5 of the Big Ideas in Reading. Curricular pieces are vetted through third party research, i.e. EdReports, ODE adoption rubrics, or our own literacy framework developed and aligned to the 5 Big Ideas in Reading. Material adoptions are aligned to the student reading profiles that exist in the district.</td>
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<tr>
<td>Referrals for IEP Evaluation or Section 504 Eligibility</td>
<td>Progress monitoring procedures do not outline the profiles of students with dyslexic traits who should be referred for IEP evaluation or Section 504 eligibility determination if the student is not responding to the evidence-based intervention at an appropriate rate of improvement.</td>
<td>Progress monitoring procedures outline the profiles of students with dyslexic traits who should be referred for IEP evaluation or Section 504 eligibility determination if the student is not responding to the evidence-based intervention at an appropriate rate of improvement, but the procedures are somewhat unclear. Procedures allow referrals to be made at any time in the process, but referrals are generally delayed until after the critical period of literacy acquisition (K/1).</td>
<td>Progress monitoring procedures clearly outline the profiles of students with dyslexic traits who should be referred for IEP evaluation or Section 504 eligibility determination if the student is not responding to the evidence-based intervention at an appropriate rate of improvement. Procedures allow referrals to be made at any time in the process.</td>
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### Specifying Dyslexia in IEPs

<table>
<thead>
<tr>
<th>Equity Not Evident for Students with Dyslexia (1)</th>
<th>Approaching Equity for Students with Dyslexia (2)</th>
<th>Achieving Equity for Students with Dyslexia (3)</th>
</tr>
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<tbody>
<tr>
<td>When dyslexia is the condition that forms the basis for the determination that a child has a specific learning disability, the IEP or 504 Team rarely or never references dyslexia in the IEP or 504 Plan.</td>
<td>When dyslexia is the condition that forms the basis for the determination that a child has a specific learning disability, the IEP or 504 Team often references dyslexia in the IEP or 504 Plan.</td>
<td>When dyslexia is the condition that forms the basis for the determination that a child has a specific learning disability, the IEP or 504 Team consistently references dyslexia in the IEP or 504 Plan.</td>
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### Specifying Structured Literacy in IEPs

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<tr>
<th>Specifying Structured Literacy in IEPs</th>
<th>Approaching Equity for Students with Dyslexia (2)</th>
<th>Achieving Equity for Students with Dyslexia (3)</th>
</tr>
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<tr>
<td>IEP plans for students with dyslexia rarely or never specify the appropriate Structured Literacy intervention.</td>
<td>IEP plans for students with dyslexia often specify the appropriate Structured Literacy intervention.</td>
<td>IEP plans for students with dyslexia consistently specify the appropriate Structured Literacy intervention.</td>
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Conclusion

Implementing Structured Literacy is a complex program of work requiring integrated plans around teaching and learning, curriculum, finance, human capital and communications. A phased-in plan will require change management and the commitment of school and district leadership. The school districts contributing to this guide represent a growing coalition of leaders who are charting a new path for all.

As we make this critical shift, we are just beginning to assess its transformative potential at scale. As the body of knowledge grows state-side and nationwide, resources like this one—while imperfect— we believe, will continue to advance emerging and best practices to enable districts across Ohio to offer students everywhere the power of reading.
Resources

Articles, Podcasts, Links

- At a Loss for Words: How a flawed idea is teaching millions of kids to be poor readers
- In Defense of Truth: A reply to 57 Reading Voices on the Issue of Dyslexia
- Getting Reading Right
- The MIBLSI Model: Multi-tiered frameworks with proven practices that improve behavioral and academic outcomes for students
- Schools Should Follow the ‘Science of Reading,’ Say National Education Groups
- The Most Popular Reading Programs Aren’t Backed by Science

Books

- Essentials of Assessing, Preventing, and Overcoming Reading Difficulties
- Language at the Speed of Sight: How We Read, Why So Many Can’t, and What Can Be Done About It
- Proust and the Squid: The Story and Science of the Reading Brain
- Reading Development and Difficulties: Bridging the Gap Between Research and Practice
- Speech to Print: Language Essentials for Teachers, Third Edition
References


Ehri, Linnea (2014). Orthographic Mapping in the Acquisition of Sight Word Reading, Spelling Memory, and Vocabulary Learning, Scientific Studies of Reading, 18:1, 5-21, DOI:10.1080/10888438.2013.819356

@GaabLab (2020, January 10). Many school districts are deciding to use ‘survey’ or ‘questionnaire’ #screeners (asking teachers a series of questions) for assessing #dyslexia risk instead of directly assessing the child. It’s very problematic for various reasons & can harm our #dyslexia advocacy efforts 1/6 [Tweet]. Retrieved from https://twitter.com/GaabLab/status/1215812491151921152


