



**CCNETWORK**   
Comprehensive Center Network

REGION 8  
Indiana  
Michigan  
Ohio

# **Dyslexia Professional Learning Series**

## **Understanding Dyslexia & Universal Screening**

**July 28, 2020**

**Sarah Sayko**

Photo is for illustrative purposes only.  
Any person depicted in the photo is a model.

# Dyslexia Professional Learning Series

## Session 1: Understanding Dyslexia & Universal Screening

(July 28, 2020; 10:00-11:30 a.m.)

## Session 2: Early Intervention and Instructional Approaches in Reading: Tiers 2 & 3

(August 6, 2020; 2:00-3:30 p.m.)

## Session 3: Schools and Families Partnering for Children's Literacy Success

(August 13, 2020; 2:00-3:30 p.m.)

# Welcome & Introductions

Ohio Department of Education  
Region 8 Comprehensive Center



# Welcome & Introductions

## Ohio Department of Education

- Office of Approaches to Teaching and Professional Learning
- Office for Exceptional Children
- Office of Early Learning and School Readiness

## Region 8 Comprehensive Center

- Karen Sanders, Ohio Coordinator
- Chris Rauscher, Technical Assistance Specialist
- Sarah Sayko, Technical Assistance Specialist

## Featured Presenter

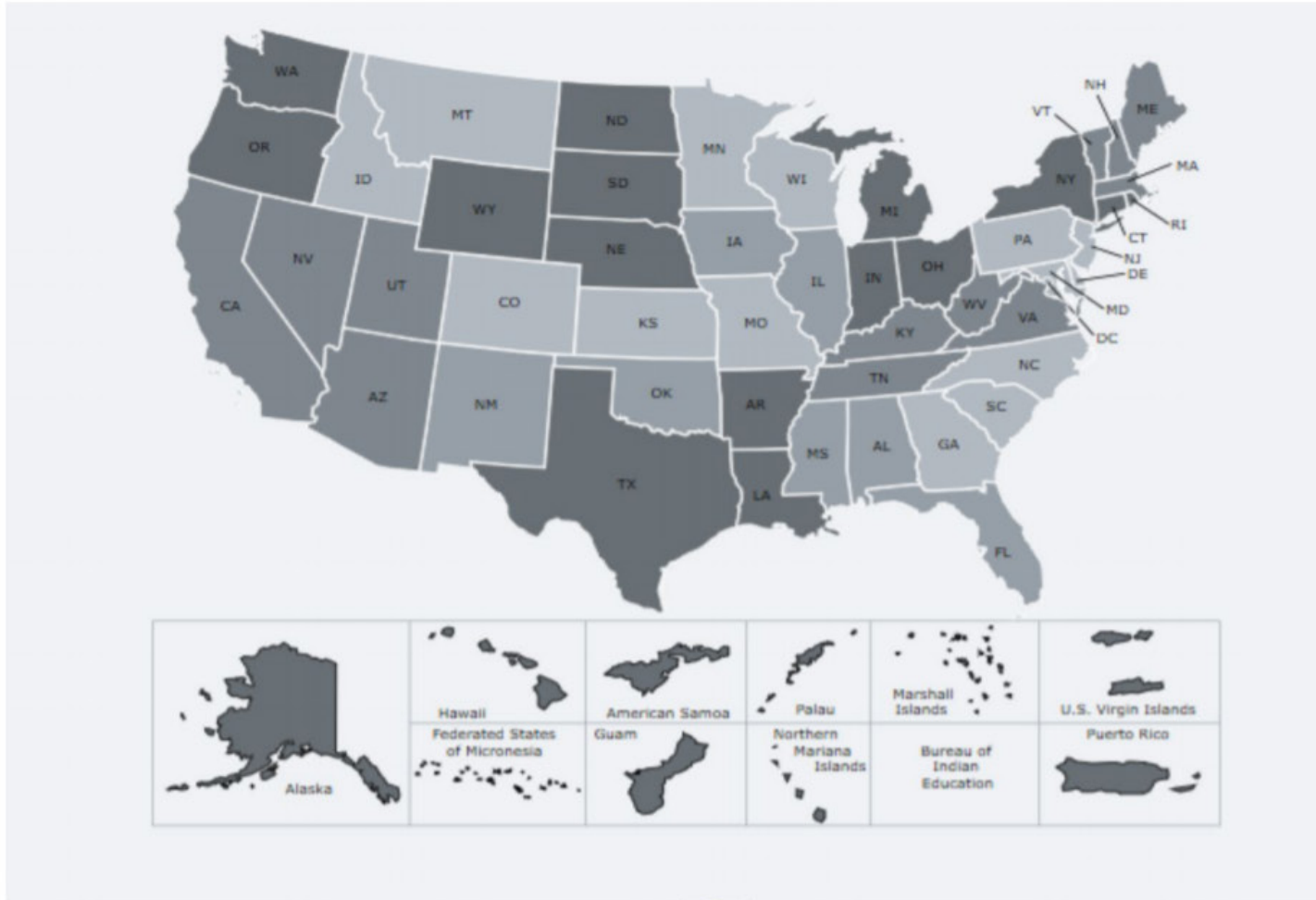
**Sarah Sayko, Ed.D., is a technical assistance specialist with the Region 8 Comprehensive Center. Dr. Sayko is also the deputy director of the National Center on Improving Literacy and leads the Parent and Family strand of work. She is a senior research associate at RMC Research Corporation in Arlington, VA.**

# Region 8 States

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# 2019-2024 Comprehensive Centers



# The Ohio Context

## Melissa Weber-Mayrer

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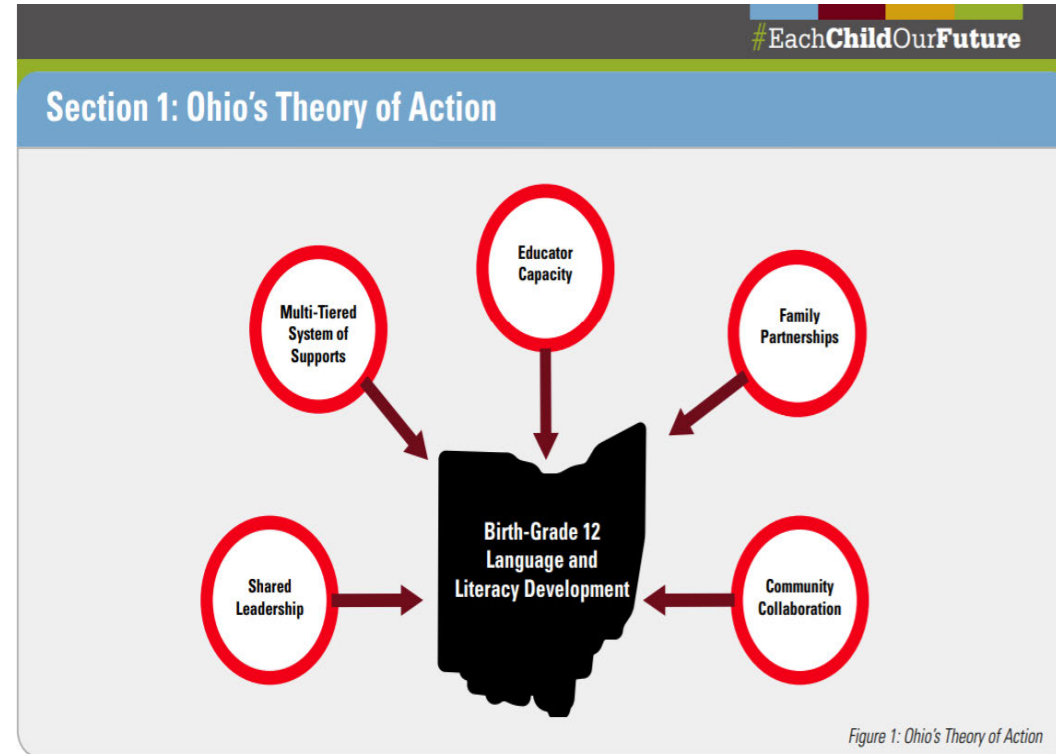


# The Ohio Context

- Proposed legislation addressing universal early screening for dyslexia
- Model Demonstration Project for Early Identification of Students with Dyslexia in Elementary Schools
  
- Connections to current roles and work within the agency
- Guiding questions
- Suggested readings
- Our Dyslexic Children (44-minute documentary)



# Ohio's Plan to Raise Student Literacy Achievement



# Understanding Dyslexia

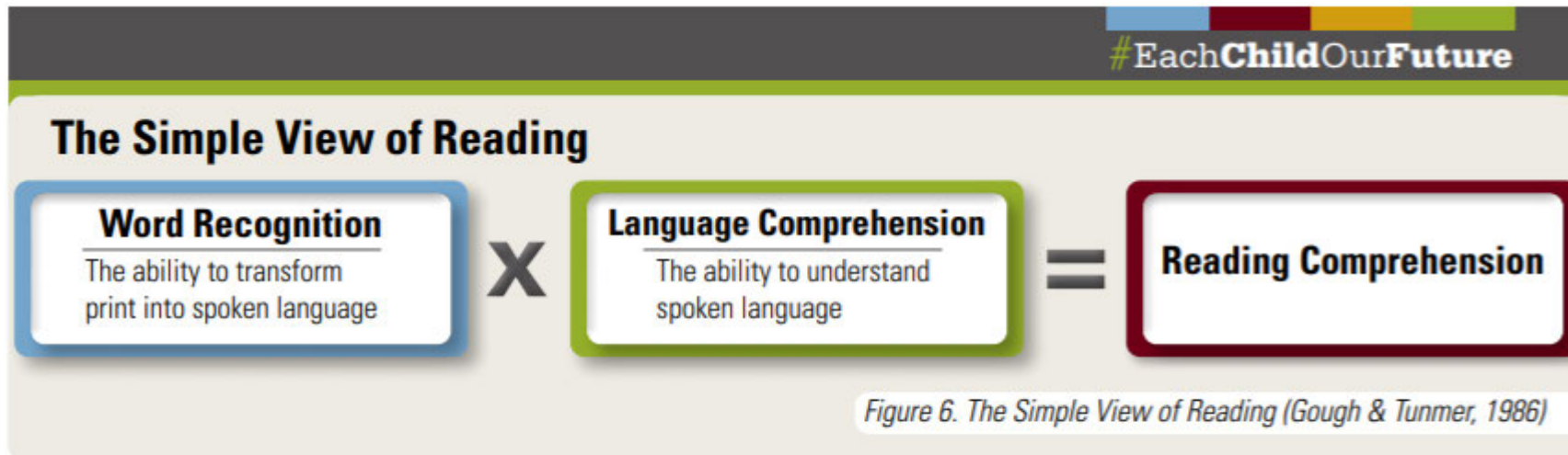
## Part A

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# Reading Development



The literacy goal of Ohio's education system is to ensure all learners have access to high-quality, evidence-based language and literacy instruction and become proficient readers. The state can achieve this goal only if it provides support at all levels of the education system in both the word recognition and language comprehension aspects of language and literacy instruction.

# Types of Reading and Writing Difficulties

#EachChildOurFuture

Like the Simple View of Reading, this is a simple model, and each learner has individualized needs educators must address through assessment and instruction.

		Language Comprehension	
		Strong	Weak
Word Reading	Strong	Typical Reader	Language Difficulties
	Weak	Phonological Difficulties	Mixed Reading Difficulty

Figure 12. Types of reading difficulties organized under the Simple View of Reading (Adapted from *Essentials of Assessing, Preventing, and Overcoming Reading Difficulties*, Kilpatrick, 2015)

# What is dyslexia?

Ohio law defines dyslexia as...

“a specific learning disorder that is neurological in origin and that is characterized by unexpected difficulties with accurate or fluent word recognition and by poor spelling and decoding abilities not consistent with the person’s intelligence, motivation, and sensory capabilities, which difficulties typically result from a deficit in the phonological component of language”

(Ohio Revised Code 3323.25)



**What is Dyslexia?**

Dyslexia is a brain-based learning disability that specifically impairs a person's ability to read.

**Dyslexia is Brain-Based**

The affected brain areas are associated with detection and processing of sounds and their corresponding letters.

Children born with the neurological impairments associated with dyslexia are more likely than other children to have family members with the impairment. Many, but not all, of these children will eventually experience reading difficulties.

**Dyslexia Impairs the Ability to Read**

Difficulty with phonological awareness inhibits the ability to effectively decode letters into blendable sounds to form words. A fundamental phonological processing problem may "block" access to other more advanced aspects of reading, such as word reading and comprehension.

**Dispelling Myths About Dyslexia**

Dyslexia does not imply the individual cannot read. People with dyslexia can learn to read with evidence-based explicit instruction, but may still have to put forth more effort.

Dyslexia does not otherwise impact the brain structure or functioning, or the intellectual, imaginative, or emotional capabilities of the individual.

Individuals with dyslexia do not necessarily see and write letters or words backwards.

For more information about dyslexia please visit [ImprovingLiteracy.org](http://ImprovingLiteracy.org)

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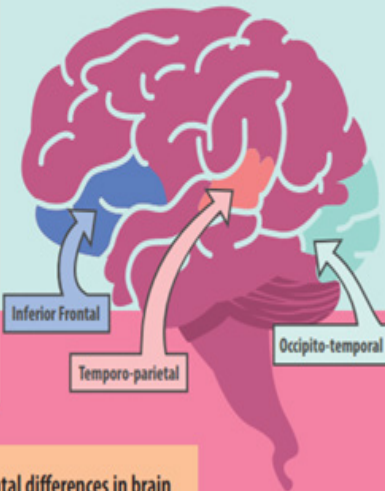
# What causes dyslexia?

Neuroimaging research suggests that individuals with dyslexia – compared to individuals without – may have fundamental differences in brain regions linked with reading and language. These differences are primarily, although not completely, noted in the left hemisphere of the brain.

## Neurological Considerations for Dyslexia

Neuroimaging research suggests that individuals with dyslexia – compared to individuals without – may have fundamental differences in brain regions linked with reading and language. These differences are primarily, although not completely, noted in the left hemisphere of the brain.

Depicted here is a two-dimensional image of the left hemisphere of the brain, which is associated with many language related skills. As noted with arrows, the temporo-parietal regions have been shown to support the integration of phonology and orthographical patterns. The occipito-temporal region, also often called the visual-word-form area, supports the rapid identifications of letters and words. Activation patterns in the inferior frontal regions have also been linked with language related skills.



Studies report fundamental differences in brain development and activation patterns between individuals with dyslexia and those without.

The research reported here is funded by a grant to the National Center on Improving Literacy from the Office of Elementary and Secondary Education, in partnership with the Office of Special Education Programs (Award # 52832140003). The opinions expressed are those of the authors and do not represent views or policies of OESL, OSEP, or the U.S. Department of Education.

# What do we know about what's different in the brain of a person with dyslexia?



National Center on Improving Literacy

**Guinevere Eden, D. Phil.**  
Director, Center for the Study of Learning  
Georgetown University

00:02.62



# What do we know about what's different in the brain of a person with dyslexia?

There are differences in the brains of people with dyslexia that we can measure with brain imaging. And it's believed that many of those differences already are present at birth. And other differences may be there because of them not having the same kind of reading experiences as a person who doesn't have dyslexia. And we measure these differences primarily with magnetic resonance imaging. The finding that most people agree on is that there is differences in the anatomy, primarily in the left hemisphere in regions that are known to serve language and written language.

# What are the effects of dyslexia?

- Difficulties with phonological processing
- Difficulties with blending sounds together to form words

### What Are the Effects of Dyslexia

Signs of typical reading development and possible indicators of risk for dyslexia.

**Typical Readers** vs **Readers at Risk for Dyslexia May**

#### Preschool Years

<ul style="list-style-type: none"><li>Notice repeated sounds in oral language (e.g. Baa, Baa, Black Sheep)</li><li>May start to pay attention to beginning or rhyming sounds in words</li><li>Know the functions of print (e.g. know that different texts are used for different purposes, know that print has meaning)</li><li>Know 10 alphabet letters, and the letters in their name</li></ul>	<ul style="list-style-type: none"><li>Have trouble learning common nursery rhymes</li><li>Not recognize rhyming patterns.</li><li>Have difficulty learning and remembering the names of letters in the alphabet</li><li>Use persistent "baby talk"</li></ul>
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#### Kindergarten to 1st Grade

<ul style="list-style-type: none"><li>Learn one-to-one letter sound correspondences</li><li>Understand that speech sounds map on to printed letters to form words</li><li>Learn to decode regular one-syllable words using their knowledge of letter-sound correspondences</li><li>Begin to make sense of what they are reading</li></ul>	<ul style="list-style-type: none"><li>Not associate letters with sounds</li><li>Make reading errors that show no connection to the sounds of the letters on the page</li><li>Not understand that words "come apart"</li><li>Not be able to sound out simple words like map, cat, pan</li><li>Complain about how hard reading is</li></ul>
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#### 2nd Grade and Beyond

<ul style="list-style-type: none"><li>Use knowledge of letter-sound correspondences to sound out unknown words</li><li>Use word parts to decode regular multisyllabic words</li><li>Read accurately and fluently enough to concentrate on comprehension</li></ul>	<ul style="list-style-type: none"><li>Often be very slow in acquiring reading skills</li><li>Often guess at words</li><li>Not be able to sound out words</li><li>Confuse words that sound alike</li><li>Avoid reading out loud</li><li>Have poor spelling and messy handwriting</li></ul>
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# Understanding Dyslexia: Myth vs. Fact

- All students with dyslexia demonstrate the same problems with reading.
- Dyslexia is a reading disorder that is based in vision problems, which causes people to read backward or mix up *b* and *d*.
- People with dyslexia cannot learn to read.
- Dyslexia exists on a continuum.
- Dyslexia is a brain-based disorder associated with impairments in the brain regions associated with manipulation of sounds, not vision.
- Reading may require significantly more effort and academic support for someone with dyslexia, but these students can learn to read!

# Understanding Dyslexia: Myth vs. Fact

- ›› Intelligent people cannot have dyslexia.
- ›› All students with dyslexia will perform poorly on tests of phonological processing.
- ›› We can predict who will respond to instruction.
- ›› There is a silver bullet to remediate dyslexia.
- ›› Dyslexia impacts individuals with a range of cognitive skills, and with average to above average intelligence.
- ›› While many students with or at risk for dyslexia get low scores on phonological processing tests, approximately 25-30% of these students will do fine on these measures.
- ›› Research is still ongoing regarding which specific intervention is best for students with or at risk for dyslexia.
- ›› Providing students with dyslexia with evidence-based reading instruction and the necessary supports to succeed involves many individuals within a school system.

# Check for Understanding

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Please select the **TRUE** Statements:

- All students with dyslexia demonstrate the same level of difficulty learning to read.
- Brain regions associated with language and reading function differently for students with dyslexia
- Students with dyslexia mainly have difficulties with reading comprehension.

# Universal Screening in Reading

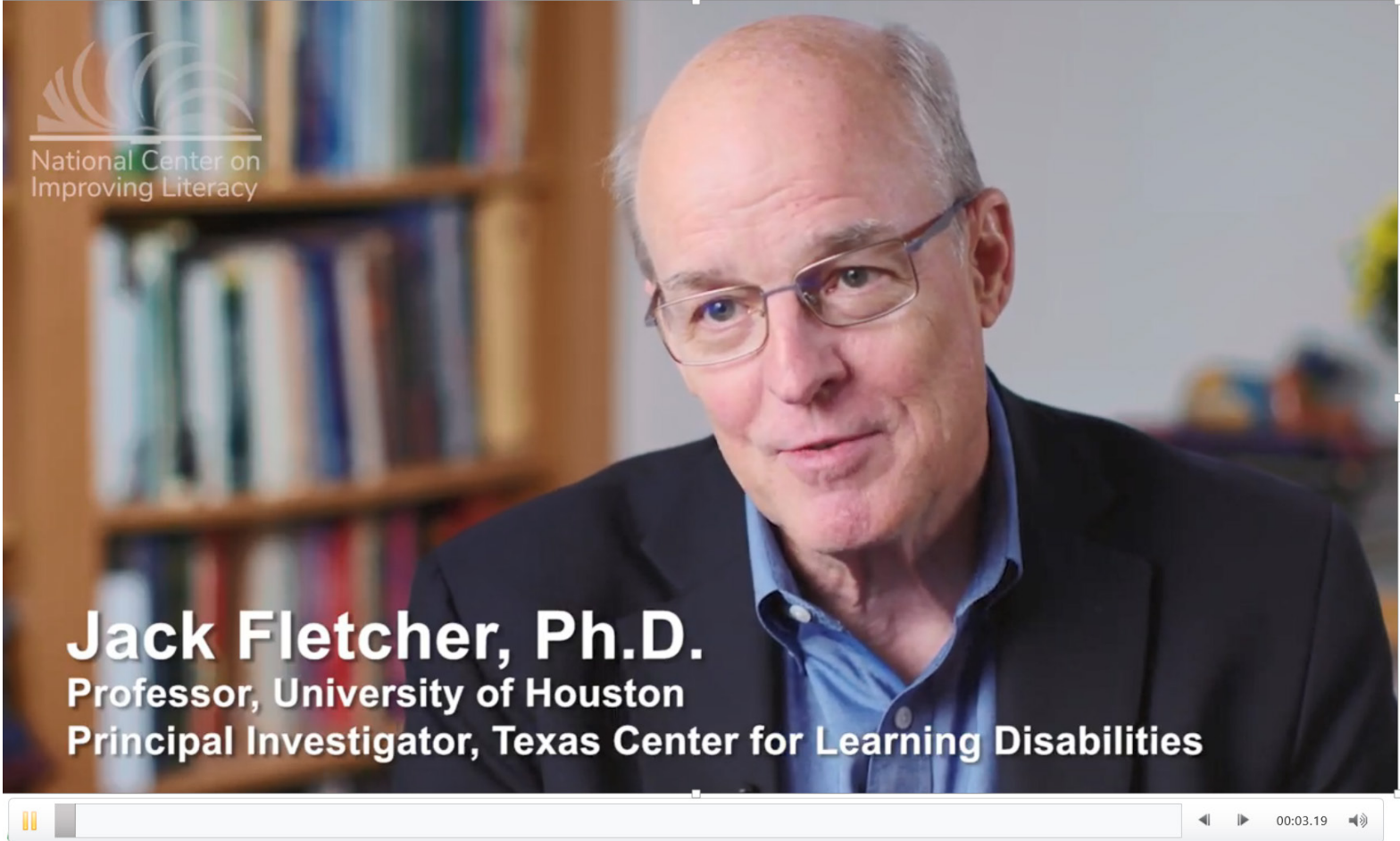
## Part B

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# What can we learn from screening kids early?



National Center on Improving Literacy

**Jack Fletcher, Ph.D.**  
Professor, University of Houston  
Principal Investigator, Texas Center for Learning Disabilities

00:03.19

# What can we learn from screening kids early?

So missing a child is a far more serious issue than falsely identifying a child. Our instrument is geared towards identifying children who are not at risk and very accurately the false positive rate goes down over time quite a bit, so that the instrument is quite accurate by the middle of first grade.



# Assisting Students Struggling with Reading: Response to Intervention and Multi-Tier Intervention in the Primary Grades

Recommendation  
1. Screen all students for potential reading problems at the beginning of the year and again in the middle of the year. Regularly monitor the progress of students who are at elevated risk for developing reading disabilities.

Create a building-level team to facilitate the implementation of universal screening and progress monitoring.

Select a set of efficient screening measures that identify children at risk for poor reading outcomes with reasonable degrees of accuracy.

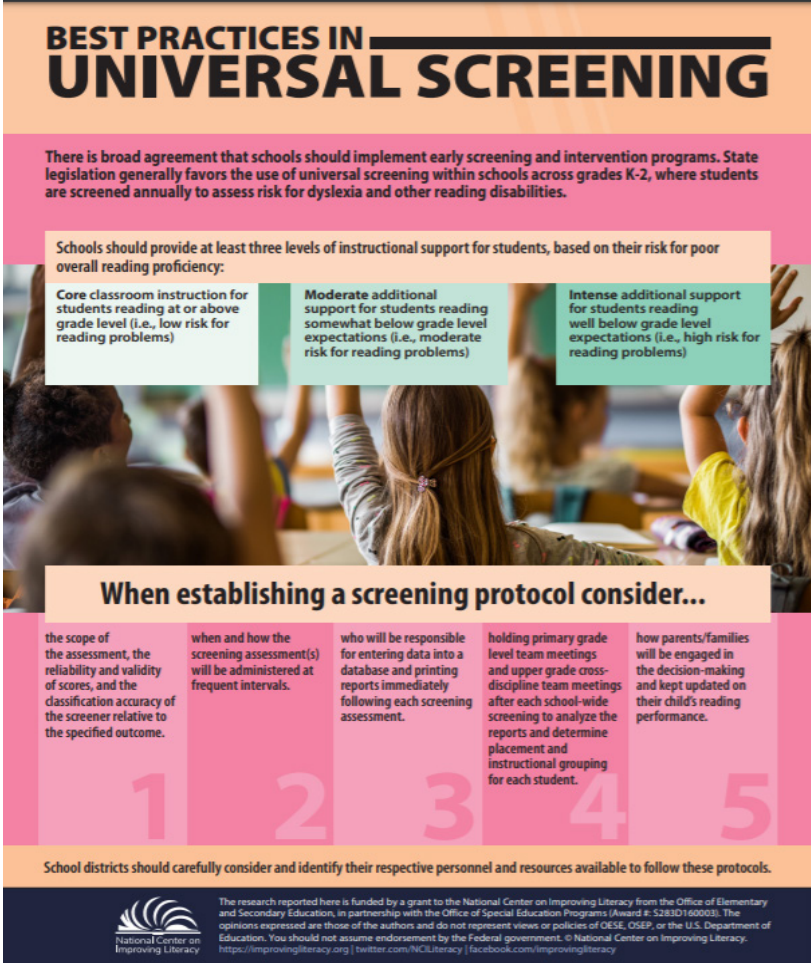
Use benchmarks or growth rates (or a combination of the two) to identify children at low, moderate, or high risk for developing reading difficulties.



# Best Practices in Universal Screening

When establishing a screening protocol consider...

- » The scope of the assessment, the reliability and validity of scores, and the classification accuracy
- » When and how the screening assessment(s) will be administered
- » Who will be responsible for entering data into a database and printing reports
- » Holding primary grade level team meetings and upper grade cross-discipline team meetings
- » How parents/families will be engaged in the decision-making and kept updated on their child's reading performance



## BEST PRACTICES IN UNIVERSAL SCREENING

There is broad agreement that schools should implement early screening and intervention programs. State legislation generally favors the use of universal screening within schools across grades K-2, where students are screened annually to assess risk for dyslexia and other reading disabilities.

Schools should provide at least three levels of instructional support for students, based on their risk for poor overall reading proficiency:

- Core classroom instruction for students reading at or above grade level (i.e., low risk for reading problems)
- Moderate additional support for students reading somewhat below grade level expectations (i.e., moderate risk for reading problems)
- Intense additional support for students reading well below grade level expectations (i.e., high risk for reading problems)

### When establishing a screening protocol consider...

- the scope of the assessment, the reliability and validity of scores, and the classification accuracy of the screener relative to the specified outcome.
- when and how the screening assessment(s) will be administered at frequent intervals.
- who will be responsible for entering data into a database and printing reports immediately following each screening assessment.
- holding primary grade level team meetings and upper grade cross-discipline team meetings after each school-wide screening to analyze the reports and determine placement and instructional grouping for each student.
- how parents/families will be engaged in the decision-making and kept updated on their child's reading performance.

School districts should carefully consider and identify their respective personnel and resources available to follow these protocols.

The research reported here is funded by a grant to the National Center on Improving Literacy from the Office of Elementary and Secondary Education, in partnership with the Office of Special Education Programs (Award #: 5283D160003). The opinions expressed are those of the authors and do not represent views or policies of OESE, OSEP, or the U.S. Department of Education. You should not assume endorsement by the Federal government. © National Center on Improving Literacy. <https://improvingliteracy.org> | [twitter.com/NCILiteracy](https://twitter.com/NCILiteracy) | [facebook.com/improvingliteracy](https://facebook.com/improvingliteracy)

# Behavioral Considerations in Universal Screening

Screening assessments are...

- Easy to administer
- Reliable and valid
- Timely and informative

## Behavioral Considerations in Universal Screening

Screening assessments are...

BRIEF	EASY TO ADMINISTER	VALID & RELIABLE	TIMELY AND INFORMATIVE
They can help capture each child's reading and language strengths and weaknesses in key early stages of development.			

# K 1 2

Screening appears to be most successful when:

In kindergarten, phonological awareness, rapid automatized naming, letter-sound association, and phonological memory tasks are included.	In first grade, phoneme awareness and segmentation, letter manipulation, nonword repetition, oral vocabulary, and word recognition fluency tasks are included.	In second grade, word identification, oral reading fluency, and reading comprehension tasks are included.
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# Recommendation #1: Screen all children at beginning and middle of the year and monitor progress of those with elevated risk

**Table 3. Recommended target areas for early screening and progress monitoring**

Measures	Recommended grade levels	Proficiencies assessed	Purpose	Limitations
Letter naming fluency	K-1	Letter name identification and the ability to rapidly retrieve abstract information	Screening	This measure is poor for progress monitoring since students begin to learn to associate letters with sounds. It is not valid for English learners in kindergarten, but seems valid for grade 1.
Phoneme Segmentation	K-1	Phonemic awareness	Screening and progress monitoring	This measure is problematic for measuring progress in the second semester of grade 1. As students learn to read, they seem to focus less on phonemic skills and more on decoding strategies.
Nonsense word fluency	1	Proficiency and automaticity with basic phonics rule	Screening and progress monitoring	This measure is limited to only very simple words and does not tap the ability to read irregular words or multisyllabic words.
Word identification <sup>26</sup>	1-2	Word reading	Screening and progress monitoring	This measure addresses many of the limitations of nonsense word fluency by including multisyllabic and irregular words.
Oral reading fluency (also called passage reading fluency)	1-2	Reading connected text accurately and fluently	Screening and progress monitoring	Although the measure has moderately strong criterion-related validity, it cannot give a full picture of students' reading proficiency. Many students will score close to zero at the beginning of grade 1. The measure still is a reasonable predictor of end of year reading performance.



# How do we select an effective screening tool?



# How do we select an effective screening tool?

There are important factors to consider when selecting the right screener to identify children in your school classroom or district. First of all, you want to make sure that it assesses all important skills that we know are important for learning to read. Secondly, you want to make sure that the screener is evidence-based, that there's some research behind it, that it's not just someone who put some words together and said, "This is a great screener because it has worked last year in my classroom." And what are the characteristics of the norming group? You also want to make sure that the overall time that it takes for you to screen the children works in your classroom. You want to look at sensitivity and specificity of a screener. So sensitivity is correctly identifying those who will develop a disability, and specificity is correctly identifying those who will not develop a reading disability. So, you can also call it the false positives and false negatives.

## Reflect

*How does new learning on evidence-based universal screening practices relate to your previous knowledge and practice?*

*What is an action you have taken/will take to support implementation of evidence-based practices in universal screening?*

# Resources for Implementation

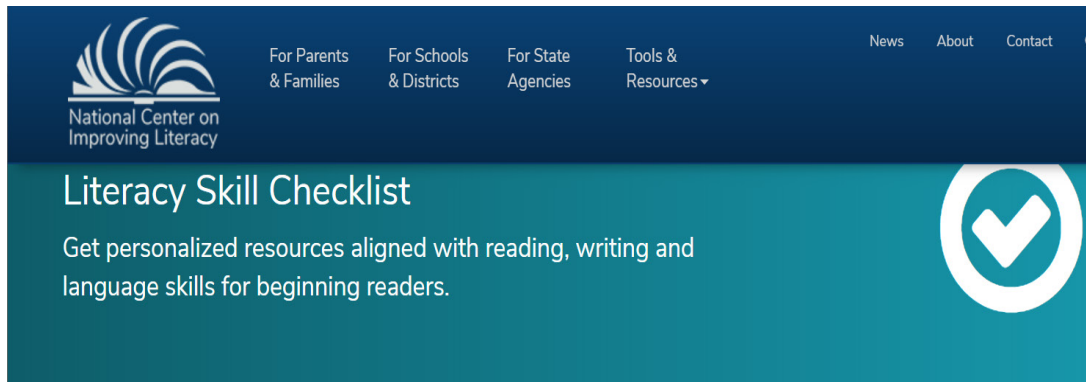
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# Understanding Dyslexia



The screenshot shows the top navigation bar of the National Center on Improving Literacy website. The navigation menu includes: For Parents & Families, For Schools & Districts, For State Agencies, Tools & Resources, News, About, and Contact. The main content area features a teal header with the text "Literacy Skill Checklist" and a sub-header "Get personalized resources aligned with reading, writing and language skills for beginning readers." A white checkmark icon is visible on the right side of the teal header.

## Notice

This tool is designed to help guide parents, caregivers, and professionals in recording the presence of important reading, writing, and language skills in Kindergarten through 2nd grade.

*It is important to note this tool is not intended to be used as a formal screener or diagnostic tool for learning disabilities, including risk for dyslexia. This tool will provide a list of personalized resources and not a score or percentile rank.*

[View Citations and Contributors](#)



The screenshot shows the top navigation bar of the National Center on Improving Literacy website. The navigation menu includes: For Parents & Families, For Schools & Districts, For State Agencies, Tools & Resources, News, About, and Contact. The main content area features a header with the text "Understanding Dyslexia" overlaid on a background image of diverse children sitting at a table and reading together.

## Implementation Toolkits

This toolkit helps parents and educators learn about dyslexia and how to support the literacy development of students with dyslexia.

### You will learn:

- Common dyslexia definitions.
- The underlying causes of dyslexia.
- The effects dyslexia may have

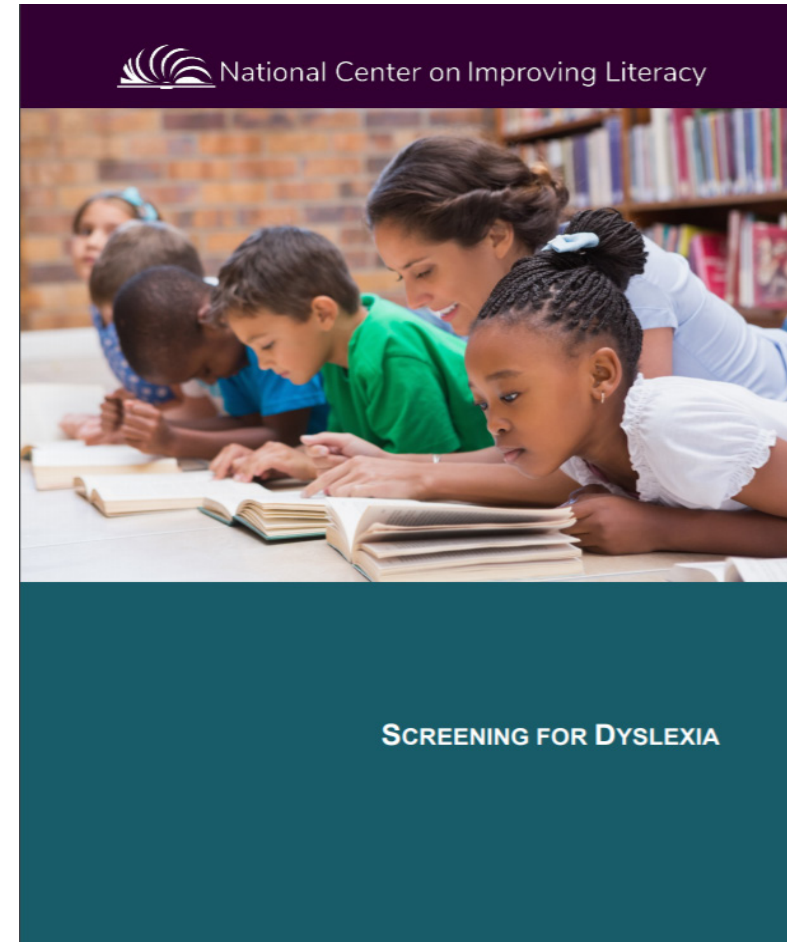
### This toolkit includes:

- An Online Tutorial
- Research Briefs & Infographics
- Expert Advice

# Universal Screening in Reading

NCIL's Understanding Screening series:

- Overall Screening and Assessment
- Bias
- Classification Accuracy
- Reliability
- Sample Representativeness
- Validity





# Thank You!



The contents of this presentation were developed under a grant from the Department of Education. However, the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal government.