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SUPERINTENDENT RESEARCH BRIEFING

The Real Reason Most Districts Struggle with Science of Reading

Presented by the District Leadership Forum

EAB

Events for District Leaders

Superintendent Research Briefings

We summarize the latest research on K-12's biggest challenges to help district leaders *get smart* and *make progress*.

> EAB's research and information are some of the best I've seen...**simple**, **concise**, **easy to understand**.
>
> *Superintendent, Missouri School District*

A Unique Approach to Tackling Education's Most Complex Challenges

We Harness a Network of Progressive Education Leaders

Our college, university, and public school district partners are committed to working together to improve performance and elevate student success

2,500+

institutional partners nationwide

28,000+

education leaders engaging with EAB every year

We Provide Research-Driven Solutions and Access to Expertise

Our proprietary research model and deep bench of subject matter experts provide innovative and practical solutions to our partners most pressing problems

30+

years researching strategic challenges for students and schools

500+

subject matter experts available to partner organizations

We Have a Relentless Focus on Turning Research into Results

Through expert consultations, diagnostic audits, implementation tools, and leadership training, we work closely with each partner to drive tangible results.

95%

of partners choose to continue our work together each year

The District Leadership Forum

Helping Superintendents and Their Teams Make Faster Progress on Today's Most Complex Challenges

Set our research agenda

Share ideas, support each other

Advise EAB and pressure test our model

Our Commitment to Forum Partners

Research current challenges to **find innovative, practical solutions**

Equip superintendents to **make the case for change**

Partner with leadership teams to **build capacity for leading change**

Engage teachers and staff to **tailor solutions to ensure progress sticks**

Our Work Together Over the Last Five Years

Finding, Forging, and Implementing Best Practice Solutions to Pressing K-12 Challenges

Research Addressing Myriad Complex and Often Nitty-Gritty Challenges Confronting Districts Nationwide

Focal Issues for Our First Five Years

Raising Early Literacy Scores

Reducing Disruptive Behavior

Closing College Access Gaps

Minimizing Chronic Absenteeism

Preventing Mental Health Crises

Developing Effective Principals

Responding to District Flashpoints

Optimizing Crisis Communications

Winning the Public Vote

Still Just Scratching the Surface

Becoming an Employer of Choice

Rethinking Special Ed. Service Delivery

Managing Your District's Brand

Strategic Staffing Models

Navigating Opportunities and Pitfalls of AI

Characteristics of High Performing Leadership Teams

Meet Your Presenters

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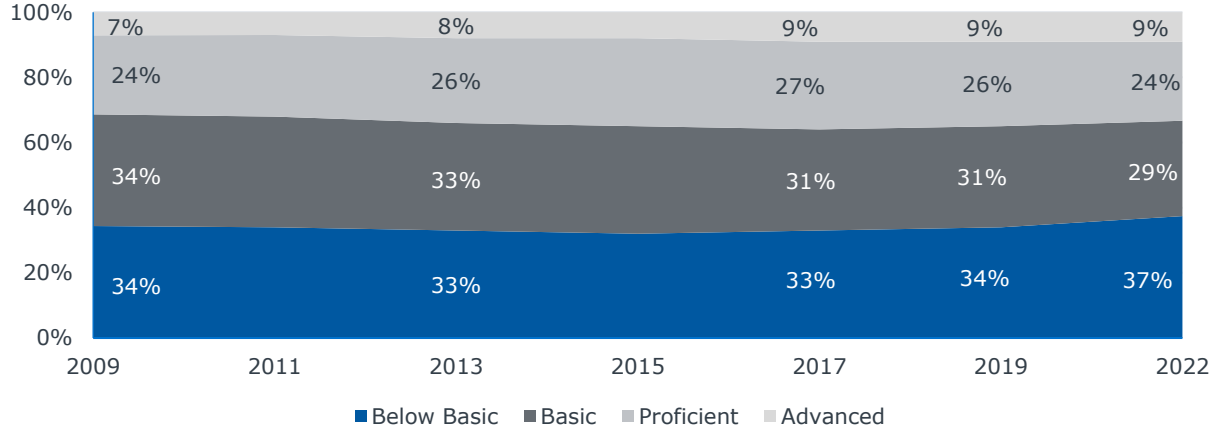
Far Too Many Kids Can't Read at An Early Age

The Nation's Poor Reading Scores Remain Stagnant

NAEP[1] 4th Grade Reading Scores Persistently Low

Percent of Students Scoring at Each Achievement Level, 2009-2022



Minimal Growth in Reading Outcomes Over the Last Decade

2% Percentage point increase in share of 4th grade students **at or above proficiency** since 2009

66% Of 4th graders are reading **at or below basic** levels on NAEP in 2022

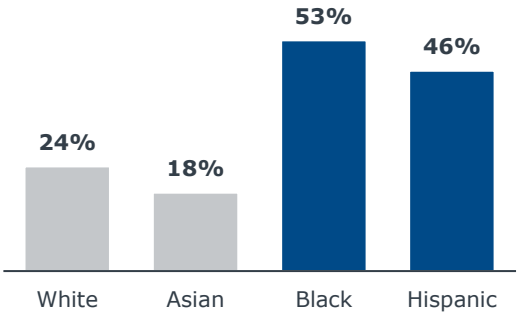
1) National Assessment of Educational Progress.

Source: The Nation's Report Card, 2019, NAEP Data Explorer; EAB interviews and analysis.

Poor Reading Outcomes Transcend Demographics

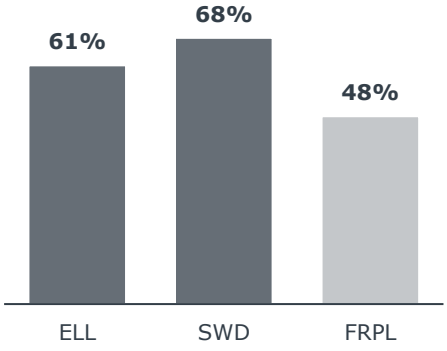
While Minority Students Are At Risk for Poor Reading Scores…

% of 4th Graders Performing Below Basic Reading Levels on NAEP, by Race/Ethnicity (2019)



…Special Populations Are the Furthest Behind in Reading

% of 4th Graders Performing Below Basic Reading Levels on NAEP, by Population Classification[1] (2019)



A Significant Share of Students from Highly Educated Families Struggle to Read

30% Of struggling readers come from households with at least one **college-educated parent**

1) ELL= English Language Learners, SWD = Students with Disabilities, FRPL= Free- and Reduced-Price Lunch.

Source: The Nation's Report Card, 2018, NAEP Data Explorer; APM Reports, 2018, Hard Words: Why Aren't Kids Being Taught to Read?; EAB interviews and analysis.

Truth Be Told: There's No Excuse for Poor Outcomes

Virtually Every Student Can Learn to Read

Almost All Students Have the Cognitive Capacity to Read

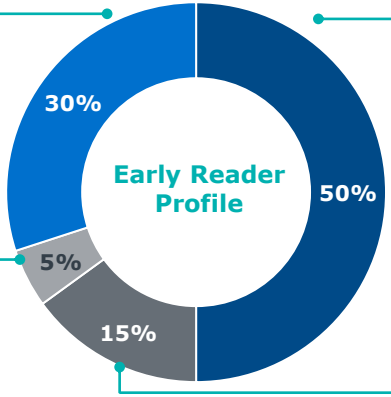
Distribution of Early Readers' Cognitive Ability, According to the National Institutes of Health

1 Capable of Learning Regardless of Environment

These students will learn how to read, regardless of instructional quality

2 Able to Learn With High Quality Tier 1 Instruction

Half of students will learn to read from explicit and direct instruction in foundational skills



3 Require Additional Time and Support

Minimal share of students will eventually enter tier 1 with additional attention and support

4 Struggle with Severe Cognitive Impairments

Small subset of students have severe cognitive disabilities and will likely struggle to read throughout their schooling

95% Of elementary students, regardless of background, are cognitively capable of learning to read when they receive sufficient direct instruction on the foundational skills of reading

Source: National Center for Education Statistics (2017) "Reading Performance, NCES" Lyon, R. (2009) "Reading Difficulties: Prevention, Early Intervention, and Remediation." Southern Methodist University; Kilpatrick, D. (2015) "Essentials of Assessing, Preventing, and Overcoming Reading Difficulties; Mathes, P. (2015) "The Case of Early Intervention in Reading"; EAB interviews and analysis.

Good News: Science Provides a Blueprint for Reading

Decades of Neuroscience Research Provides Insight on How Students Learn to Read

42 Research centers nationwide examine reading-related brain activity

30 Years of brain-based research dedicated to learning to read

Science Has Implications For How to Teach Reading...

"We [NICHD] have multidisciplinary [research] teams—including cognitive neuroscientists and pediatricians—who have developed a body of information on reading and the brain that can inform practice in schools and policy."

Dr. G. Reid Lyon
National Institute of Child Health and Human Development

...And How Schools Can Help Struggling Readers Read

"Every year, there are hundreds of newly published, scientifically oriented research reports on reading...There is ample research that shows how weak readers can make substantial reading gains, with a fairly large percentage developing normalized reading skills."

Dr. David Kilpatrick
Professor of Psychology, SUNY[1] Cortland

Source: Boulton, D (2015) "An Interview with Dr. G. Reid Lyon– Converging Evidence—Reading Research What it Takes to Read;" Loyd, G. (2009)"Reading Difficulties: Prevention, Early Intervention, and Remediation; Kilpatrick, D. (2015) "Essentials of Assessing, Preventing, and Overcoming Reading Difficulties;" EAB interviews and analysis.

1) State University of New York

Human Brains Are Not Naturally Wired to Read

Reading and Writing Are Relatively Recent in the Span of Human Existence

Timeline of Spoken and Written Language in Relation to Human History

Spoken Language

Modern humans first emerged in Africa around 200,000 years ago and communicated using spoken language

198,000 B.C.E.

Written Language

Cuneiform, the earliest written language, dates back to Mesopotamia around 5,500 years ago

3,500 B.C.E.

Books

Johannes Gutenberg invented the printing press, which created the first mass-produced book, *The Gutenberg Bible*

1439

2018

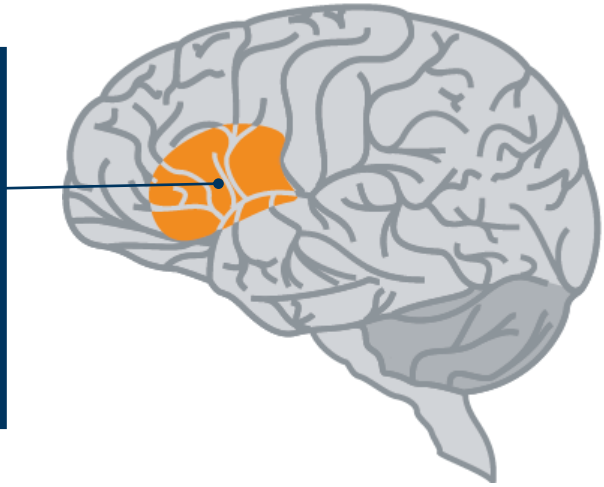
<3% Of human existence includes written language and reading. **The human brain has not evolved to learn reading naturally.**

Source: Ritchter, D, et al. (2017) "The Age of Hominin Fossils from Jebel Ironed, Morocco and the Early Stone Ages"; Spar, I. (2004) "Histories of Writing," The Metropolitan Museum of Art; EAB interviews and analysis.

Frontal Lobe Produces Speech, Processes Meaning

Inferior Frontal Gyrus

- Located within the frontal lobe, which deals with executive functioning and higher-order processing
- Includes Broca's area, known for its role in speech production
- Linked to a semantic hub that assists in processing meaning



Role in Reading: Speech Production, Fluency, and Comprehension

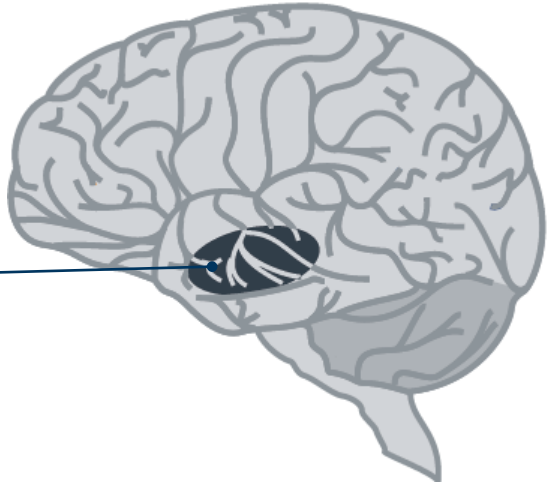
Essential for multiple functions, including grammatical usage, effective speech production, and language comprehension

Source: Harvard Medical School, Department of Neurobiology, "Reading and the Brain," 2018; Burns, "The Reading Brain: How Your Brain Helps You Read, and Why it Matters," FastForward by Scientific Learning, 2017; Pegado et al., "Brain Pathways for Mirror Discrimination Learning During Literacy Acquisition," 2014; Buchweitz et al., "Brain Activation for Reading and Listening Comprehension: An fMRI Study of Modality Effects and Individual Differences in Language Comprehension," 2011; Seidenberg, *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*, 2017; EAB interviews and analysis.

Auditory Cortex Builds Oral Word Understanding

Auditory Cortex

- Located within the temporal lobe
- Processes auditory stimuli transmitted through the ears
- Contains Wernicke's area, known for its role in speech comprehension



Role in Reading: Phonological Processing

Critical for the discernment and recognition of unique speech sounds, which is foundational to the decoding process

Source: Harvard Medical School, Department of Neurobiology, "Reading and the Brain," 2018; Burns, "The Reading Brain: How Your Brain Helps You Read, and Why it Matters," FastForward by Scientific Learning, 2017; Pegado et al., "Brain Pathways for Mirror Discrimination Learning During Literacy Acquisition," 2014; Buchweitz et al., "Brain Activation for Reading and Listening Comprehension: An fMRI Study of Modality Effects and Individual Differences in Language Comprehension," 2011; Seidenberg, *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*, 2017; EAB interviews and analysis.

Visual Cortex Recognizes Printed Letters and Words

Visual Cortex

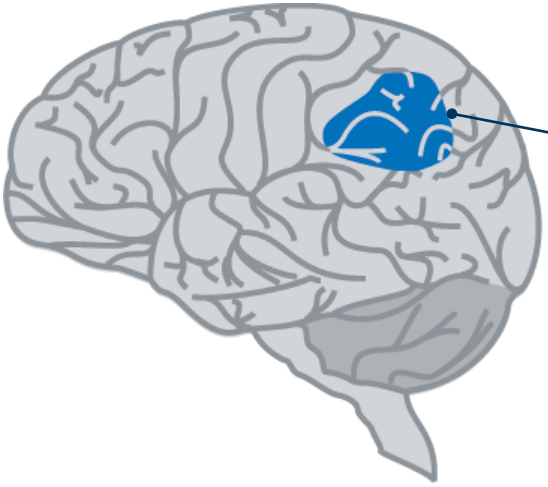
- Located within the occipital lobe
- Processes visual stimuli transmitted through the eyes

Role in Reading: Orthographic Processing

Recognizes and processes visual information conveyed through written letters and words

Source: Harvard Medical School, Department of Neurobiology, "Reading and the Brain," 2018; Burns, "The Reading Brain: How Your Brain Helps You Read, and Why it Matters," FastForward by Scientific Learning, 2017; Pegado et al., "Brain Pathways for Mirror Discrimination Learning During Literacy Acquisition," 2014; Buchweitz et al., "Brain Activation for Reading and Listening Comprehension: An fMRI Study of Modality Effects and Individual Differences in Language Comprehension," 2011; Seidenberg, *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*, 2017; EAB interviews and analysis.

Angular Gyrus Associates Letters with Sounds



Angular Gyrus

- Located within the parietal lobe
- Responsible for many multimodal functions
- Links semantic, phonological, and orthographic processors

Role in Reading: Sound-Symbol Connections and Semantic Processing

Makes connections between sounds and visual representations of letters and words, which is critical for speech-to-print and print-to-speech circuits

Source: Harvard Medical School, Department of Neurobiology, "Reading and the Brain," 2018; Burns, "The Reading Brain: How Your Brain Helps You Read, and Why it Matters," FastForward by Scientific Learning, 2017; Pegado et al., "Brain Pathways for Mirror Discrimination Learning During Literacy Acquisition," 2014; Buchweitz et al., "Brain Activation for Reading and Listening Comprehension: An fMRI Study of Modality Effects and Individual Differences in Language Comprehension," 2011; Seidenberg, *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*, 2017; EAB interviews and analysis.

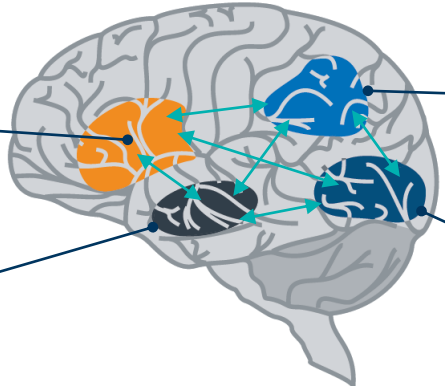
There Is No Single "Reading Region"

Reading Requires Building Neural Circuits Across Critical Brain Regions

Regions of the Brain Activated While Reading, as Viewed in fMRI[1] Scans

Inferior Frontal Gyrus
Aids in speech production, fluency, and comprehension

Auditory Cortex
Creates meaning out of speech sounds and builds comprehension



Angular Gyrus
Connects discrete sounds to letters in order to form words and meaning

Visual Cortex
Recognizes visual representations of written letters and words

Early Reading Instruction that Builds Neural Pathways Is Essential

The quality of reading instruction impacts a child's white matter development—the neural pathways that connect areas of the brain

56%

Of variance in reading outcomes is accounted for by the change in volume in white matter between kindergarten and 3rd grade

1) fMRI= Functional Magnetic Resonance Imaging

Source: Konnikova, M (2015) "How Children Learn to Read," *The New Yorker*; Myers, C (2014) "White Matter Morphometric Changes Uniquely Predict Children's Reading Acquisition;" Seidenberg, M (2017) *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It;* EAB interviews and analysis.

Research Confirms: Strong Readers Decode

Research Distinguishes Strong From Poor Readers

Key Differences Between Strong and Poor Readers, According to Numerous Studies

1 Strong readers rely heavily on decoding skills

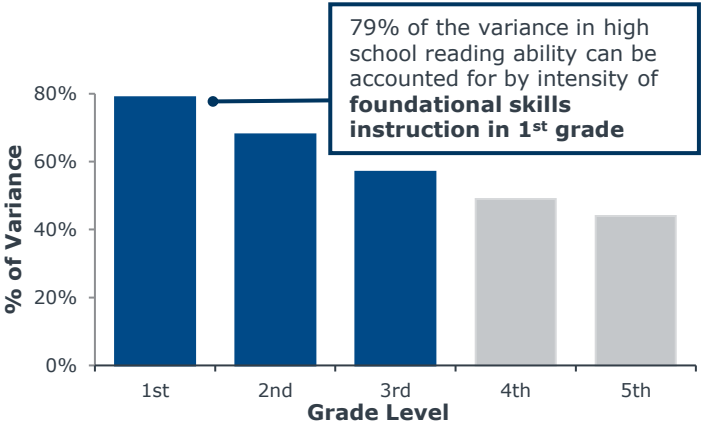
- Adelman (2012)
- Frost (1998)
- Gringirenko & Naples (2008)
- Halderman, et al. (2012)
- Pugh & McCardle (2009)
- Share (1995)

2 Poor readers rely heavily on context clues

- Corkett & Parrila (2008)
- Nation & Snowling (1998)
- Rack et al. (1992)
- Van Den Broeck & Geudens (2012)

A Focus on Foundational Skills[1] in Early Grades is Essential for Future Reading Success

Influence of Early Decoding Skills-Focused Instruction on Reading Comprehension Ability in Later Grades[2]



87% Of English words are either fully or easily decodable[3]

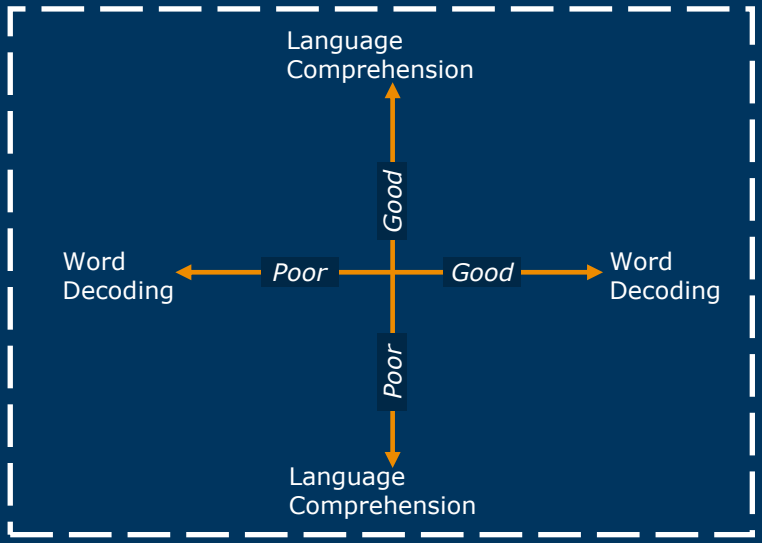
1) Phonological awareness, print concepts, phonics/word recognition, and fluency
2) Results from a ten-year longitudinal study out of Yale University; n=445 randomly selected kindergarten students.
3) 50% of English words are fully decodable; 37% of words are mostly decodable with the exception of one sound, many of which can be solved by knowledge of prefixes, roots and suffixes

Source: Shaywitz, et al., (1999) "Persistence of Dyslexia: the Connecticut Longitudinal Study at Adolescence;" Student Achievement Partners, "Foundational Skills Guidance Documents: Grades K-2"; Kilpatrick, D. (2015) "Essentials of Assessing, Preventing, and Overcoming Reading Difficulties"; Reed, D. (2016), "The Importance of Phonics Instruction For All Students," Iowa Reading Research Center' EAB interviews and analysis.

The Simple View of Reading

Research-Based Equation for How Students Learn to Read

Reading Comprehension = Word Decoding x Language Comprehension



Reading Mastery Is an Ongoing Progression

Phases of a Student's Reading Development

Emerging Pre-Reader

5 years old and younger

Word Decoding

- Aware of the **letters in the alphabet**
- Knows that language is made up of **small units called words** and **even smaller units called letters**
- Understands **what books are** and the kinds of experiences they can create

Language Comprehension

- Exposed to ample **oral** and **written** language through books and conversation
- Has a **vocabulary** of ~2,000 words and can understand ~10,000 words

Novice Reader

Grades K-1

Word Decoding

- Distinguishes between and blends **sounds**
- Aware of **orthographic** conventions, **spelling** patterns
- Uses **semantic knowledge** to aid decoding and vice versa
- Understands the **alphabetic principle**
- Develops **strategies for sounding out unknown words**
- **Segments** words into syllables, syllables into sounds

Language Comprehension

- Able to recognize some **words by sight**
- Exposed to **robust vocabulary,** learning 2-3+ new words per day
- Can understand ~20,000 words

Decoding Reader

Grades 2-3

Word Decoding

- Aware of the **morphophonemic**[1] principles of language
- Reads more often and at increased speed (**semi-fluency**)
- Has added ~**3,000 decodable words** to one's lexicon

Language Comprehension

- Uses linguistic knowledge to **distill meaning** from text
- Can **predict, retell**
- Familiar with **sight words** and **sight "chunks,"** recognizable letter blends and morphemes
- Knows to **reread** and **correct misunderstandings**

Fluent, Comprehending Reader

Grades 3-5

Word Decoding

- Decodes **nearly automatically**, freeing up working memory for higher level executive functioning

Language Comprehension

- Understands the **grammatical function of language**
- Applies **morphology** (roots, suffixes, prefixes) to comprehend complex words
- Uses **metaphor, inference,** and **analogy** accurately
- Independently connects **prior knowledge** to text to deduce greater meaning
- Relies on reading to **build ongoing knowledge**

1) The relationship between sounds and word units and the rules that govern their pronunciation

Source: Wolf, M, *Proust and the Squid: The Story and Science of the Reading Brain*, 2007; Temple et al., *All Children Read: Teaching for Literacy in Today's Diverse Classrooms*, 4th ed., 2010; Virtual Speech Center, "Speech and Language Development Milestones," 2018; Loraine, S, "Vocabulary Development,"(2008; Lyon, R., "Reading Difficulties: Prevention, Early Intervention, and Remediation," Southern Methodist University, 2009; EAB interviews and analysis.

What Does the Science Mean for Comprehension?

Developing Good Readers Requires Ongoing Comprehension Support

1 Morphological Awareness

Explicit instruction in **morphology, or the study of the structure of words and word formation,** helps students build lifelong comprehension skills by recognizing the meaning of word roots, prefixes, and suffixes.

Example of Word Comprehension through Morphology

Prefix	Root	Suffix	Full Word
un-	**system**	**-atic**	**Unsystematic**
Negates, "opposite of"	*noun, "an organized process"*	*converts noun to adjective*	*Something that is not done according to an organized plan or process*

2 Explicit Vocabulary Instruction

Teachers can help students build their working vocabulary by using more robust vocabulary in class and teaching at least 2-3 new words per day in 1st and 2nd grades and at least 6-8 new words per day for 3rd grade and older.[1]

Recommendation for Vocabulary Instruction

12 — Average number of times that early readers need to encounter a new word before they know it well enough to improve comprehension

3 Expanding Background Knowledge

Teachers should consider the **requisite background knowledge needed to access a text** and use pre-reading discussions to familiarize students with new words and concepts. Culturally diverse and responsive materials can facilitate **text-to-self and text-to-world connections**, while helping students develop an excitement for reading.

See the Appendix for a sample of multi-cultural texts by age level, based on the Teachers' Choices Reading List, and for strategies to aid ELLs[2] in language comprehension.

1) 800+ words per year in grades 1-2; 2,000+ words per year in grades 3+
2) English language learners

Source: Irujo, S. "What Does Research Tell Us About Teaching Reading to English Language Learners," Reading Rockets; Fromkin et al. (2011), *An Introduction to Language*, 9th ed.; Lyon, R. (2009) "Reading Difficulties: Prevention, Early Intervention, and Remediation," Southern Methodist University; EAB interviews and analysis.

What Does the Science Mean for Word Decoding?

Direct Instruction on Decoding Skills is Fundamental For Early Grades

1 Phonemic Awareness

Direct instruction related to recognition and production of the **44 speech sounds (phonemes) in the English language** is critical for students who are starting to learn to read, particularly for ELLs.[1]

See the Science of Reading Implementation Guide for a list of 44 English phonemes and links to lists of phonemes that prove challenging for ELLs.

Language	Number of Speech Sounds
English	**44**
Haitian Creole	32
Mandarin	29
Spanish	24

2 Mastery of Print Concepts

Recognizing letters and basic elements of print (*see right*) is foundational to mastering the **orthography** (writing system) of English. Teachers should create multiple and meaningful exposures to print to introduce students to the **alphabetic principle**.[2]

- ✓ Front, back of book
- ✓ Title of the book
- ✓ Where to begin reading
- ✓ One letter
- ✓ One word
- ✓ First, last word in sentence
- ✓ First, last word on page
- ✓ Capital letter
- ✓ Lowercase letter
- ✓ Punctuation marks

3 Phoneme-Grapheme Correspondence

Once students have acquired the alphabetic principle, teachers should explicitly explain how each of English's 44 speech sounds maps to a letter or letter combination (grapheme). **Sound walls** in early grades that include photos of each oral pronunciation help students practice individual sound-symbol correspondences *(see right).*

1) English language learners
2) The systematic relationship between the written letters of an alphabet and its sounds

Source: The National Reading Panel (2000) "Teaching Children to Read;" American Speech-Language-Hearing Association, (2018) "Phonemic Inventories and Cultural and Linguistic Information Across Languages; Seidenberg, M (2017) "Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About it," Basic Books, New York; Irujo, S. "What Does Research Tell Us About Teaching Reading to English Language Learners," "Print Awareness: Guidelines for Instruction," Reading Rockets; Castles et al. (2018), "Corrigendum: Ending the Reading Wars: Reading Acquisition from Novice to Expert," Association for Psychological Science; EAB interviews and analysis.

Phoneme-Grapheme Correspondance

Long Vowels

Phoneme	Graphemes	Examples
31. /e/	a, ai, eigh, aigh, ay, et, ei, au, a_e, ea, ey	b**a**by, m**ai**d, w**eigh**, str**aigh**t, p**ay**, fil**et**, **ei**ght, g**au**ge, m**a**_**e**, br**ea**k, th**ey**
32. /i/	e, ee, ea, y, ey, oe, ie, i, ei, eo, ay	b**e**, b**ee**, m**ea**t, lad**y**, k**ey**, ph**oe**nix, gr**ie**f, sk**i**, dec**ei**ve, p**eo**ple, qu**ay**
33. /aɪ/	i, y, igh, ie, uy, ye, ai, is, eigh, i_e	sp**i**der, sk**y**, n**igh**t, p**ie**, g**uy**, st**ye**, **ai**sle, **is**land, h**eigh**t, k**i**_**e**
34. /o/	o, oa, o_e, oe, ow, ough, eau, oo, ew	**o**pen, m**oa**t, b**o**_**e**, t**oe**, s**ow**, d**ough**, b**eau**, br**ooch**, s**ew**
35. /u/	o, oo, ew, ue, u_e, oe, ough, ui, eu, ou	wh**o**, l**oo**n, d**ew**, bl**ue**, fl**u**_**e**, sh**oe**, thr**ough**, fr**ui**t, man**eu**ver, cr**ou**p
36. /ju/	u, ou, eau, ew, ieu, iew, eu, yu, eue	**u**niform, **you**, b**eau**ty, f**ew**, ad**ieu**, v**iew**, f**eu**d, **yu**le, q**ueue**
37. /ɔɪ/	oi, oy	s**oi**l, t**oy**
38. /aʊ/	ow, ou, ough	n**ow**, sh**ou**t, b**ough**

Most Reading Instruction Fails to Align with Science

Typical Classrooms Rarely Incorporate the Science of Reading

Limitations of Status Quo Early Elementary Reading Instruction

Unfamiliarity with Foundational Reading Skills

60%

Of elementary teachers have **never been trained** in strategies for teaching phonemic awareness, phonics, vocabulary, fluency and comprehension

Oversimplified Phonemic Awareness

95%

Of early elementary classrooms **spend insufficient time** providing direct instruction on all English phonemes[1]

Overemphasis on Using Context Clues for Decoding

80%

Of early elementary teachers **encourage students to use pictures or context clues** to identify unfamiliar words

> "A look at the research reveals that **the methods commonly used to teach children to read are inconsistent with basic facts about human cognition and development** and therefore make learning to read more difficult than it should be… In short, what happens in classrooms isn't adequate for many children."
>
> *Mark Seidenberg, Cognitive Neuroscientist, University of Wisconsin-Madison*

1) In fact, most 2nd-4th grade curricula and assessments stop monitoring phonemic awareness, even though phonics skills continue to develop through fourth grade (David Kilpatrick, 2015)

Source: Kilpatrick, D (2015) "Essentials of Assessing, Preventing, and Overcoming Reading Difficulties;" Seidenberg, M. (2018) "Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It;" EAB interviews and analysis.

How Reading Is Still Taught in Most Classrooms

Despite Need for Foundational Skills, Comprehension Reigns Supreme

Many Instructional Strategies Assume Mastery of Foundational Knowledge…

Common Comprehension Strategies that Crowd Out Foundational Emphasis

"Daily 5" Activities
Individual and peer-led activities are predicated on child's ability to read fluently and comprehend text

Leveled Literacy
Non-specific leveling overlooks precise phonics-informed phonemic patterns and blends

Balanced Literacy
Often overemphasizes comprehension strategies before ensuring mastery of decoding

…Calling into Question the Developmental Validity of Their Use in the Early Grades

> You have to know how to read enough to then be able to learn from what you're reading. **If young children don't decode well enough, they're using too much cognitive space to comprehend what they're reading.** The word work aspect can free up that space to *then* start thinking about main idea, detail, inferencing, and the more metacognitive components.
>
> Carol Tolman, Ed.D.

Source: EAB interviews and analysis.

Success Is Possible: Science Critical for Improvement

Districts that Have Aligned Systems with Science Dramatically Improve

	Demographics	Performance Before	Performance After
Rapides Parish *(32 elementary schools)*	**FRPL 69%; Title I: 94%** Black: 43% Hispanic: 3% IDEA: 11% LEP: 2%	18% Of third graders reading on or above grade level in 2016	63% Of third graders reading on or above grade level as of March 2019
Bethlehem Area School District *(16 elementary schools)*	**FRPL 57%; Title I: 82%** Black: 10% Hispanic: 39% IDEA: 17% LEP: 6%	47% Of kindergarteners scored at or above the DIBELS benchmark composite score in 2015	84% Of kindergarteners scored at or above the DIBELS benchmark composite score in 2018
Grant County Schools *(2 elementary schools)*	**FRPL 46%; Title I: 50%** Black: 1% Hispanic: 1% IDEA: 18% LEP: 0.3%	43rd Lowest-performing school district out of 55 districts total in the state in 2010	6th Highest-performing school district out of 55 districts total in the state in 2016

Source: Louisiana Department of Education, 2018, 2017 and 2016 DIBELS Reading Reports; American Public Media, 2018, Hard Words: Why aren't kids being taught to read?; Grant County Schools, WV; EAB interviews and analysis.

Narrowing the Third Grade Reading Gap

Embracing the Science of Reading to Ensure All Students Can Read

1 Develop and Sustain Schoolwide Expertise in the Science of Teaching Reading

1. Science of Reading Professional Development
2. Instructional Materials Selection Rubrics
3. Train the Trainer Sustainability Plan
4. Grassroots Pilot Success Models

2 Hardwire Science-Based Instruction in the Classroom

5. Principal Literacy Champions
6. Science-Directed Literacy Look-For
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13. Summer School Attendance Incentives
14. Parent-Facing Literacy Nudges

Source: EAB interviews and analysis.

Getting Teachers Up the Science of Reading Curve

Many Schools Investing in Extensive (and Expensive) Training Programs

Learning Outcomes of LETRS[1] Provide Teachers the Science of Reading

- How the **brain learns to read** and its implication for educators
- **Allocate time** effectively to enhance reading outcomes
- Deep understanding of the **five foundational reading skills** and how to teach them
- Supports for **building vocabulary**
- Strategies for assessing and **addressing individual student skill deficits**
- Knowledge of evidence-based instructional practices for both **ELL and students with disabilities**

Vendor Overview:
LETRS, Voyager Sopris Learning

Comprehensive Modules Provide Explicit Reading Instruction Advice

Recommended Core Requirements !

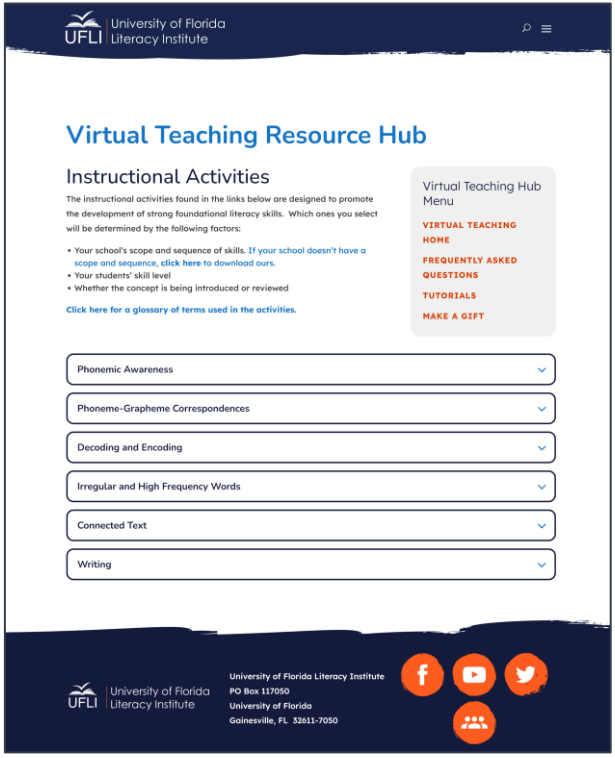
1. The Challenge of Learning to Read
2. The Speech Sounds of English
3. Teaching Beginning Phonics, Word Recognition, and Spelling
4. Advanced Decoding, Spelling, and Word Recognition
5. The Mighty Word: Oral Language and Vocabulary
6. Digging for Meaning: Understanding Reading Comprehension
7. Text-Driven Comprehension Instruction
8. The Reading-Writing Connection

1) Language Essentials for Teachers of Reading and Spelling.

Source: Voyager Sopris Learning. 2018. LETRS: Language Essentials for Teachers of Reading and Spelling Elementary; EAB interviews and analysis.

Myriad (Often Less Expensive) Training Options

EAB Can Help Your Teachers Choose the Right Approach for Your School



Source: EAB interviews and analysis.

Guidance Available to Select Instructional Resources

Multiple Tools Available to Find the Right Instructional Materials

Resources Available to Review and Evaluate Quality of Instructional Materials

COMPLETED REVIEWS AND RUBRIC

Key Benefit of Each Resource	edreports.org	Louisiana Department of Education
Foundational Skills Emphasized in Rubric	✓	✓
Individual Grade-Level Review of Materials	✓	✓
Summative Ratings	✓	✓
Actionable "Next Steps" for Educators		✓
Benchmark Assessment Reviews		✓
Commentary from the Publisher	✓	
Detailed, Specific Reviews of Numerous Materials	✓	✓

RUBRIC ONLY

REL Southeast — Regional Educational Laboratory At Florida State University

REL Southeast Offers a Standards-Agnostic Rubric for Evaluating Reading/Language Arts Instructional Materials

Clear Guidance on Review Process

Offers explicit guidelines for creating a curriculum review team as well as professional development recommendations

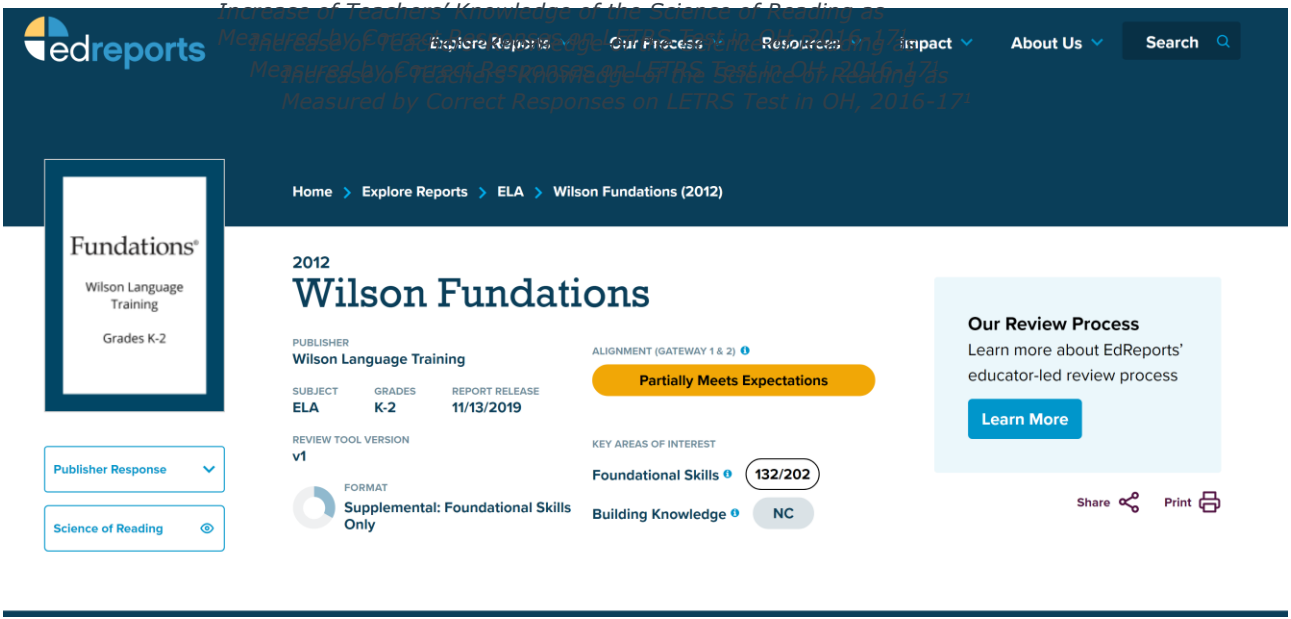
In-Depth Analysis of Foundational Skills

Provides explicit reviews of each foundational area of reading, as opposed to a broad overview

Source: EdReports; LA Dept. of Education, "Curricular Resources Annotated Reviews"; REL Southeast, 2017, "Rubric for Evaluating Reading/Language Arts instructional Materials for Kindergarten to Grade 5"; EAB interviews and analysis.

Is Your Curriculum What You Need It to Be?

Start by Evaluating What Your Teachers Are Using Now

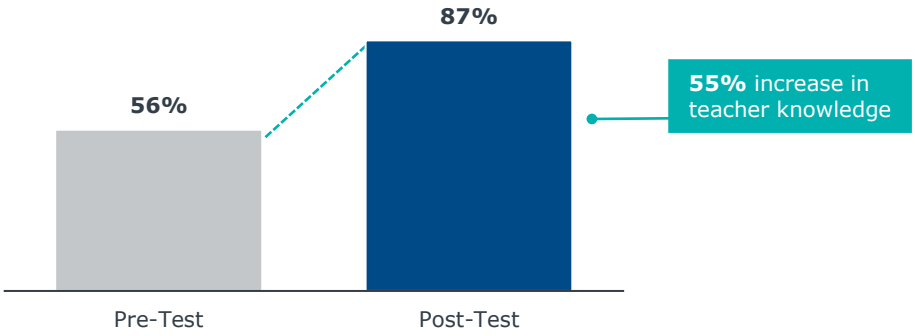


Source: EAB interviews and analysis.

LETRS-Trained Teachers Come Out of Training Knowing What to Do

Increase in Teacher Knowledge of Foundational Reading Skills

Increase of Teachers' Knowledge of the Science of Reading as Measured by Correct Responses on LETRS Test in OH, 2016-17[1]



"Why Didn't We Learn This Earlier?"

"For our teachers, true learning is occurring, and the light bulb is being turned on. So many of these teachers have said, 'How were we not taught these skills in college?'"

Alana Cohen, ELA Curriculum Specialist, Rapides Parish, LA

1) n = 255; teachers were trained in units 1-4 of LETRS.

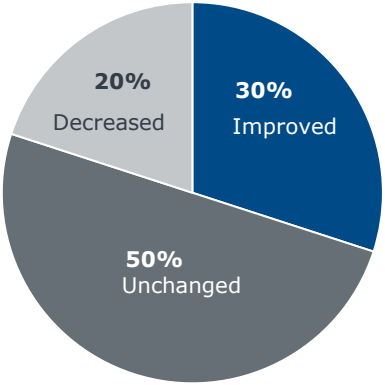
Source: Education Week Webinar. 2018. Develop Your Teachers Into Literacy Experts; Voyager Sopris Learning. 2018. LETRS: Language Essentials for Teachers of Reading and Spelling, Elementary; American Public Media. 2018. Hard Words: Why aren't' kids being taught to read?; EAB interviews and analysis.

One-Off Training is Not Enough

Teachers Struggle to Bring Their Learning into the Classroom

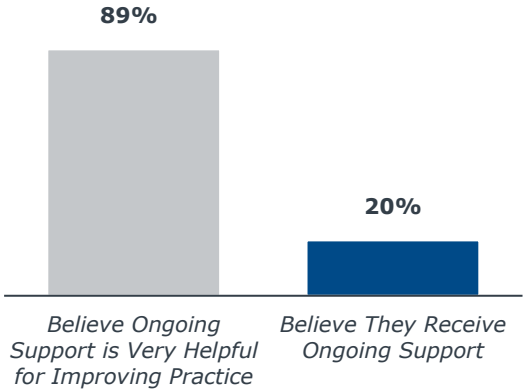
Inconsistent Translation of Professional Learning to Teacher Practice

% Breakdown of Teacher Performance Change After Participating in Professional Development[1]



Limited Ongoing Implementation Support a Key Barrier

Discrepancy Between Teachers' Desires for Ongoing Support and Reported Experiences[2]



1) N=10,000 teachers; TNTP performance quality review was measured using evaluations and observations over a two-to-three year period.
2) N=20,000 teachers.

Source: Gates Foundation, "Primary Sources: America's Teachers on Teaching in an Era of Change"; TNTP, "Billions of Dollars in Annual Teacher Training is Largely a Waste," 2015; EAB interviews and analysis.

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Source: EAB interviews and analysis.

Principal Investment Critical to Teacher Success

Principals Create Building-Level Environment for Literacy Instruction

- Set **building-level priorities and focus** year-to-year
- Determine **teacher hiring** criteria and make school-level hiring decisions

- Help determine **professional development** offerings
- Oversee and conduct **teacher observations and evaluations**

But Principals Have No More Knowledge of Literacy Than Teachers

"Principals help to set the foundations for school success, but **we were finding that many of the principals themselves did not have much background in the science of reading**… Some principals shared similar teacher beliefs that some students were unlikely to make much reading improvement by third grade because of non-school factors beyond their control. After all, this is how it's always been. We had to change our mindset."

Jack Silva, CAO
Bethlehem Area School District

Source: EAB interviews and analysis.

Establish a "No Excuses" Leadership Mindset

Prepare Principals to Be Building-Level Literacy Leaders and Advocates

1 Data Summit

District convenes a principal data summit as a call to action to initiate literacy change

2 Science of Reading Training

Principals participate in science of reading professional development[1] to build their knowledge and prepare them to answer tough questions from teachers

3 Change Management Training

Principals participate in change management professional development to give them tools to lead their teachers through literacy change

Profiled Institution: *Bethlehem Area School District, PA*

Inaugural Urgency Data Summit

- District **sets expectation for improved performance** by highlighting underperformance in current data and challenging the status quo
- District sets expectation that **data summits will be replicated at the building level**

Change Management Training

- Principals **discuss real-time case scenarios to identify practical solutions** from science of reading PD
- District leaders and principals **develop a collective set of talking points** for resistant teachers
- Principals have network to connect with in real time for **support on tough questions**

1) Principals went through LETRS training on units 1, 2, 3, and 7.

Source: EAB interviews and analysis.

Create Systems to Sustain Literacy Leadership

Principals Recreate Data Summits at Their Schools

4 School-Level Data Summit

Convene data summits for teachers to analyze data to catalyze a mentality of change

5 Science of Reading Training for Teachers

Select initial cohort of teachers for LETRS training and create roll out plan for subsequent grades

6 Bi-Monthly Data Meetings

Lead bi-monthly data summits with teachers to review DIBELS results and instructional needs for students

Repeat steps 1-3 for principals and 4-6 for buildings on a yearly basis to maintain focus on literacy.

Principals Engage in Continued Cross-District Collaboration

Establish Collaborative Online Platforms for Principals

- Create a password-protected online document sharing system using a free or inexpensive platform (e.g., Google Docs)
- Principals share resources, talking points, and regularly collaborate with each other

Quarterly Meeting Between District and School Leaders

- Elementary principals meet on a quarterly basis to analyze school and student data
- Principals share best practice strategies from their schools

Source: EAB interviews and analysis.

Principals Become Informed Reading Advocates

Principals Know What Works and Make More Effective Reading Decisions

Principal Knowledge and Decision Making Improves

40% ➡ 95%

Increase in principals who believed that all kids could read when provided science-based instruction

85%

Of principals report greater clarity around what it takes to improve reading outcomes

80%

Of principals report making at least one change in their decisions to better support literacy

Principals Adjust Practice to Promote the Science of Reading

Principals incorporate **new hiring questions** about prospective teachers' level of comfort with change in addition to literacy knowledge

Principals provide more targeted and **informed guidance and feedback** on literacy instruction

> "Rather than saying a student 'needs more reading support' in a generic way, **school staff can now discuss the skill needs of struggling readers**. They can figure out whether a student's poor performance is linked to needing help with speech sounds or with matching the letters with the speech sounds."
>
> Jack Silva, CAO
> Bethlehem Area School District

Source: EAB interviews and analysis.

Give Teachers Clear Guidance on Classroom Practice

"Look-For" Planning and Observation Document Defines Quality Instruction

Lesson Component	What I Should and Shouldn't See and Hear
Phoneme-Grapheme Mapping **5 – 10 minutes** **Notes** *Make sure students are tapping each sound and writing the corresponding letter. Give corrective feedback, as needed.*	✔ **Should See...** ❑ Teacher using a predetermined word list including only spelling patterns previously taught ✔ **Should Hear...** ❑ Teacher reviewing sound-symbol correspondence before or after the mapping routine, saying "Remember these letters make this sound." ✖ **Shouldn't See...** ❑ Students looking at a printed copy of the whole word ❑ Students mapping words with spelling patterns they haven't yet been taught

1 Describes **exactly what should be seen and heard** in a scientifically-based reading lesson

2 Includes **suggested time allocation for each skill** component of the lesson

3 Provides explicit **guidance on common practices that are NOT aligned to the science of reading**

Profiled Institution:
Cedar Rapids Community School District, IA

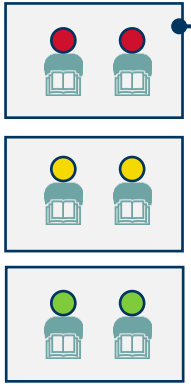
Cedar Rapids Community School District
Every Learner: Future Ready

"Look-For" document available in the Science of Reading Implementation Guide.

Source: EAB interviews and analysis.

Non-Specific Data Often Drives Student Grouping

Many Teachers Group Students Using Imprecise Universal Screener Data



Universal screeners or CBMs[1] are commonly used to group students with similar average benchmark scores or reading levels, even though **this data does not provide insight on the precise nature of students' reading needs**

Examples of Non-Specific Grouping Categories

- *Red, Yellow, Green, Blue*
- *Above Benchmark vs Below Benchmark*
- *Advanced vs Struggling*
- *Level A, B, and C Groups*

Common Screeners or CBMs: AIMS Web, DIBELS, STAAR, Texas Primary Reading Inventory, DRA

90% Of teachers **maintain generic reading groups**, without diagnosing the precise reasons behind students' reading levels

1) Curriculum Based Measurements

Source: Sparks, S. (2018) "Are Classroom Reading Groups the Best Way to Teach Reading? Maybe Not," Education Week; Hall, S (2006) "I've Dibel'd, Now What?";EAB interviews and analysis.

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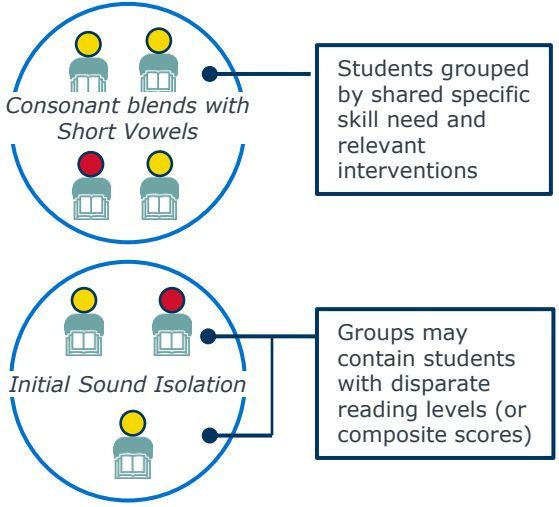
Skills-Based Grouping Refocuses Intensive Instruction

Use Diagnostics to Group Students By Similar Skill Needs, Not Reading Levels

Sample Kindergarten Skills-Based Intervention Groups



Profiled Institutions:

Grant County Schools, WV

Farmington Municipal Schools, NM

Diagnostics Provide Deep Data Needed to Group and Monitor Student Skills

Sample Skills-Based Grouping Process

1. **Employ Universal Screener (or CBM)**
   Which students are struggling readers? And what are their high-level skill needs (i.e., phonics)?
2. **Assess Using Diagnostic**
   Why are they struggling? What are their sub-skill needs?
3. **Organize Student Groups By Skills**
   Which groups of students have need similar skill-based interventions?
4. **Match Intervention To Skill Need**
   Which targeted instruction will best address their skill deficiencies?
5. **Monitor Progress of Particular Skill Using Diagnostic**
   Does the student demonstrate at least 80% mastery of the specific skill after three weeks?
   - If yes, assess student on next skill
   - If no, consider adjusting intervention

Source: Hall, S. (2018) "10 Success Factors For Literacy Intervention: Getting Results with MTSS in Elementary Schools;" EAB interview and analysis.

Provide Teachers with the Data Know-How

Support Teachers in Using Assessment Data for Skills-Based Implementation

Invest in Diagnostics and Train Teachers in Distinguishing and Using Assessments

Distinction Between Screeners and Diagnostics

Universal Screener (CBM)	Diagnostic
Sample: DIBELS	***Sample: DIBELS DEEP***
• Identifies *who* is not reaching benchmark • Norm reference measures or predictive measures of future reading ability • Provides insight into high-level skill need (i.e., phonemic awareness)	• Identifies *why* students are struggling • Criterion referenced around one skill area at a time • Provides insight into sub-skill needs (i.e., 25 subskills within phonemic awareness)

Both are helpful, but diagnostics give specific details about underlying skill needs and progress

Provide Ongoing Opportunities for Teachers to Refine Data Analysis Skills

Assign a master teacher or intervention specialist to host data collaboration hours at least every two weeks so teachers can troubleshoot challenges

Source: EAB interviews and analysis

Help Teachers Match Interventions to Skill Needs

Prescriptive Intervention Chart Guides Teachers in Providing Right Supports

Know the Problem to Determine the Right Treatment

Sample Intervention Guideline Chart

1 Literacy Focus	2 Diagnostic	3 Corresponding Resource
If *a student presents challenges with…*	***Then*** *use the following diagnostic…*	***Use*** *the following program to target interventions…*
Orthography: Letter Identification	DIBELS Letter Identification	Handwriting Without Tears
Fluency: Reading Pace	Oral Fluency- % of Words Read Correctly	Read Naturally
Comprehension: Context Clues	Retell Fluency	Visualizing and Verbalizing

Include "If/Then" statements to clarify action steps

Offer resource suggestions for each skill need

Recommendations for Maximizing Utility

- Laminate chart for long-term durability
- Limit chart to one page for easier access and classroom visibility
- Disseminate during PD and at the end of school year to ensure appropriate identification of students for summer program
- Hold teachers accountable for adherence to the prescribed process

Source: EAB interviews and analysis.

Expand Opportunities for Ongoing Support

Support Teaching Excellence with Sustained, Actionable Feedback

1 Record

Teachers record a reading lesson focusing on foundational skills

2 Review

Teachers review their lesson using district-issued self-evaluation checklist then share video with peers to identify strategies to improve practice

3 Revise

Teachers revise instructional strategies based on reflection and peer feedback

Repeat Process as Frequently as Possible

Three-Step Review Process

Self-Evaluation
Following prescribed instructional checklist, teachers self-review their lessons on video

Peer-to-Peer Discussions
Teachers then use checklist to observe a colleague's video and provide feedback accordingly

Exemplary Modeling
Highest quality videos are used as models and presented in professional learning communities

Source: EAB interviews and analysis.

Guidance Needed to Ensure Meaningful Reflection

Self-Evaluation Checklists Help Teachers Identify Room for Growth

	Phonological Awareness	
	Did I **clearly state the learning target**?	✓
	Did I **provide scaffolds?** (e.g., chips, tiles, tapping)	✓
	Model: Did I provide the "I do"? (my voice only)	✓
	Guided Practice: Did I include the "we do"? (my voice with students)	
	Independent Practice: Did I include the "you do"? (students choral and/or individual response)	✓
	Did I **use a signal?** (i.e., verbal or non-verbal cue)	
	Did I **complete this component in 2 minutes or less**?	✓
	Did I **review the learning target** for phonological awareness?	
	Phonological Awareness Total:	**5/8**

Organize checklist according to **foundational components of literacy instruction**

Use checklist as opportunity to **remind teachers of critical pedagogical processes**

Provide **concrete metrics** to assist in timing and pacing of lessons

Include opportunity for teachers to **self-grade lessons** in a non-punitive way

Access the complete set of checklists in the Science of Reading Implementation Guide.

Source: EAB interviews and analysis.

What Gets Evaluated, Gets Implemented

Identify District Literacy Priorities and Essential Teacher Behaviors…

Suggested Sub-Criteria To Hold Teachers Accountable to Apply Literacy Theory

Focus on Science-Based Practices

- Lesson plans include direct instruction of foundational skills
- Reading block time is allocated according to research

Utilize a Variety of Assessment Methods

- Weekly phonics assessments are used to monitor student acquisition of skills
- Deeper diagnostics assess struggling readers' progress on a regular basis

Profiled Institution:
Norton Public Schools
Norton, MA

Norton Public Schools

…And Insert Them Into Existing Evaluation Criteria

Evaluation Criteria Selected as Best Aligned with Literacy Goals

1. **Well-structured lessons and units**
2. Adjustments to practice
3. **Variety of assessment methods**
4. Meeting students' diverse needs
5. High student expectations
6. Family engagement, parental communication
7. Professional judgment

Source: EAB interviews and analysis.

The Anatomy of a Collaborative:
EAB's Unique Formula for Supporting Successful Implementation

Four Essential Elements of Every Implementation Collaborative

Guided Planning Workshops
EAB experts provide step-by-step guidance for each phase of implementation and protected time to make key decisions

Implementation Resources
EAB creates every resource you need – including agendas and communications - to make leading change possible for your team

Weekly Office Hours
Sustain your momentum by working with EAB experts to navigate concerns and roadblocks as they arise

A Community of Peers
Learn and lead alongside a cohort of peers, all working to make progress together

What We Hear From Partners

> *"Working through a process rooted in research gave my team clarity and confidence through understanding the "why" behind our actions."*
>
> *~ Superintendent, Michigan*

> *"EAB's resources were amazing. There's no way we could have done all of this alone."*
>
> *~ Assistant Superintendent, Missouri*

> *"One week we found ourselves with 100 questions from staff and scrambling for answers. Olivia helped us to slow down, craft efficient responses, and communicate with confidence."*
>
> *~ Chief Academic Officer, Virginia*

> *"Learning alongside other others is crucial for school leaders. It's impossible – and unhelpful – for us to try and solve today's challenges alone."*
>
> *~ Superintendent, Texas*

Choose the Path That's Right For Your Team: Each collaborative can also be run for individual districts. Limited availability.

Implementation Collaborative:
Achieving Alignment with the Science of Reading

A Proven Playbook for Science-Based Reading Instruction in Schools

1	***Build a Shared Vision for Literacy***	• Ground team in key concepts of science-aligned reading instruction • Define a timeline for change and what success looks like for your schools • Craft a one-page summary of your district's vision and plan for literacy
2	***Establish District-Level Requirements***	• Craft a system for sustaining knowledge of the Science of Reading • Evaluate alignment of current curricula and assessment materials • Define expectations for principals and instructional leaders
3	***Prepare Principals to Lead School-Level Implementation***	• Discover and adapt a proven playbook for leading instructional change • Anticipate barriers to implementation for principals in your district • Equip principals to discuss reading science with teachers
4	***Ensure Teachers Have Agency Through the Change Process***	• Learn to operate Science of Reading-focused PLCs for teachers • Conduct a pre-mortem analysis to identify and address blind spots • Finalize a detailed plan for implementation to ensure successful roll-out

Thirty-two states and the District of Columbia have now passed laws or implemented new policies to promote evidence-based reading instruction.

Professional development for teachers is a crucial first step, but **research has shown that many districts are struggling to turn theory into practice**.

This three-month course equips district leaders with a proven playbook for implementing and sustaining science-based reading instruction in schools.

Reserve your seats for our 2024 Leading for Literacy Collaborative:

Launches July 2024

Build a plan for aligning instruction with reading science that can be scaled and sustained across the district

Case Study: Improving Early Literacy Performance

How Republic School District Went from Good to Great

Republic
School District

Republic School (MO) District enrolls 5,000+ students and has five elementary schools

OPPORTUNITY

Republic's 3rd grade reading scores were among the highest in the state, but the **district was looking to do even better**

SOLUTION

Partnering with EAB, Republic rolled out a phonemic-awareness curriculum with kindergarten teachers in 2020, expanding it to 1st- and 2nd-grade teachers in 2021

IMPACT

Republic achieved **across the board increases in early literacy scores** even as districts statewide saw performance decline.

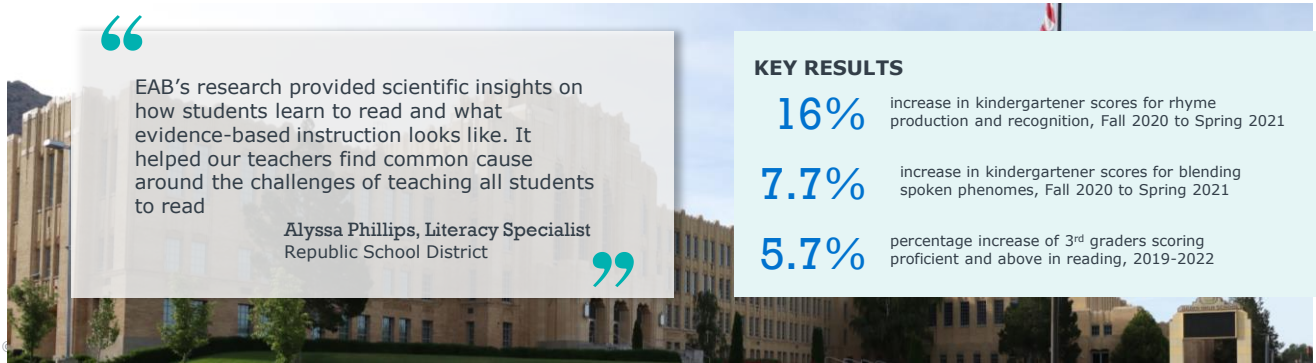
> "EAB's research provided scientific insights on how students learn to read and what evidence-based instruction looks like. It helped our teachers find common cause around the challenges of teaching all students to read"
>
> Alyssa Phillips, Literacy Specialist
> Republic School District

KEY RESULTS

16% increase in kindergartener scores for rhyme production and recognition, Fall 2020 to Spring 2021

7.7% increase in kindergartener scores for blending spoken phonemes, Fall 2020 to Spring 2021

5.7% percentage increase of 3rd graders scoring proficient and above in reading, 2019-2022



How Else Can We Help?

I'd like to speak with someone further to…

1. Learn how to reserve seats for the upcoming *Leading for Literacy* Collaborative cohort
2. Explore EAB's other areas of strategic initiative support for district leadership teams
3. Something else? Choose this option and we will follow up with you

A Quick Ask

We value your feedback.

Please take a few minutes to **complete the short survey** in your web browser.

Thank you!