The Science of Reading: Background & Opportunities

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Reading is the single most important skill we teach. If you can’t read well, you will always struggle to learn.

This is our premise.

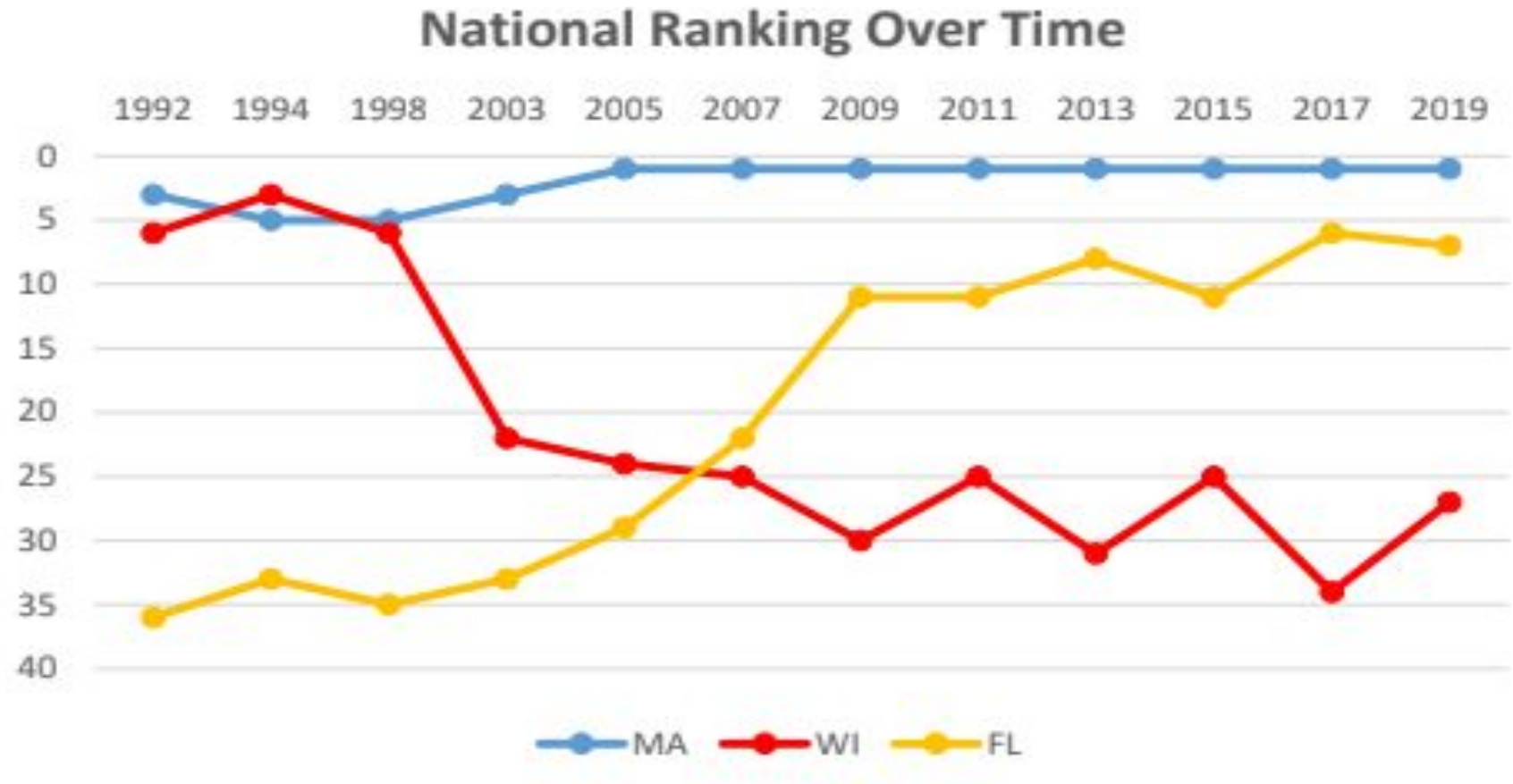
Brief Agenda

1. Background: Reading in WI
2. What is the “Science of Reading” (SoR)
3. How are schools implementing SoR?
4. What are some options for support?
    a. ESSR Learning Loss Funds

Thanks to Rachel Hesprich for slides 16-31. RachelAHesprichEDU@gmail.com

Reading Outcomes in Wisconsin

- We have all heard we have **worst achievement gaps** in the nation
- Our **black students score lowest** in the nation
- Our **low income students** score well below the national average for low income students
- If you look only at white students, who do not get free/reduced lunch and do not have an IEP, **we are 42nd in the nation**
- Only 4 public elementary schools in WI with >80% proficiency
- The average proficiency level is about 35-40% in 4th grade

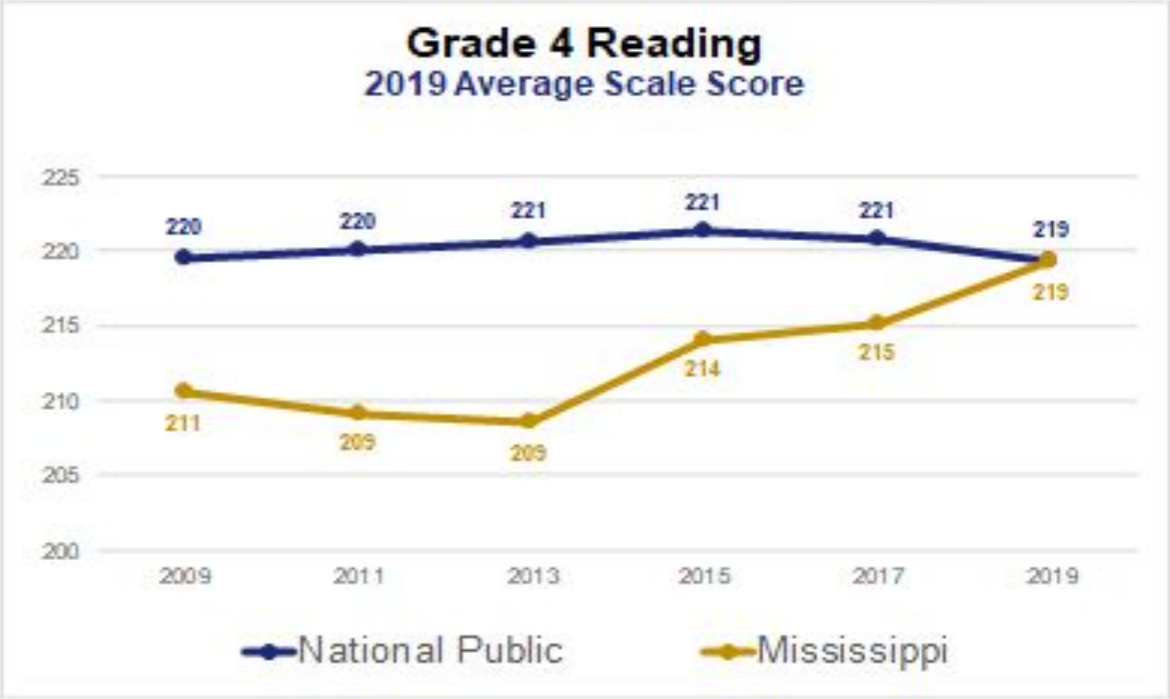


WI drops from top 10 to 35th in the nation.

WI Reading Coalition, 2019 4th Grade NAEP Reading Data Analysis

Mississippi NAEP Score Increase: Grade 4 Reading

- **Mississippi's Grade 4 Reading** NAEP score is **tied with national average**
- **Mississippi scores are increasing**, national scores are declining



How: dyslexia screening, teacher training, leadership coaching on Science of Reading.

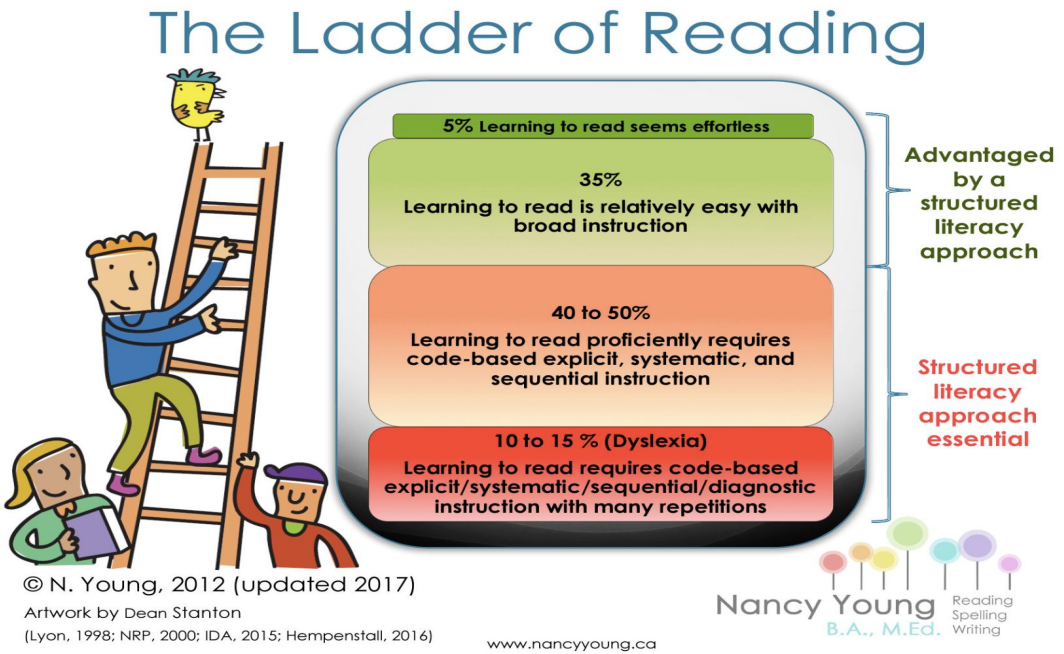
WISEDash Public: 52% proficiency in Not Free/Reduced at 3rd Grade

Why is this? Some ideas...

- **State Report Cards** paint a rosy picture. Schools with just 30-40% reading and math proficiency can be “Meeting Expectations.”
- DPI’s adoption of **Common Core** minimized the role of basic reading skills, putting the early reading standards in an Appendix. FRST better.
- **Most teacher preparation programs** train new teachers on what most districts and DPI are using, so we get more of the same.
- **DPI and RtI Center Guidance**: Open to many options--you choose. “School leaders should discover the best programs through exploration. Every situation is unique.”

Discussion:

- Do your new teachers have adequate knowledge/skills to effectively teach reading?



Wisconsin's Achievement Gaps: Why Worst?

- We know that most "Balanced Literacy" approaches don't adequately address basic skills. Too much is left to chance and there is not enough explicit and systematic instruction.
- "Three cueing" is not supported by evidence: We should NEVER teach guessing at words.
- We know these approaches are widely used in WI (DPI Survey data--235 adoptions grades K-5 in 5 years):
  - Fountas & Pinnell/Leveled Literacy intervention (LLI)/Benchmark Assessment System (BAS)
  - Teachers College/Units of Study/Lucy Calkins
- It appears that parents with more resources are able to supplement inadequate instruction/intervention with home or community tutoring.

Why isn't "Balanced Literacy" working?

1. Based on a theory that never had evidence: "students will 'pick up' the phonics as needed…" **They rarely teach phonics.**
2. It's not balanced! These programs give very little time to early literacy skills like phonemic awareness.
3. It minimizes the role of fluency (accuracy and rate) and focuses almost entirely on reading comprehension.
4. Comprehension is the goal to be sure, but if you can't decode words and read fluently, you *will* struggle to comprehend.
5. Most of these programs use "three-cueing:" use context, look at first letter, guess at the word… **Incompatible with phonics**.

EducationWeek

More Than Phonics: How to Boost Comprehension for Early Readers

By Sarah Schwartz — December 03, 2019 | Corrected: December 09, 2019 10 min read

Ashley Palmer, a kindergarten teacher in Matthews, Mo., works with students on letter names using flashcards.
— Houston Cofield for Education Week

The 1st Schools Cubed Partner!

Matthews Elementary, New Madrid County R1
MO State Assessment

	2014	2015	2016	2017	2018	2019
ELA	13.7	26.8	54.5	40	55	80%
Math	25.5	5.4	14.5	30	43	71.3%

Graph illustrates the building average for percent of students reading At/Above Grade Level. Data highlight: In 2014, only 10% of 3rd graders were Proficient in ELA on MAP. By 2019, 95% of 3rd graders are proficient!

Schools Cubed
The Power of Three
Science of Reading
Systems
Structures

Balanced Literacy and Phonics: Oil and Water

At Matthews, an explicit, systematic approach to phonics instruction has helped drive the big jumps in student achievement—but it's only one part of the equation, said Angie Hanlin, the school's principal. The school took on a complete restructuring of its reading program, which included changing the way teachers planned and taught vocabulary and reading comprehension.

"Putting a phonics patch on a (balanced) reading program...is not going to teach all students to read," Hanlin said. "It is not going to fix it, and it's not going to drive up the data."

EdWeek Special Issue: Getting Reading Right, December, 2019

Discussion:

- Have any of you added a phonics supplement to a balanced literacy core curriculum?
- What has been your experience?

In my experience...

Since about 2010, schools and districts have been saying:

"Show us those high impact, *evidence-based* approaches that are *the most likely* to result in improved achievement for all students and reductions in the achievement gap."

Not: "We want to discover the best programs through exploration and experimentation. Our situation is unique and our students won't learn to read like other students."

What Is the Science of Reading?

The term “science of reading” refers to the **research** that reading experts, especially cognitive scientists, have conducted on how we learn to read. This body of knowledge, over twenty years in the making, has helped debunk older methods of reading instruction that were based on tradition and observation, not evidence.

https://www.scilearn.com/the-science-of-reading-the-basics-and-beyond/

Three depictions of skilled reading based on evidence.

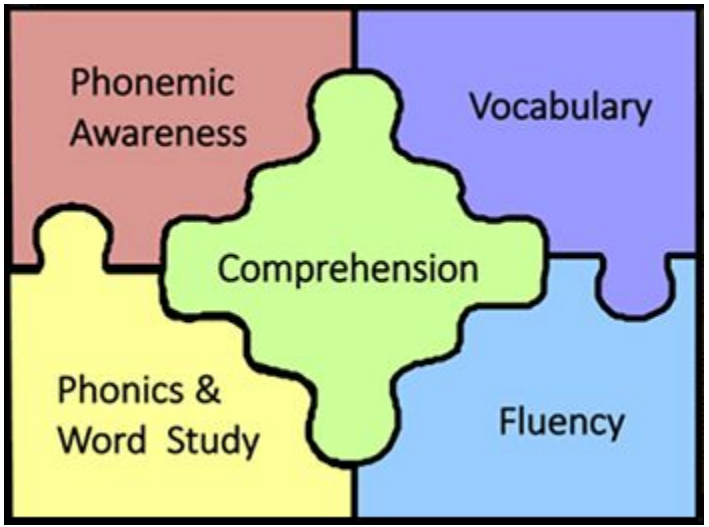
Our brains are not “wired” to read...

- Learning to speak is natural. Learning to read is not.
- Our brains are hard-wired for language.
- Cognitive psychologists, neuroscientists, and linguists have performed thousands of studies that have provided evidence on the process of learning to read and on *what works best* in reading instruction.
- So, when you hear, “There’s no one right way to teach reading,” you’ll know that there are clearly ways that are wrong, and we know the most efficient ways involve explicitly teaching the code.

https://www.maryannewolf.com/proust-and-the-squid

https://www.zaner-bloser.com/reading/superkids-reading-program/pdfs/Whitepaper_TheScienceofReading.pdf

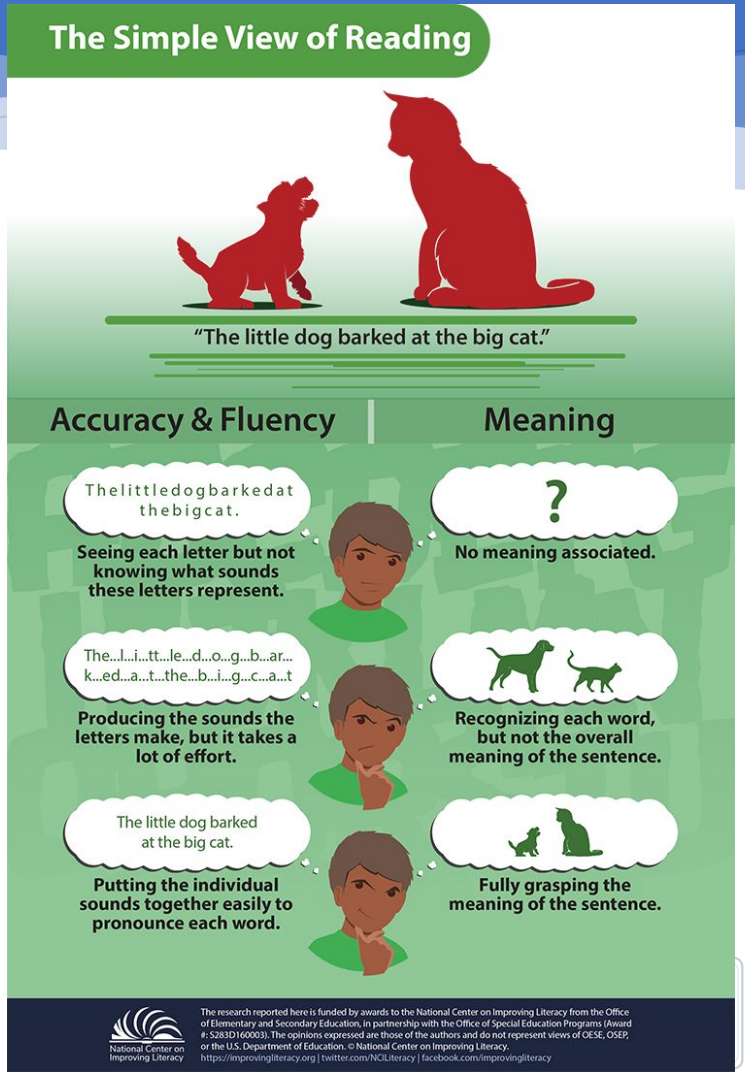
Five Components of Reading
National Reading Panel, 2001



The Reading “Equation:”

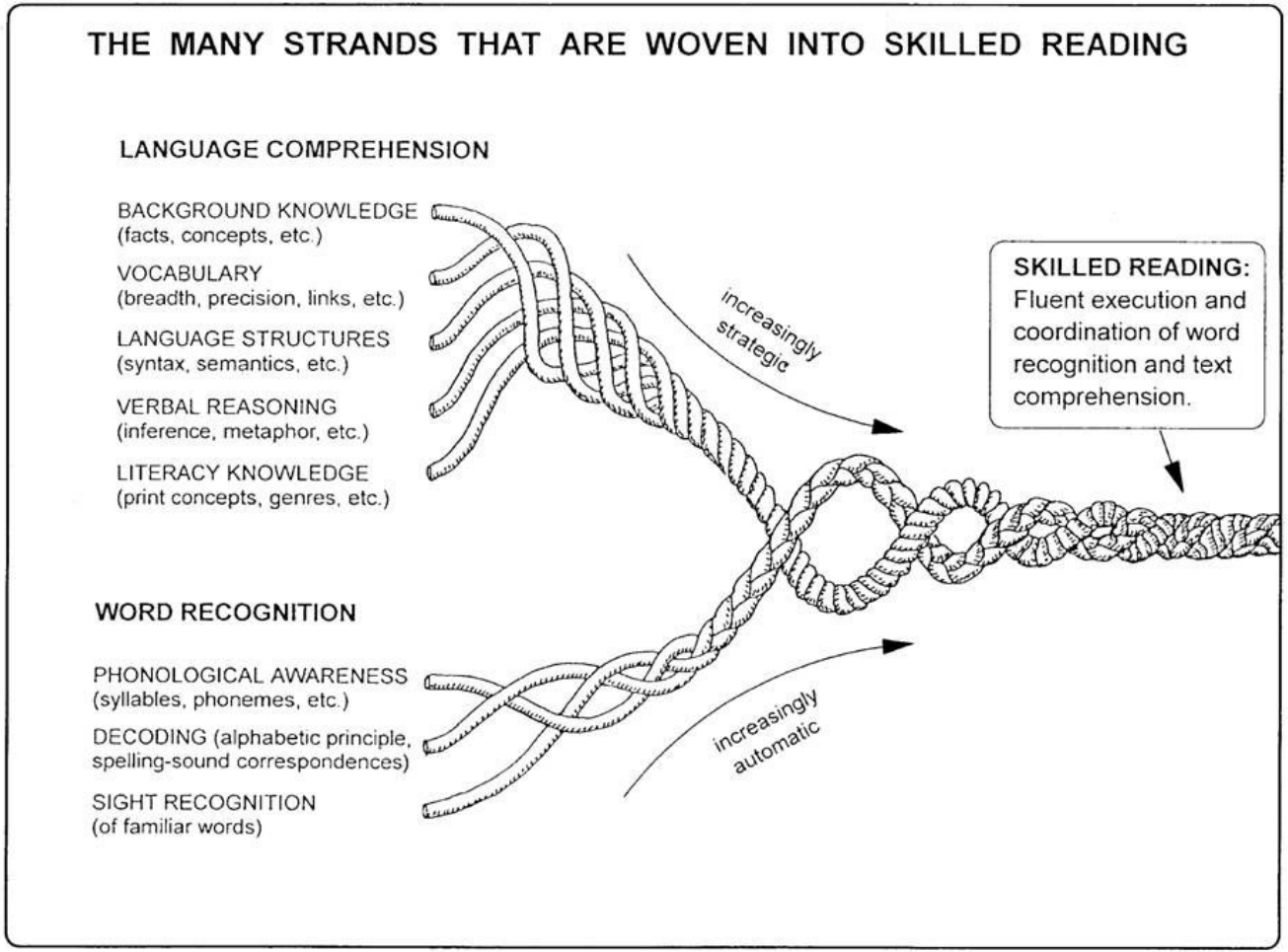
Decoding
times
Language Comprehension
equals
Reading Comprehension

National Center for Improving Literacy



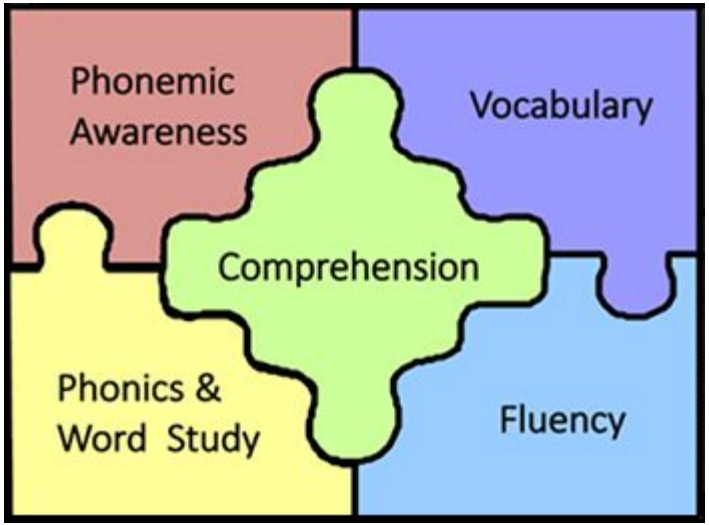
The Reading Rope: Another Depiction of Reading Skill Development. Scarborough, 2001

Balanced Literacy models mostly ignore the lower strand



Discuss

- Does your core curriculum address each of the areas needed for skilled reading with enough explicit instruction to reach mastery?



The role of fluency in each model...

- Fluency or “Orthographic Mapping” is *the key skill* for reading.
- Our sight-word vocabulary is built through developing fluency, *not through visual memory*.
- English ≠ Chinese
- Apartment vs Suite
- 房子 vs 房间

Science of Reading: Brain Imaging Studies

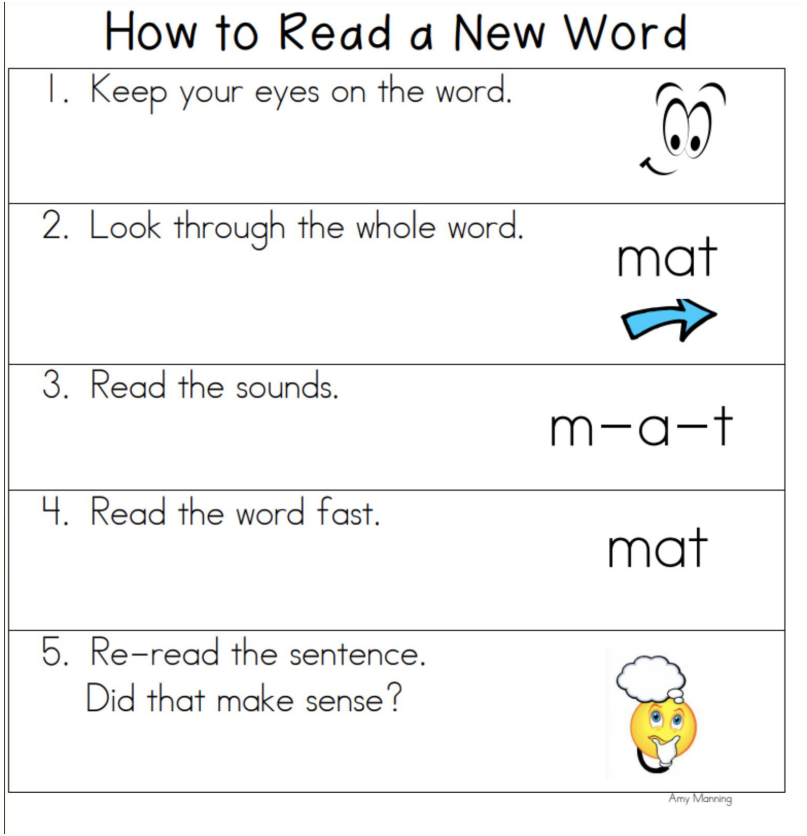
“Beginning readers who focus on letter-sound relationships, or phonics, instead of trying to learn whole words, **increase activity in the area of their brains best wired for reading**, according to (2015) research investigating how the brain responds to different types of reading instruction.”

In other words, to develop reading skills, teaching students to sound out "C-A-T" sparks more optimal brain circuitry than instructing them to memorize the word "cat." And, the study found, these teaching-induced differences show up even on future encounters with the word.”

https://ed.stanford.edu/news/stanford-brain-wave-study-shows-how-different-teaching-methods-affect-reading-development

Reading Strategy to Support Orthographic Mapping

This is supported by the science of reading.



Reading Strategy to Support Orthographic Mapping

This is supported by the science of reading.

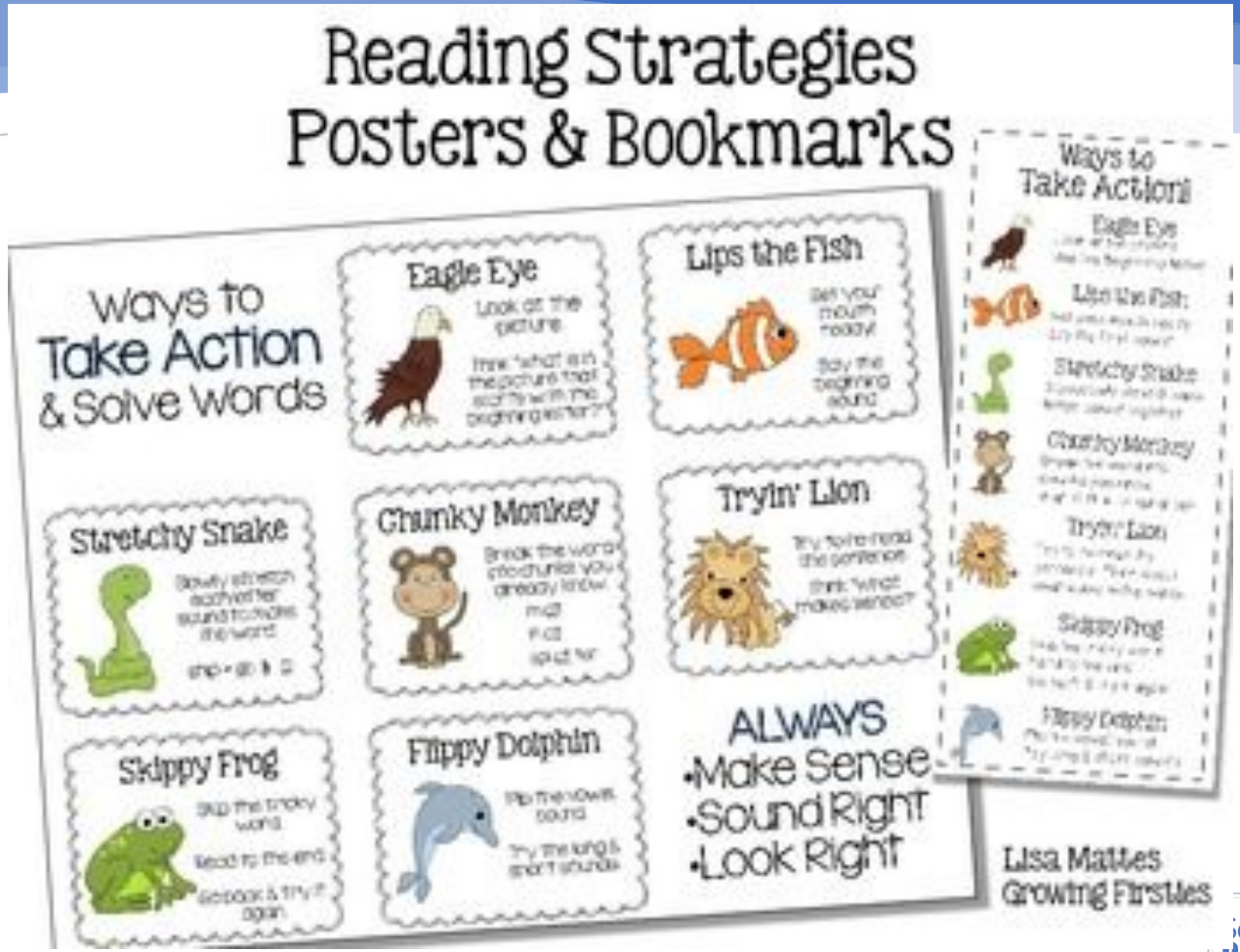
Balanced Literacy/3-Cueing

- When students use the three cueing systems approach, they bypass the decoding/fluency (orthographic mapping) process.
- Teaches students to identify words through **context and visual** systems.

Used in Reading Recovery, Leveled Literacy Instruction (LLI), Units of Study for Teaching Reading, Units of Study for Teaching Phonics, all Balanced Literacy approaches.

Three-Cueing

This is NOT supported by the science of reading.



Decodable Text Supports Orthographic Mapping

Decodable texts are supported by the science of reading.

"Decodability is a critical characteristic of early reading text…it increases the likelihood that students will use a decoding strategy and results in immediate benefits particularly with regard to accuracy."

Cheatham & Allor, 2012

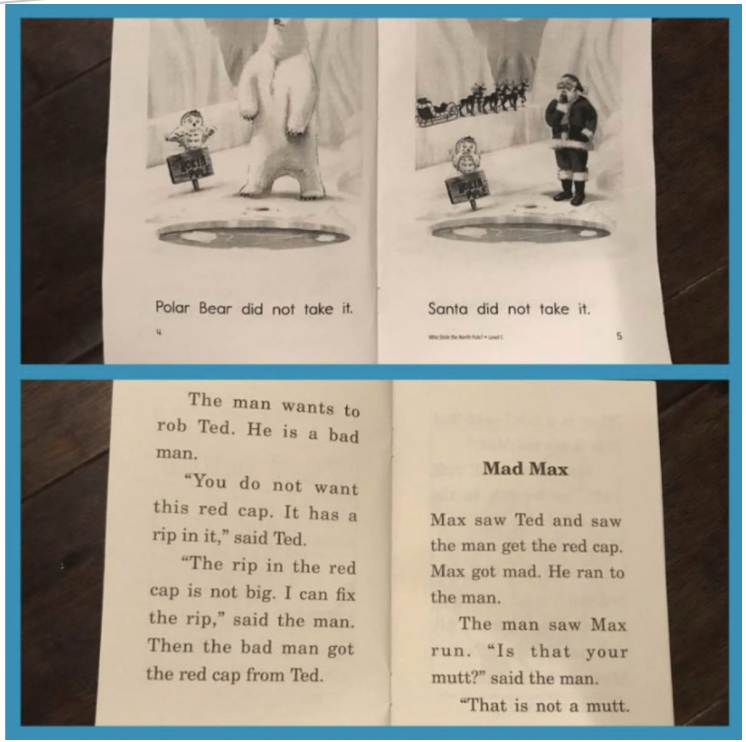
Decodable Text Characteristics and Use

*high proportion of words with phonetically regular relationships between letters and sounds

*close match between the letter/sound relationships in text and those that the student has been taught

*teacher explicitly and systematically teaches students decoding skills then students apply those skills with the decodable text in order to build neural connections for accuracy and automaticity (fluency)

Predictable Text vs. Decodable Text



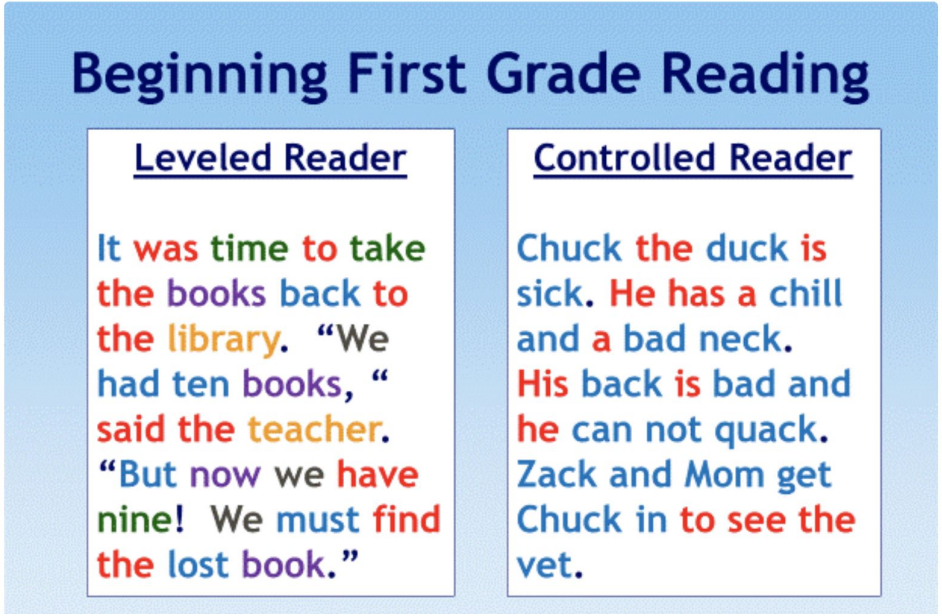
Predictable text with picture clues works against decoding.

Decodable text supports practicing decoding.

PRACTICE MAKES PERMANENT

https://www.readingrockets.org/blogs/shanahan-literacy/which-texts-teaching-reading-decodable-predictable-or-controlled-vocabulary

Leveled Reader vs. Controlled Reader



Here is an example of a Leveled Reader vs. a Controlled Reader. Both contain beginning first grade level text. The words in the text are color-coded to match syllable types.

https://brainspring.com/ortongillinghamweekly/importance-controlled-readers/

Anita Archer, Explicit Instruction

“There is no comprehension strategy powerful enough to compensate for the fact that you can’t read the words.”

https://explicitinstruction.org/

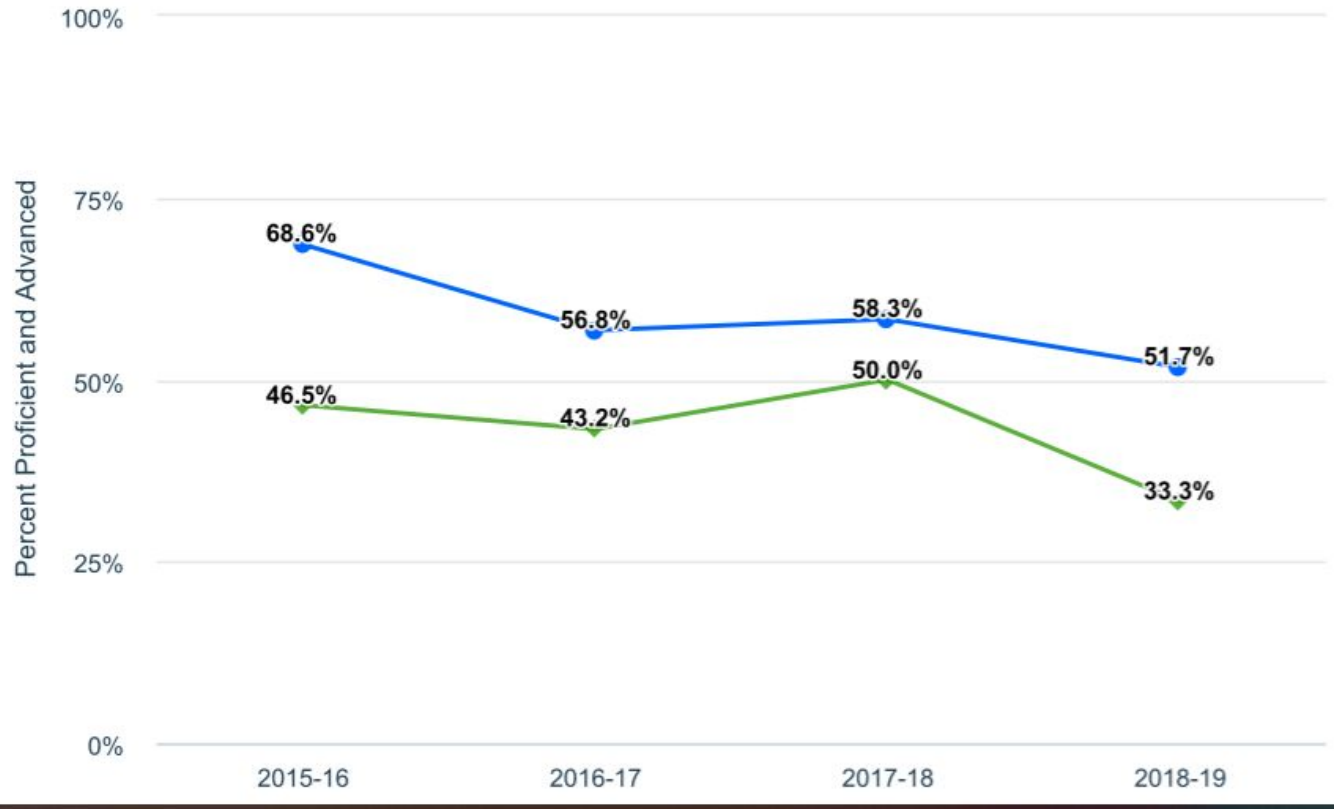
https://highfiveliteracy.com/2016/09/29/reading-comprehension-problem-maybe-not/

What about Professional Learning Communities?

- Excellent model of data-based decision making
- However, without a background in how children learn to read, teachers are unable to adequately follow the PLC pathway:
  - They cannot develop common formative-assessments aligned with how kids learn to read
  - They struggle to identify elements of core instruction likely to improve outcomes
  - They cannot develop interventions that will close gaps
- Cost: as much as $10,000/day for onsite coaching
- Wisconsin example from *All Things PLC* website: Stanley-Boyd

Filter Criteria:

Group by	Economic Status	**Test Type**	Forward
Forward Subject	English Language Arts	**District**	Stanley-Boyd Area
School Type	[All Types]	**School**	[All Schools]
Tested at Grade	Grade 3		



Group by	Economic Status	**Test Type**	Forward
Forward Subject	English Language Arts	**District**	Hartland-Lakeside J3
School Type	[All Types]	**School**	[All Schools]
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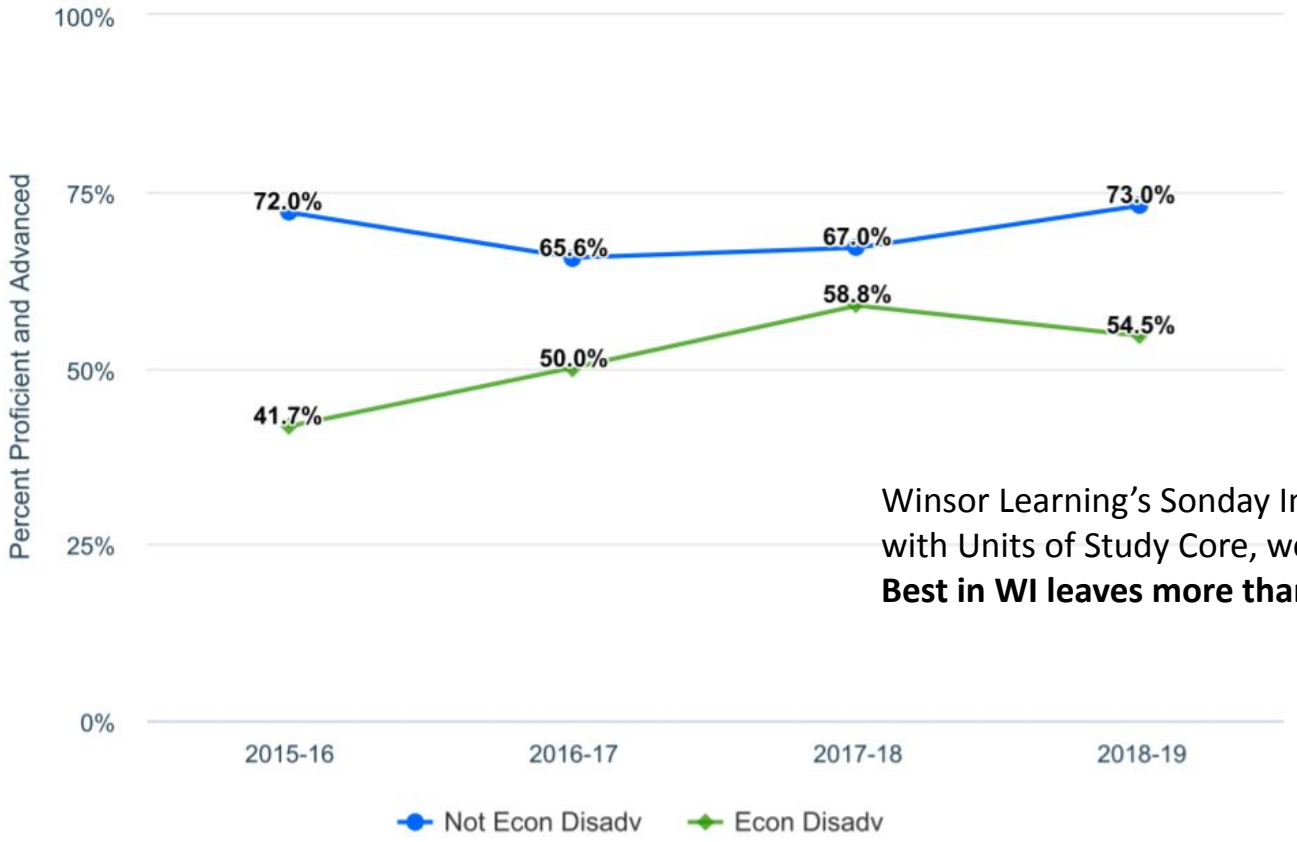
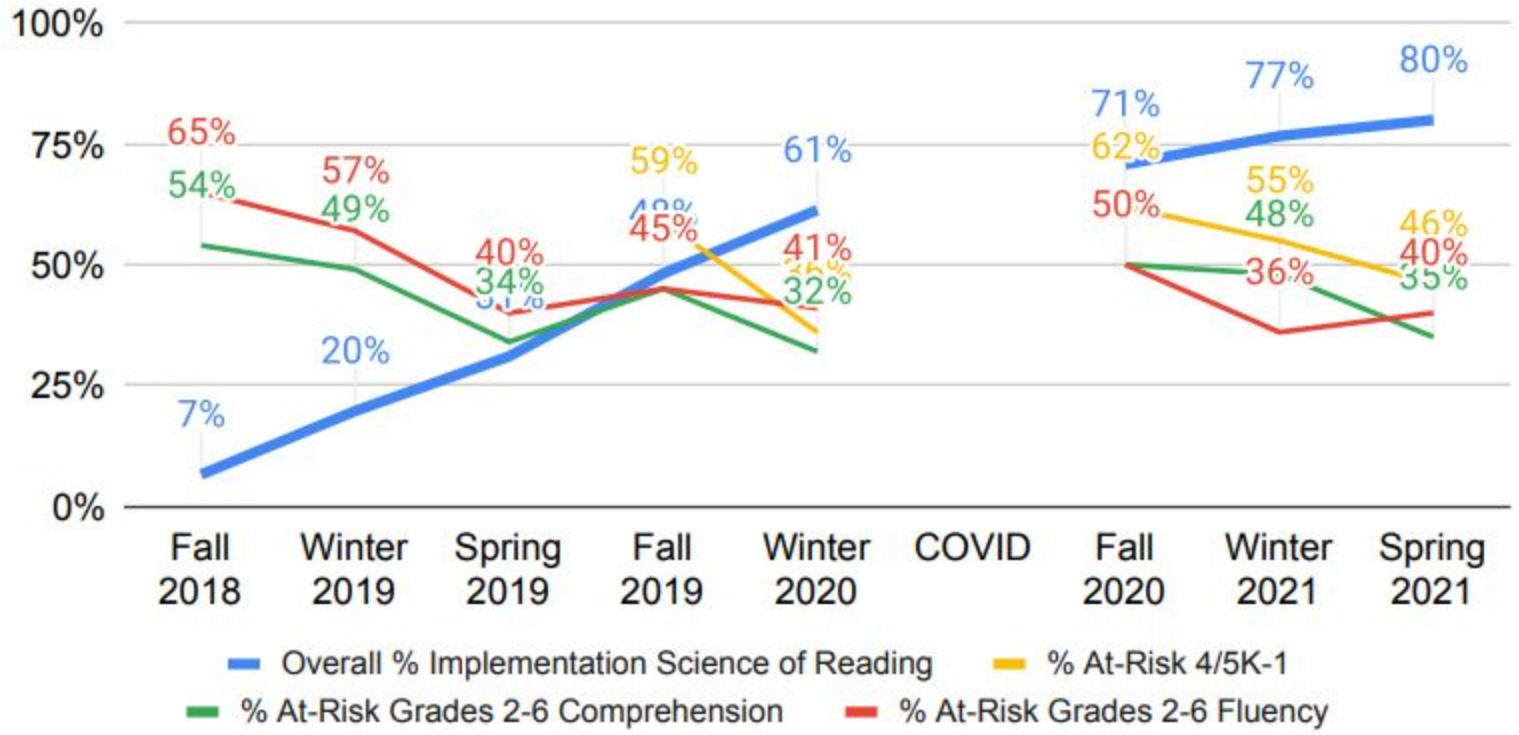


Winsor Learning's Sonday Interventions with Units of Study Core, wealthy district.
Best in WI leaves more than 1 in 4 behind.

Science of Reading, Thorp: Superintendent 2017-2020

- Awareness building, frank discussions about our data
- Teacher training: 10+ days of contract time (Needed?)
- Dropped STAR and replaced with FASTBridge
- Dropped LLI and replaced with Heggerty, PRESS
- Sold leveled readers and bought decodable books
- Stopped admiring the problems and started using data
- Expanded coaching
  - Leadership team
  - Teachers in class

Implementation of Science of Reading with Schools Cubed Leads to Reduced Risk of Reading Failure



SoR Implementation using LET, and At-Risk measured by FastBridge.

Where can you turn for information and support?

- Schools Cubed:
  - Used them in Thorp
  - Focus on leadership training, core curriculum, interventions
  - Teacher SoR training is second focus
  - Excellent evidence for effectiveness
  - Highly-Skilled coaches from across the nation
- “Cubed:”
  - Systems
  - Structures
  - Science of Reading

Literacy Evaluation Tool (LET): Key to Implementation

- Progression of systems and structures aligned with research
- Leads to high-quality core, intervention, and assessment systems
- Six Domains:
  - Universal Instruction
  - Intervention
  - Assessment
  - Data-Based Decision Making
  - Leadership Team
  - Professional Development

Lessons Learned

- Leadership Coaching > Teacher Knowledge
  - Weeks of teacher training on SoR **not needed** for results
  - Deep knowledge of SoR needed for reading specialists, instructional coaches
  - In Mississippi: Schools Cubed trained >800 Principals with great impact
- Systems and Structures > Curriculum
  - We can work with most curricula, our Scope and Sequence is aligned with SoR
  - We help teachers identify critical elements of the core
  - We help implement high-impact interventions
- Over-support teachers
  - Focus on implementation of rigorous content
- Each school is unique, but how kids learn to read is not
  - We help create a customized plan based on the evidence

Opportunities for Support from Schools Cubed

Use our audit/strategic planning and coaching cycle.

- **Audit/Plan**: 2 days
- **Coaching**: Typically is eight, 2-day visits in a school year working directly with leaders to support effective classroom practice. We customize the plan based on initial audit findings.

We provide training, coaching, and support, not programs or curricula.

Daily rate is $3250 for 2021-2022

ESSR Funding, EANS and CESA 6

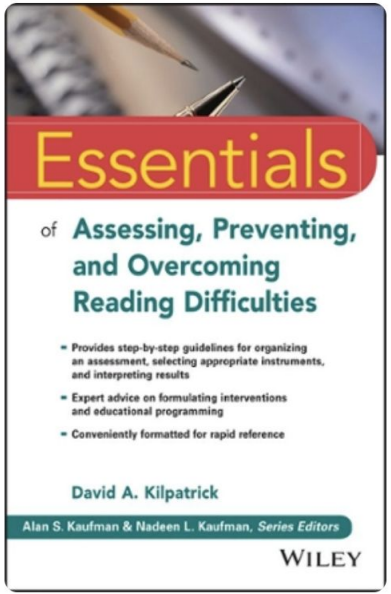
Under the Emergency Assistance for Non-Public Schools (EANS) program, the State of Wisconsin received an award, of which $77,104,541 is available for services or assistance to eligible private schools.

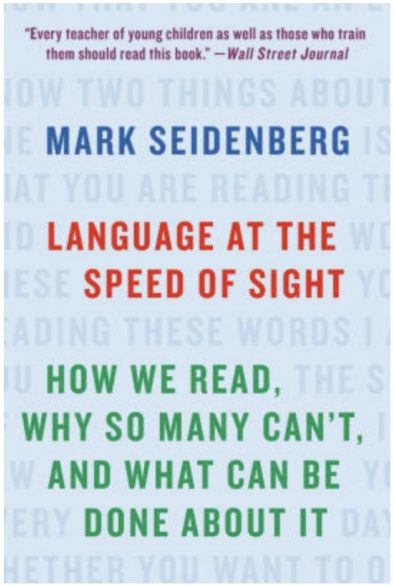
Reach out to your local CESA with a request to add Schools Cubed to their catalog of services. Watch for a post-meeting evaluation link from me (not the one from Zoom) and **reply to that email** if you would like me to assist.

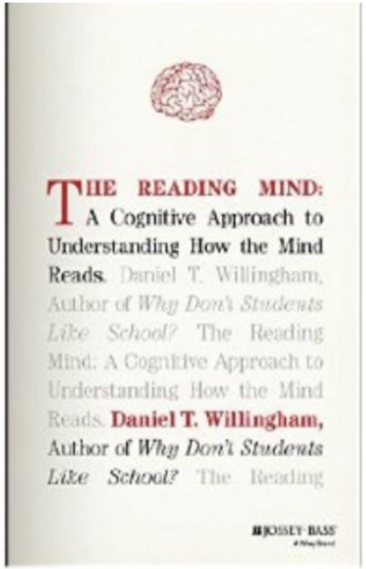
Other Opportunities

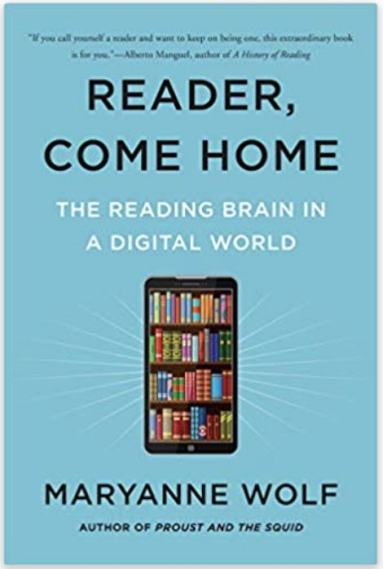
- Teacher Training
  - Deb Glaser, Top Ten Tools
  - Center for Effective Reading Instruction: Structured Literacy Training (3 levels)
  - Reading 101 from Reading Rockets
- Administrator/Reading Specialist/Academic Coach Training
  - LETRS: Language Essentials for Teachers of Reading and Spelling
  - *Principals Primer on Improving Reading Instruction:* Montgomery
- Groups
  - The Reading League
  - Science of Reading, What I Should Have Learned in College: Facebook Group
  - Science of Reading for Administrators: Facebook Group
- Conferences
  - Reading League Wisconsin, Fall 2022
  - Plain Talk, Winter, 2022

Resources: Books





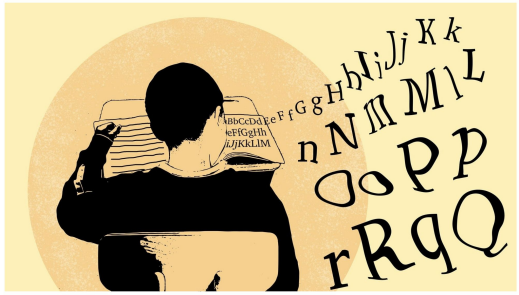




Resources: APM Reports Podcasts

Hard Words

Why aren't kids being taught to read?



Scientific research has shown how children learn to read and how they should be taught. But many educators don't know the science and, in some cases, actively resist it. As a result, millions of kids are being set up to fail.

https://www.apmreports.org/story/2018/09/10/hard-words-why-american-kids-arent-being-taught-to-read

At a Loss for Words

How a flawed idea is teaching millions of kids to be poor readers

For decades, schools have taught children the strategies of struggling readers, using a theory about reading that cognitive scientists have repeatedly debunked. And many teachers and parents don't know there's anything wrong with it.

https://www.apmreports.org/story/2019/08/22/whats-wrong-how-schools-teach-reading

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