Fact Sheet

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"The minute you ask them just to pay attention to the first letter or look at the picture, look at the context, you're drawing their attention away from the very things that they need to interact with in order for them to read the word and remember the word..." Dr. David Kilpatrick

WHAT IS THE SCIENCE OF READING (SOR)?

The science of reading is a body of research that incorporates insights and research from disciplines that include developmental psychology, educational psychology, cognitive science, and cognitive neuroscience. The science of reading has been documented around the world, in all languages and cultures.

The science of reading informs "how proficient reading and writing develop; why some have difficulty; and how we can most effectively assess and teach and, therefore, improve student outcomes through prevention of and intervention for reading difficulties" (The Reading League, 2022).

The National Reading Panel (NRP) report in 2000 found that explicit, systematic, cumulative instruction in these five essential elements is key to reading success: phonemic awareness; phonics; vocabulary; fluency; and comprehension.

Reading is accomplished with letter-by-letter processing of a word (Rayner, et al, 2001, 2002). Fluent readers do perceive each and every letter of print. Thus, we can distinguish casual from causal, grill from girl, and primeval from prime evil (Moats & Tolman, 2019).

WHY THE THREE-CUEING SYSTEMS MODEL DOES NOT TEACH CHILDREN TO READ

Three-Cueing Systems Model Red Flags

The Three-Cueing Systems Model, embedded within whole-language and balanced literacy programs, is a widespread problem with how early reading instruction is taught. This model of teaching reading lacks empirical evidence (Seidenberg, 2017) and "goes directly against what is known from the science of reading (SOR)" (Petscher, et al, 2020).

The Three-Cueing Systems Model:



Promotes strategies used by poor readers (guessing at words using pictures and clues) Instructional strategies that employ the three-cueing system model of reading include visual memory as the primary basis for teaching word recognition or the three-cueing system model of reading based on meaning, structure and syntax, and visual, which is also known as "MSV."

Undermines sound-spelling relationships and obscures phonemic awareness and phonics Reading is accomplished with letter-by-letter processing of a word (Rayner, et al, 2001, 2002). Fluent readers do perceive each and every letter of print. Thus, we can distinguish casual from causal, grill from girl, and primeval from prime evil (Moats & Tolman, 2019). Three-cueing distracts readers from letter-by-letter processing of a word and encourages word prediction or memorization, not decoding.

WHY THE THREE-CUEING SYSTEMS MODEL DOESN'T TEACH CHILDREN TO READ

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Is the basis for popular balanced literacy and whole language reading and intervention programs

These curricula and/or intervention programs are widely known for their alignment to whole-language or balanced literacy, which are infamous for teaching students to read using the three-cueing model,

- Fountas & Pinnell Classroom™ Literacy For All Students Grades K-6 (fountasandpinnell.com)
- Units of Study Reading, Writing & Classroom Libraries by Lucy Calkins
- Jan Richardson Guided Reading (janrichardsonreading.com)
- What is Leveled Literacy Intervention (LLI) and how is LLI used? (fountasandpinnell.com) -Intervention
- Reading Recovery Council of North America Intervention

"'Balance' is an appealing term but in reality, it has meant little to no systematic instruction in foundational reading skills, including phoneme awareness, phonics, and fluent word recognition. Children are taught to rely on context and pictures to identify printed words, a practice that reinforces what poor readers naturally do." Dr. Louisa Moats, 2019

Note: Multiple programs fit the description of "Balanced Literacy" with Fountas and Pinnell and Lucy Calkins among the most popular. This is not an exhaustive list.



Continues to mislead teachers and hinder student's progress even though it is predicated upon ideas of reading development which have been demonstrated to be false Adopting the *Three-Cueing Systems Model* **negatively** impacts how a teacher:

- determines priorities for reading instruction,
- delivers reading instruction,
- suggests strategies to students for reading unknown words.
- identifies resources and materials,
- identifies interventions and determines the focus of assessments.

"Reading Recovery — a one-on-one tutoring program for first graders — has long been controversial because it's based on a theory about how people read that was disproven decades ago by cognitive scientists. A 2019 story by APM Reports helped bring public attention to the fact that reading programs based on this theory teach the strategies struggling readers use to get by. In other words: Children are taught to read the way that poor readers read." Emily Hanford and Christopher Peak, APM Reports

According to Kozloff (2002), if a child memorizes ten words, then the child can read ten words. But, if the child can learn the sounds of ten letters, the child can read...

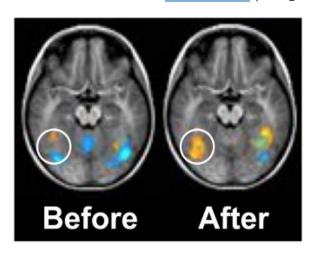
- 350 three-sound words
- 4.320 four-sound words
- 21,650 five-sound words

Teaching whole word memorization is limited, but learning phonics empowers students with an exponential effect.

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WHAT DOES THE RESEARCH SAY?

Taken from Kate Walsh's "Case Closed" (NCTQ, 2019)



Increased brain activity appears in the mature reading network located in the left occipito-temporal cortex of non-reading kindergarten students after learning of letter-speech sound correspondences.

Source: Brem S., et al (2010)

The image on the left is a functional MRI of a non-reading kindergarten student who has not been exposed to letter-speech sound correspondences, clearly unable to activate those language centers on the left side of the brain. Without the ability to sound out words, the brain is basically stumped.

The image on the right is of a non-reading kindergarten student after exposure to letter-speech sound correspondences (the lit-up areas represent blood flow). This image (and other similar images tackling other reading skills) provide demonstrable proof of which part of the brain needs to be activated in order for kids to sound out words or derive meaning from what they are reading.

The good news that doesn't seem to be penetrating our collective mindset is that after being exposed to effective reading instruction, the language parts of the brains of struggling readers can almost always <u>be activated</u>.

ADDITIONAL RESOURCES:

- Model Policy: Prohibiting Three-Cueing
- The New Yorker The Rise and Fall of Vibes-Based Literacy
- TIME Inside the Massive Effort to Change the Way Kids Are Taught to Read
- Emily Hanford, APM Reports Hard Words: Why aren't kids being taught to read?
- Emily Hanford, APM Reports Sold a Story
- An Explanation of the Reading Brain (Video)
- #EIE22: Solving America's Literacy Crisis with the Science of Reading Emily Hanford, Dr. Kymyona Burk, & Kareem Weaver