Common Assumptions About Reading Improvement

- Reading is baked on visual memory/paired-associate learning
- · Weak readers can improve their fluency with reading practice
- Phonics intervention will close the gap between struggling readers and their typically developing peers
- Interventions based upon the three-cueing system approach will get students up to grade level
- Phonological awareness is not important after first grade
 - Once child can decode simple CVC words, it is no longer relevant
- If students cannot read well by late elementary school, they will not become good readers

Common Assumptions Drive Teaching Practices

- The following practice aligns with these common assumptions
 - Teach irregular words as whole units (visual memory assumption)
 - Repeated reading, reading practice (practice assumption)
 - Break down the task into smaller units and develop more fine-grained lettersound knowledge (phonics assumption)
 - Teach students to make better use of context when reading (three-cueing assumption)
 - o Ignore phonological skills after first grade (phonological assumption)
 - Abandon targeted word-reading instruction after late elementary school (statute of limitations assumption)

Teaching Irregular Words as Unanalyzed Wholes

- Based upon intuition and tradition
- Inconsistent with extensive evidence against the visual memory hypothesis of word-level reading
- Inconsistent with our scientific understanding of how words are remembered for later, instant retrieval
- No evidence in the literature that this approach helps weak readers close the gap with their typically developing peers

Practice and Fluency Approaches and Repeated Reading

- Strong intuitive and very common approach
- Based on older assumptions about fluency
 - Not informed by research on orthographic learning
 - Weak readers do not remember the words they read
- Oddly, recent research reviews seem to support repeated reading
 - No reference to standard score points gain (such gains are very limited)
 - No strong or consistent generalization to non-practice passages
 - No evidence for normalizing reading skills

• Some commercial programs are based on volume of reading

Phonic Intervention Often Does Not Close the Gap

- Phonics skills are necessary for reading alphabetic writing
- Consider three responses to phonic intervention based on severity of phonological-core deficit
 - Mild-these students "take off" with phonics interventions
 - Moderate-these students become better at sounding out new words but do not remember the words they read (lack fluency)
 - Severe-these students do not seem to benefit from phonics instruction
- Recall how word-reading develops

Phonics Intervention with Struggling Readers

- Foundational phonics concepts pre-date our scientific understanding of reading development
- Most phonics interventions require supplementation with more explicit and attentive phonemic awareness training
- If students become competent at reading nonsense words that follow the six common syllable types, more fine-grained teaching of rules or patterns or exceptions to patterns will not likely result in major gains
 - Word memory is their issue at this point
- Students who do not benefit from phonics lack the phonological skills and this is correctable

Three-Cueing Systems- Getting Up to Grade Level?

- Three-Cueing intervention approach is very popular
- No independent evidence that it helps beyond one year
- Inconsistent with what we know about reading development
- Emphasizes strategies that come naturally to weak readers
 - Guessing from contextual cues or picture cues
 - Looking at the first letter
 - Weak readers are poor at sounding out words and remember words
 - o They do not have a large pool of familiar words in memory to propel fluency

Phonological Awareness (PA) Beyond First Grade

- Universal screening typically discontinues PA after first grade
 - o The correlation between PA and reading decreases after first grade
 - Largely due to the use of a less sensitive PA task (phoneme segmentation)
- PA grows until 3rd to 5th grade in typical readers
 - Older struggling readers have PA skills parallel to K-1 typical readers
- Aggressively training PA beyond a first-grade level had the best reading outcomes in the research literature
 - PA consistent with orthographic learning literature

No Age Limit on Correcting Word Reading Difficulties

- Schools normally stop or limit intervention for word-reading difficulties after elementary school
 - Presumably due to the limited benefits of the approaches mentioned in this session beyond a particular point in reading development
 - o If these methods worked with older students, they would be used
 - None of these approaches address PA beyond a first-grade skill level
- Fortunately, some studies show that dramatic gains can occur with older students and adults
 - Such studies used interventions that "fixed" the PA difficulties holding students back

Research Results on Specific Intervention Programs

- Studies of common commercially available programs consistently show very limited standard score point gains
 - No evidence that any of these interventions close the gap between struggling readers and their typically developing peers
 - This is consistent with four decades of research on general and special educational remedial reading: weak readers remain weak readers
- No need to "name names" here
 - Consider any current program operating from the previously mentioned assumptions and they will have limited gains (i.e., visual memory/exposure to words, reading practice, three-cueing, phonics without post-first grade level phonemic awareness)
- Unfortunately, this describes most current programs

Why the Limited Results?

- These interventions are not based upon research into how word-level reading develops
 - They are based on the unsupported assumptions mentioned at the beginning of this session
 - These same assumptions keep getting recycled into most of the commercially available programs
- Fortunately, researchers can provide a better understanding of how word reading develops and why some student's struggle
- The best interventions result in the research are consistent with this scientific understanding of reading