Evidence-Based Literacy Improvement

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LITERACY IS IMPORTANT

It matters that our kids learn to read and write well
• Economics
  – Literacy attainment explains 55% of the economic growth in nations (Coulombe, Trembley, & Marchand, 2004)
  – Second-grade literacy explains economic success of individuals at age of 42 (Ritchie & Bates, 2013)
Literacy Matters

• Health
  – Reading is associated to extended lifespan (Levy, 2016) probably because it improves cell interconnectivity
  – Reading reduces stress by 68% (Lewis, 2009)
  – Reading slows cognitive decline (Wilson, et al., 2019)
• Civics
  – Low readers are less apt to be knowledgeable of issues, candidates and current events (Venezky, et al., 1987)
  – Literacy rate affects voting rate (Rodriguez, 2014)
Literacy Matters

• Social Participation
  – Reading helps individuals to recognize the mental states of others (Kidd & Castano, 2013)
  – Reading improves empathy (Castano, 2013)
OUR KIDS DO NOT READ WELL
HOW DO WE DECIDE HOW TO RESPOND TO OHIO READING NEEDS?
What is the source of our educational practices?
Tradition— we may do things the way we always have
Published programs – we do it if our district bought it
Authority— we do it if a guru says to do it
Fads— we do it if everybody else is doing it
Inspiration – we do it if it feels right
Research—we do what can be proven to help kids learn
WHY RESEARCH IS BEST?
WHAT RESEARCH IS BEST?
Why research?

- We are all capable of learning from experience
- But we all suffer from narrow perspective, wishful thinking, and opportunity cost
- Research provides us with the tools to know things that go beyond our experience
- Research allows us to advance in socially acceptable way
Which research?

• Reading Wars of 1990s
• Not all research is equal
• Federal response was to put in place several supports in place for schools to ensure that they could and would use research
• Definition of research and evidence-based practice
• Research panels
• What Works Clearinghouse
Evidence-based practice

- Evidence-based practices are those “effective educational strategies supported by evidence and research” (ESEA)
- Essentially the instructional practice has a sound record of success
- This record of success is valid and reliable
- Educational practices should be based upon appropriate, sound, accumulation of research
Research

- Research does not refer to anything that is published
- Research requires the collection and analysis of data in a systematic, rule-based way
- Research is published through a refereeing system
- Nevertheless, not all research is equal—there are differences in appropriateness to particular claims and quality
Appropriateness of Research

• There are different kinds of research and they answer different kinds of questions
• Descriptive studies describe
• Correlational studies relate
• Experimental studies identify causal relationships
• Claims should match the nature of evidence
Sound Research

• Objective—data that any evaluator would identify and interpret similarly
• Valid—data that adequately represent the tasks that children need to accomplish to be successful readers
• Reliable—data will remain essentially unchanged if collected on a different day or by a different person
• Systematic—data that were collected according to a rigorous design of either experimentation or observation
• Refereed—data that have been approved for publication by a panel of independent reviewers
Accumulation of research

• Most educational experiments are small
• Replication is essential to getting it right
• Education studies vary in many ways
• Unfortunately, this can encourage cherry-picking (”you can prove anything with research”)
• Research synthesis (especially meta-analysis) has become the accepted way to scientifically combine studies
Meta-analyses

- Collection of methods used to identify and combine studies into synthesis
- Meta-analysis actually combines the data from multiple studies in a way that properly weights the contribution of each
- Allows for a systematic accounting of the differences in findings and for dealing with flaws in original researcher
- Leads to consistency of conclusions
SOME EVIDENCE WORTH PAYING ATTENTION TO
Preventing Reading Difficulties

• National Research Council appointed a group of literacy experts to provide research-based recommendations on how to address early literacy
• They issued a report in 1998 focused on preschool, kindergarten, and primary grade reading instruction and support
Preventing Reading Difficulties in Young Children

NATIONAL RESEARCH COUNCIL
National Reading Panel

• In 1998, Congress asked for a review of what works in reading instruction
• U.S. Department of Education and the National Institute of Child Health and Human Development appointed a panel
• Panel reviewed more than 500 studies on reading instruction (K-12)
National Reading Panel
Donald Langenberg, University of Maryland, Chair
Gloria Correro, Mississippi State University
Linnea Ehri, City University of New York
Gwenette Ferguson, Houston Public Schools
Norma Garza
Michael L. Kamil, Stanford University
Cora Bagley Marrett, University of Massachusetts-Amherst
S.J. Samuels, University of Minnesota
Timothy Shanahan, University of Illinois at Chicago
Sally E. Shaywitz, Yale University
Thomas Trabasso, University of Chicago
Joanna Williams, Columbia University
Dale Willows, University of Toronto
Joanne Yatvin, Portland State University
National Early Literacy Panel

- National Early Literacy Panel (2003-2008) reviewed research on the teaching of reading in preschool and kindergarten
- Largest meta-analysis of research data on the teaching of reading during these years (examined 400-500 studies)
- Set out to determine which skills needed to be taught early on and what confers literacy learning advantages to young children
National Early Literacy Panel
Timothy Shanahan, University of Illinois at Chicago, Chair
Anne Cunningham, University of California Berkeley
Kathy C. Escamilla, University of Colorado
Janet Fischel, State University of New York at Stony Brook
Susan Landry, University of Texas Health Science Center at Houston
Christopher J. Lonigan, Florida State University
Victoria J. Molfese, University of Louisville
Chris Schatschneider, Florida State University
Dorothy Strickland, Rutgers University
National Early Literacy Panel (2003-2006) reviewed research on the teaching of reading to children (ages birth to 18) from language minority families.

- Largest analysis of research data on the teaching of reading during this population.
- Set out to make a wide range of determinations concerning what facilitates the English-language literacy learning of non-English speakers (including young children).
DEVELOPING LITERACY IN SECOND-LANGUAGE LEARNERS

Report of the National Literacy Panel on Language-Minority Children and Youth

Edited by Diane August & Timothy Shanahan
National Panel for Language Minority Children and Youth
Timothy Shanahan, University of Illinois at Chicago, Chair
Diane August, Center for Applied Linguistics
Isabel L. Beck, University of Pittsburgh
Margarita Calderón, Johns Hopkins University
David J. Francis, University of Houston
Georgia Earnest García, University of Illinois at Urbana-Champaign
Fred Genesee, McGill University
Esther Geva, University of Toronto
Claude Goldenberg, California State University, Long Beach
Michael L. Kamil, Stanford University
Keiko Koda, Carnegie Mellon University
Gail McKoon, Ohio State University
Robert S. Rueda, University of Southern California
Linda S. Siegel, University of British Columbia
What Works Clearinghouse

- U.S. Department of Education
- Panels of experts assembled based on particular topics
- Panels can make any recommendations that they choose, but WWC evaluates supporting research and indicates the strength of the underlying evidence
What Works Clearinghouse Panelists (sample)

- Carol Connor, Florida State University
- Janice Dole, University of Utah
- Nell Duke, Michigan State University
- Jill Fitzgerald, University of North Carolina
- Barbara Foorman, Florida State University
- Steve Graham, Arizona State University
- Laura Justice, Ohio State University
- Michael L. Kamil, Stanford University
- James Kim, Harvard University
- P. David Pearson, University of California, Berkeley
- Timothy Shanahan, University of Illinois at Chicago
- Joe Torgesen, Florida State University
Review of Educational Research
Other highly ranked reading research journals
BASIC FINDINGS
Key research findings on literacy

• Phonemic awareness
• Phonics
• Oral reading fluency
• Vocabulary
• Reading comprehension strategies
• Writing
ONE BIG CAVEAT
Limits of evidence-based teaching

• Evidence-based does not mean that something will work
• It only means that it has worked
• And accumulations of research mean that it has worked over and over
• There are no automatic gains in education
• Quality supervision, sufficient amounts of instructional time, high quality well prepared teachers, supportive parents, and our daily commitment to meeting the literacy needs of our students is needed to make any “evidence-based” approach work
Summary

- It is essential that we improve reading achievement.
- The most certain and professional way to accomplish that goal is through a reliance on accumulations of the best existing research.
- We need to teach PA, phonics, fluency, comprehension, and writing.
- But evidence-based approaches give us no excuse to relax in our commitment to providing the most intensive and supportive teaching that we can provide.