



# **DYSLEXIA AND READING – INSTRUCTIONAL IMPLICATIONS**

**JEAN SCHEDLER, PH.D.**

**EDUCATIONAL CONSULTANT & TEACHER TRAINER  
SCHEDLERJF@AOL.COM**

**SPELD NZ**

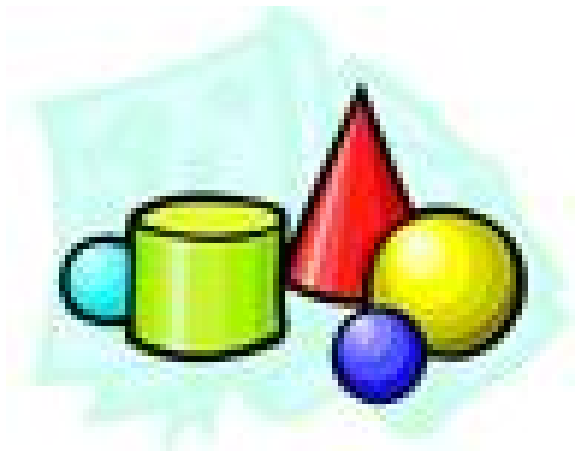
**2008 Conference**

**Supporting People who Learn  
Differently**

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# DYSLEXIA & READING

- We now know more about Dyslexia-  
*Brain function (not brain structure) is the issue.*
- We now know more about Reading  
*There are five research-based building blocks to learning to read.*



# DYSLEXIA

## INTERNATIONAL DYSLEXIA ASSOCIATION

(2002)

- “Dyslexia is a specific learning disability that is *neurobiological* in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by *poor spelling and decoding skills*. These difficulties typically result from a deficit in the *phonological component* of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. *Secondary consequences* include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

# DYSLEXIA

- Dyslexia is the most common and studied of learning disabilities.
- Dyslexia affects about 80 percent of all individuals identified as LD.
- Dyslexia affects 5 – 17 percent of all children and adults in the United States.
- Shaywitz (2003)

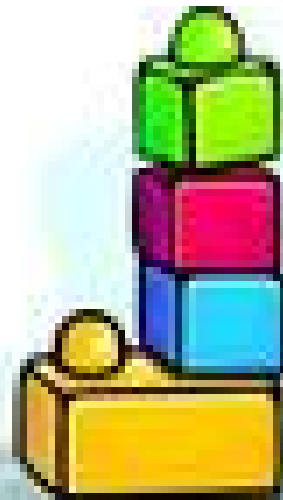
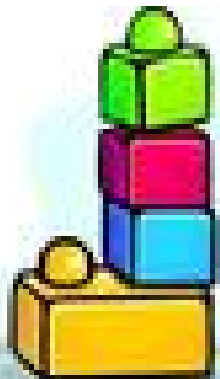
# MAJOR SOURCES OF READING FAILURE

- Socioeconomic Factors – poverty
- Biological Factors – Genetics & Neurobiology (about 2 – 6 %)
- Program and Instructional Factors
- Reid Lyon (2008) Using Scientific Research to Guide Educational Practices and Policies: Why Is It So Darn Hard? Plain Talk About Reading Conference. Houston, Texas



# PUT READING FIRST RESEARCH BUILDING BLOCKS

- 1. Phonemic Awareness
- 2. Phonics Instruction
- 3. Fluency Instruction
- 4. Vocabulary Instruction
- 5. Text Comprehension In



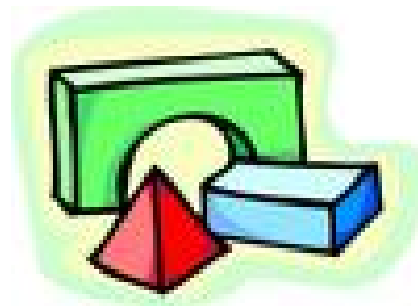
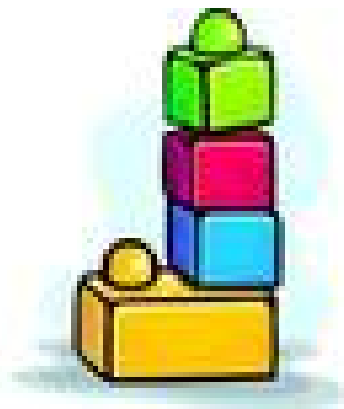
# PHONOLOGICAL PROCESSING

- Phonological Processing is a general term for several oral language processing abilities
  - Phonological Awareness
  - Verbal short-term memory
  - Rapid serial naming
  - Articulation speed

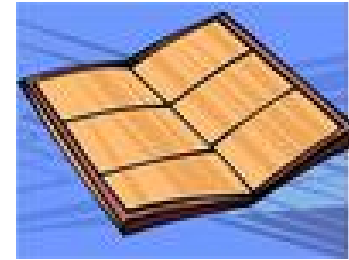


# PHONOLOGICAL AWARENESS

- Phonological Awareness is the ability to focus on units of sound in spoken language.
  - Word Awareness
  - Syllable Awareness
  - Phonemic Awareness



# PHONEMIC AWARENESS



- Phonemic Awareness is the ability
  - to notice,
  - to think about and
  - to work with the individual sounds in spoken words.
  
- Phonemes are the individual sounds in spoken words

# PHONEMIC AWARENESS CAN BE TAUGHT AND LEARNED

- Phoneme isolation
- Phoneme identity
- Phoneme categorization
- Phoneme blending
- Phoneme Segmentation
- Phoneme Deletion
- Phoneme Addition
- Phoneme Substitution



# PHONEMIC AWARENESS INSTRUCTION HELPS CHILDREN LEARN TO READ

- *For children to understand what they read, they must be able to read words rapidly and accurately*
- How does Phonemic Awareness (PA) accomplish this?



# PHONEMIC AWARENESS INSTRUCTION HELPS CHILDREN LEARN TO SPELL

- Teaching PA, particularly how to segment words into *phonemes*, helps children learn to spell.
- Why would segmenting phonemes help with spelling?



# PHONEME/PHONEMIC AWARENESS

- The ability to hear, identify, and manipulate the individual sounds – phonemes – in spoken words.
- Understanding that words are made of bits of sound.

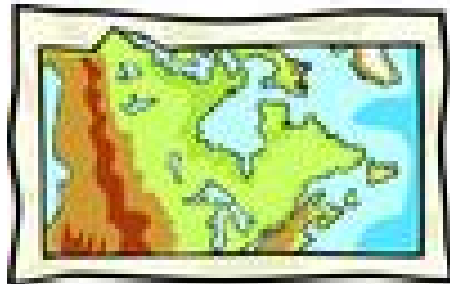


# PHONICS

- Paired association between letters and letter sounds.
- Understanding the predictable relationship between phonemes (sounds) and graphemes (letters and spellings that represent those sounds) – Alphabetic Principal.
- An approach to teaching of reading and spelling that emphasizes sound-symbol relationships, especially in early instruction.

# PHONICS

- Need to be able to isolate/segment individual sounds of language.
- Need to know/recognize the name for each letter (grapheme) of the alphabet.
- Need to map the individual sound, ONTO the individual letter (grapheme) or letters.



# WHAT DOES SCIENTIFICALLY-BASED READING RESEARCH (SBRR) TELL US ABOUT PHONICS INSTRUCTION?

- Systematic and explicit phonics instruction is
- more effective
- than non-systematic or
- no phonics instruction

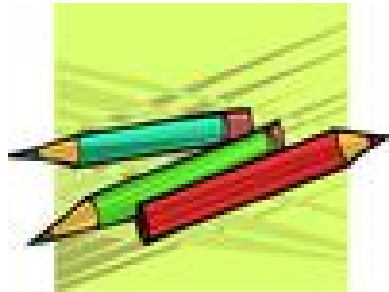


# WHAT DOES “EXPLICIT” AND “SYSTEMATIC” MEAN?

- Explicit Instruction - is the **direct teaching** of a set of letter-sound relationships
- Systematic Instruction - is instruction in a **clearly defined sequence**.
- In order to “teach” the letter-sound relationships in a clearly defined sequence – the instructor must first have been taught how to do this.

# SPELLING

- Phonics is “decoding” print into sounds.
- Spelling is “encoding” sounds into print.
- There is research to suggest that spelling supports vocabulary development



# SPELLING - ORTHOGRAPHY

- Approximately 50% of English words can be spelled accurately by sound-symbol association.
- Another 36% can be spelled accurately except for one speech sound (usually a vowel).
- Another 10% are predictable using morphology (e.g. *-ed* suffix) and word origin.
- Only about 4% of words are truly irregular.

# FLUENCY

- **Fluency** - is the ability to read a text accurately and quickly
- **Accuracy + Rate + Prosody = Fluency**
- Prosody is “reading with expression”



# ACCURACY AND RATE

- Accuracy = few or no errors while decoding words.

Able to map the correct sounds onto print.

- Rate = ability to blend the individual letter-sounds into a complete word.

Able to read the individual words automatically.

# READ WITH EXPRESSION

- To read with expression, readers must be able to divide the text into meaningful chunks.
- These chunks include phrases and clauses.
- Readers must know to pause appropriately within and at the end of sentences and when to change emphasis or tone.

# FLUENT READERS

- Fluent readers – focus their attention on making connections among ideas in a text and between those ideas and their background knowledge.
- They are able to focus on **comprehension**



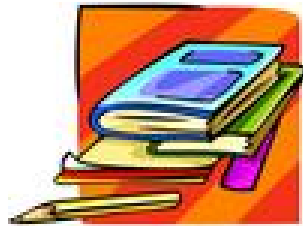
# LESS FLUENT READERS

- Less fluent readers must focus their attention on **decoding** individual words.
- Therefore they have little attention left for comprehending the text.



# FLUENCY DEVELOPS AS A RESULT OF:

- many opportunities
- to practice reading
- with a high degree of success.
  
- Students need the opportunity to do repeated readings of connected text at their independent (95% accuracy) reading level.



# VOCABULARY

- Refers to the words we must know to communicate effectively.



# TYPES OF VOCABULARY

- Listening Vocabulary – words that we need to know to understand what we hear.
- Speaking Vocabulary – words we use when we speak.
- Reading Vocabulary – words we need to know to understand what we read.
- Writing Vocabulary- words we use in writing



# IMPORTANT “MIDDLE GROUND” OF VOCABULARY

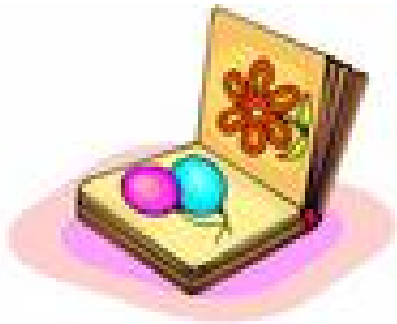
- *Understanding text* by applying letter-sound correspondences to printed material only occurs if the word read orally is a known word in the learner's oral vocabulary.
- If the word read orally is not in the learner's vocabulary, then the learner will not be able to understand the word's meaning.
- *Kamil, Michael in The voice of Reading Research (p214).*

# WHAT DOES SCIENTIFICALLY –BASED RESEARCH TELL US ABOUT VOCABULARY INSTRUCTION?

- 1.) most vocabulary is learned indirectly.
- 2.) some vocabulary must be taught directly.
- *But which words need to be taught “directly” and what does that look like?*



- Research has shown
- that vocabulary size and
- reading ability are related.



# HOW MANY WORDS DO CHILDREN NEED TO KNOW

- In 1<sup>st</sup> and 2<sup>nd</sup> grade, children need to know 800+ words per year, about 2 per day.
- Children need to learn 2000 to 3000 new words each year from 3<sup>rd</sup> grade onward, about 6-8 per day.
- Children who are behind in 1<sup>st</sup> grade have a hard time catching up.

Thorne, Glenda (2008) Dyslexia: Myths and Realities. Plain Talk About Reading Conference (Houston, TX)

# TEXT COMPREHENSION

- RAND Reading Study Group (2002)
- Provided model that represents the complexity and multifaceted nature of Reading Comprehension.
- Comprehension = interaction among the
  - reader
  - the text
  - the task and
  - the context.



# A MODEL LESSON



- The Big Five+
  - Phonemic Awareness
  - Phonics (*and Spelling*)
    - Fluency
    - Vocabulary
  - Text Comprehension