

## MULTISENSORY STRUCTURED LANGUAGE STRATEGIES

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## ACT 69 OF 2014, THE DYSLEXIA AND EARLY LITERACY INTERVENTION PILOT PROGRAM, JUNE 26, 2014

### INTERVENTION MEASURES:

- Multisensory structured language programs for students scoring below the benchmark after the second screening
- Delivered with fidelity
- By a trained interventionist providing timely targeted instruction
- Strategic reteaching
- Intensive intervention
- Explicit multisensory synthetic phonics instruction and structured language

*What a prideful occurrence for all to celebrate!!!*

## THE BRAIN AND LEARNING TO READ

"Reading can be learned only because of the brain's plastic design, and when reading takes place, that individual brain is forever changed, both physiologically and intellectually."

"Young novice readers around the globe learn how to link up all the perceptual, cognitive, linguistic, and motor systems necessary to read. These systems, in turn, depend on utilizing older brain structures, whose specialized regions need to be adapted, pressed into service, and practiced until they are automatic." (Wolf, 2007).

## THEMES FOR TODAY

1. Introduction
2. What are multisensory structured language strategies?
3. The role of multisensory, multi modal instruction in everyday teaching of literacy skills with examples of learning new sounds and concepts concerning phonology, orthography and morphology.
4. Conclusion and questions

## HOW CAN WE PROVIDE THIS KIND OF INSTRUCTION?

### *EMBEDDED PROFESSIONAL DEVELOPMENT*

- ➔ Teachers released to attend PD to learn science of teaching reading
  - ➔ PD followed by classroom support to guide teachers to link their new knowledge (what they know) to instructional practice (what they do)
  - ➔ This happens regularly, throughout the year, over several years
  - ➔ ALL teachers are included ( e.g., gen. ed., special ed, EL teachers, reading teachers )
- Gillis, M. Learning Ally Webinar, 10/28/14

## "READING IS HARD BECAUSE SPEECH IS SO EASY."

ALVIN LIBERMAN HASKINS LAB

- How do you link oral and written language for students who have been identified for special literacy instruction?
- These students are in need of every step of the way made crystal clear in order to fill in the gaps in their knowledge.
- The instruction must be differentiated – one size does not fit all
- Systematic, cumulative, explicit, and diagnostic

## WHERE DOES THIS EVIDENCE-BASED MANDATE COME FROM?

- National Reading Panel (2000)
- National Early Literacy Panel (2008)
- IES Practice Guide, Foundational Skills to Support Reading for Understanding in Kindergarten Through 3<sup>rd</sup> Grade (2016)
- IDA Knowledge and Practice Standards for Teachers of Reading (2010)



HEARING

SEEING

SAYING

## READERS WITH DYSLEXIA

“...a dyslexic reader can develop awareness of the sound structure of a word by physically forming the word with his lips, tongue and vocal cords.”

Shaywitz (2003) p.81

## EARLY CLINICIANS AND TEACHERS USE MULTISENSORY INSTRUCTION

- Fernald, 1943
- Gillingham & Stillman, 1960
- Montessori, 1912
- Strauss & Lehtinen, 1947
- Orton, J, 1966

## LOOKING AT MULTISENSORY TEACHING

Multisensory teaching links **listening**(ear), **speaking**(voice), **reading** (eye) and **writing** (hand) to reinforce the learning of language structure.

## USING MULTISENSORY STRATEGIES

### VISUAL

- \* Look at mouth to see mouth position
- \* Look at card with letter and key word
- \* Look at printed word to identify vowel sounds and number of syllables
- \* Identify base words, prefixes and suffixes

## LOOKING AT MULTISENSORY TEACHING USING VISUAL MODALITY

Example: /k/ = ck

Discovering a new letter-sound association by **listening** to words with the same sound in the final position while **looking** at the mouth in a mirror **feeling** how it's made, **seeing** a list of the words and **writing** the new digraph.



## USING MULTISENSORY STRATEGIES

**Kinesthetic**

**Physically arrange letters in alphabetical order**

**Use tokens to segment sounds in spoken words**

**Feel movement of articulatory muscles when phonemes are spoken**

**Build words with syllable cards**



tick Jack truck deck rock



## USING MULTISENSORY STRATEGIES

**Tactile**

**Feel voicing airflow /th/**

**Tap out syllables in words**

**Write words and/or**

**sentences from dictation**



## USING MULTISENSORY STRATEGIES

**Auditory**

**Discriminate number of sounds in spoken words**

**Say key word and sound**

**Segment spoken word into syllables**

**Listen for base words, roots and affixes**

**Paraphrase sentences accurately**



## VAKT: WHY SO POPULAR?

Reports of success

Follow principles of good instruction:

**differentiated instruction**

**enhancing attention**

**feedback and modeling by teacher**

**avoidance of overloading student**

**sufficient practice**

**effective reinforcement**



## LANGUAGE ABOUT LANGUAGE

- Consistent vocabulary for everyday and later learning to build in the 500-1000 exposures to get to long term memory
- Teaching the vocabulary we use together in a logical, structured way that reveals the language elements teachers and students work on, setting up the vocabulary for later learning.
- Examples:
  - **Initial, medial and final** positions of letters and letter groupings
  - **Voiced and unvoiced** sounds
  - **Blocked and unblocked** sounds
  - **Before and after**
  - **Vowels and consonants**

## RESEARCH THAT MAY LEND SUPPORT FOR CONTENT AND APPROACH OF MULTISENSORY INSTRUCTION FROM NEUROSCIENCES

- Cognition and active learner engagement
  - Efficacy of phonics instruction
  - Insights from neuroscience
    - Studies of the brain

Farrell & Sherman (2011)

## DISCOVERY LEARNING

- Discovery learning makes students partners in learning
- It is the underlying instrument of learning
- It buoys up students and increases memory
- Rather than tell students what they will learn, have them discover the information through VAKT discovery

## INSTRUCTIONAL PRACTICES CONSISTENTLY SUPPORTED BY RESEARCH

- The efficacy of structured, systematic, explicit teaching of all language-based skills for all learners along with repeated practice and review
  - Direct, explicit instruction works best especially by eliciting frequent student responses
  - Emphasis on accuracy and fluency
  - Progress monitoring and differentiated instruction

## RESEARCH

Current research tells us unequivocally that struggling learners benefit:

- when the structure of spoken and written language, beginning with phonemes, is represented for them **explicitly, sequentially, directly and systematically**
- in the context of a comprehensive reading program

## BRAIN BASED INTERVENTION STUDIES

- Functional brain patterns more normalized
- Increased activation in left hemisphere
- Improvement in automatic word recognition
- Use of alternate circuits to compensate

## COGNITION AND ACTIVE LEARNER ENGAGEMENT

- Connecting new and old established learning
- More effective than rote learning or memorization
- Active responding, verbalizations, explicit use of strategies



**Examples of  
discovering and  
learning new sounds  
and concepts  
concerning  
phonology,  
orthography and  
morphology of the  
English language**



## THEORETICAL SUPPORT FOR USE OF VAKT BASED ON THE WAY MEMORY WORKS

“...it is easier to integrate multiple sources of information during learning when the material is physically integrated, auditorily and **visually**, than when information is presented to each modality separately (Mousavi, Low, & Sweller, 1995).”

Farrell & Sherman (2011)



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



## READING BRAIN

- Multiple brain areas involved
- Complex connections among areas
- Highly specialized and widely distributed **multisensory** networks



## INTRODUCTION OF A NEW LETTER AND SOUND     t̥ = /t/

### The Linkages

- Multisensory discovery
- Letter, sound and key word
- Cursive letter shape
- Feel in hand and in mouth
- Review



## GUIDED DISCOVERY TEACHING OF NEW MATERIAL

MARILYN MATHIS (2016)

- Pre-Review
- Auditory Discovery
- Visual Discovery
- Kinesthetic Discovery
- Review of New Learning



## DISCOVERY OF A NEW CONCEPT

- WHAT ARE COGNATE LETTERS?
- USEFUL FOR READING AND SPELLING
- DEVELOPING VOCABULARY TO USE ABOUT LANGUAGE



## CHARACTERISTICS OF SUFFIX [S]

- Multisensory discovery of sounds of suffix [s]
- Use of language about language
- Help for reading and spelling



Cognate; adj.

associated, related, connected,  
linked; similar, alike, kindred



cats

dogs

puffs

studs

flips

drums



## COGNATES

Unvoiced

Voiced

/t/  
/p/  
/k/  
/s/  
/f/  
/th/  
/ch/  
/sh/

/d/  
/b/  
/g/  
/z/  
/v/  
/th/  
/j/  
/zh/



## AN EXAMPLE OF THE MORPHOPHONEMIC QUALITY OF ENGLISH

### WHAT CAN WE DISCOVER

### ABOUT SUFFIX -ed?

## CONCLUSION

- All of our instruction for students struggling with literacy at any level need:
  - MULTISENSORY INSTRUCTION THAT IS:
    - STRUCTURED
    - CUMULATIVE
    - SYSTEMATIC
    - EXPLICIT
    - INTENSIVE
    - FOR AS LONG AS NECESSARY!

Word	ed= /d/	ed=/t/	ed=/ed/
walked			
smelled			
puffed			
named			
hopped			
defended			
teethed			
touched			
staged			
invented			

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Walked		+	
Smelled	+		
Puffed		+	
Named	+		
Hopped		+	
Defended			+
Teethed	+		
Touched		+	
Staged	+		
Invented			+

## QUESTIONS

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