Robust Instruction in Phonemic Awareness,
Phonics, and Vocabulary for Struggling
Readers

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Vocabulary

Letters and Sounds

Trumbower, 2018

This breakout session is an extension of the keynote address.
Characteristics of evidence-based approaches and programs in
phonemic awareness, phonics/word study, and vocabulary will be
surveyed through lecture and video samples.

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Objectives

At the end of this breakout session, participants will be able to:

1. Name three key characteristics of evidence-based phonemic
   awareness instruction.
2. Name three key characteristics of evidence-based phonics and
   word-study instruction.
3. Name three key characteristics of evidence-based vocabulary
   instruction.

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Decoding Factors and Instruction: PA and Phonics

Decoding is most basically described as the process of converting printed words to spoken words.

Generally, two of our topics: phonemic awareness and phonics are necessary for acquiring decoding skills.

Another of the big 5 ideas, vocabulary, overlaps with decoding in the domain of "morphology."

Morphology overlaps with the language domains of: semantics, syntax, phonology, and pragmatics and influences both decoding and comprehension.

In addition, print awareness is a feature of decoding and considered a precursor to some researchers. Print awareness encompasses concepts of print, functions of print, alphabet, and alphabet knowledge.

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MO ELA Standards and Grade Levels for Addressing
Print Awareness, Phonemic Awareness, Phonics, Vocabulary

Skill	Kindergarten	First	Second	Third
Print Awareness	■	■	■	
Phonemic Awareness	■	■		
Phonics	■	■	■	■
Vocabulary	■	■	■	■
Morphology		■	■	■

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At a minimum, decoding requires….

- Print awareness and concepts of print
- Alphabetic knowledge and skill
    letter recognition, letter names, alphabetic principle, sound-letter correspondence
- Phonological/Phonemic Awareness
- Phonics (orthographic knowledge; morphological awareness, morphological knowledge and skill)

These elements have a reciprocal relationship.
Vocabulary, grammar, and pragmatics affect these elements as well.
Integrated programs help students see purpose and application.
Instruction in alphabet, alphabetic principle, phonemic awareness and phonics tend to overlap

Automaticity

Alphabet Knowledge
Vocabulary/ Morphology
Phonics

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How Do We Maximize Success in Decoding Instruction?

1. Evidence-Based Practices and Programs (EBPs)

   Start with a proven program/technique/method/approach based on evidence.

2. Fidelity

   Make sure you address the essential elements (key components) in the program.   Deliver the EB Program as designed.

3. Dosage

   (Related to Fidelity) How much of the method/program/technique is critical. Make sure you implement the practices often enough.

4. Monitor progress

   Check frequently and make adjustments. Check students' progress often to make sure intervention is working.

Adaped from: Carta, J. Enhancing Young Children's Growth in Early Literacy and Communication. Available online at http://www.jgcp.ku.edu/

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Comments about alphabet knowledge…

➢ Of all the literacy challenges that the student will ultimately confront, learning the letters of the alphabet is the *only* one that depends exactly and only on sheer rote memorization, and it must be over-memorization, at that.

➢ Letters can *only* be useful and useable as mediators for phonemic awareness development to the extent that they are familiar already.

➢ In turn, phonemic awareness and letter knowledge together—but only together—become useful and useable to making phonics, decoding, and spelling interesting and attainable.

Adams, M.J. (2013). *ABC Foundations for Young Children.* Baltimore: Paul Brookes Publishing.

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Alphabet knowledge is addressed in MO ELA Standards as Part of Reading Foundations: Print Awareness

Kindergarten

Develop print awareness in the reading process by:

a. identifying all upper-and lower-case letters

b. sequencing the letters of the alphabet

Other print factors are also noted through second grade such as:

Directional orientation for how books are read

Written words consist of letters and sentences consist of words divided by spaces, recognizing the distinguishing features of a sentence, and that sentences are organized into paragraphs.

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Myths in PA for struggling students, students with disabilities & students at-risk for school failure

- It is not important to use letters when instructing PA to K and lst grade students.
- Rhyming is the most important skill for students to learn in PA instruction
- Word play will be adequate for learning PA
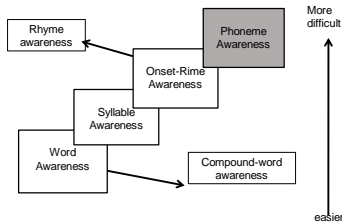- We don't need to start PA instruction until kindergarten

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PA Continuum of Difficulty

Source: Phillips, et al (2008) Successful phonological awareness instruction with preschool children. TECSE, Vol. 28(3).

More difficult

Rhyme awareness

Phoneme Awareness

Onset-Rime Awareness

Syllable Awareness

Word Awareness

Compound-word awareness

easier

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Evidence-based programs and practices for PA: Critical Considerations
Research and evidence strongly support these key characteristics of PA instruction

- ✓ Instruction should be explicit and systematic.
- ✓ PA targets should be cycled rather than viewed as a stage model (word, syllable, onset-rime, phoneme)
- ✓ Segmenting, blending, and manipulation skills are important; rhyming is not the most important PA skill for predicting or learning to read. Onset-rime maps more specifically to reading skill as "rhyming words."
- ✓ Teach one or two targets per session (not all).
- ✓ Small group instruction is best (flexible groupings).
- ✓ Students need to hear, say, see the targets (high degree of student response).
- ✓ Instruction should be engaging and interactive.
- ✓ Knowledge and use of scaffolding is important.

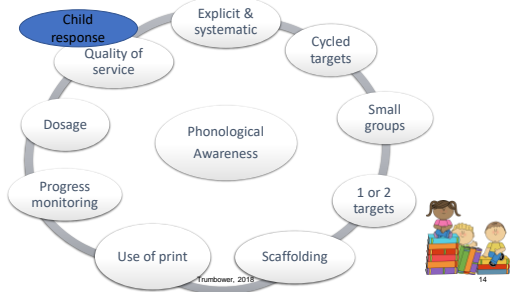Trumbower, 2018   12

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Evidence-based practices (cont.)

✓ Compatible targets should be included as adjuncts to instruction: print awareness, letter knowledge, alphabetic principle. Instruction in alphabet, alphabetic principle, phonemic awareness and phonics tends to overlap

✓ Integrating experiences with PA instruction targets throughout the day, in addition to small group experiences, is good practice.

✓ Progress monitoring is important.

✓ Fidelity, duration, intensity is important.

✓ Implicit PA experiences such as reading rhyming stories, singing word play songs, etc., embedded throughout each day are good early childhood experiences but not sufficient.

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Characteristics and Components of Effective PA Instruction

- Child response
- Explicit & systematic
- Cycled targets
- Quality of service
- Small groups
- Dosage
- Phonological Awareness
- 1 or 2 targets
- Progress monitoring
- Use of print
- Scaffolding

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Evidence-based practices in PA: References

• Report of the National Early Literacy Panel (2008) www.nifl.gov

• National Reading Panel (2000) available online at: http://www.nichd.nih.gov/publications/pubs/nrp/documents/report.pdf

• Phillips, B. M., Clancy-Menchetti, J., Lonigan, C. J. (2008) Successful Phonological awareness Instruction With Preschool Children: Lessons From the Classroom. *Topics in Early Childhood Special Education,28;3.*

• Report of the National Reading Panel (2000). https://www1.nichd.nih.gov/publications/pubs/nrp/Documents/report.pdf

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PA Pointers from the Research: Intensity

- For typically developing children and at-risk children, 5 to 18 total hours of PA instruction is better than less or more
- For typically developing children, small group yields better results than either individual or large group (full class) instruction

Dosage

Ehri, L.C., et al. (2001). Phonemic Awareness Instruction Helps Children Learn to Read: Evidence from the National Reading Panels Analysis. *Reading Research Quarterly, 36,* 250-287.

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PA Pointers from the Research: Intensity

For children with language impairment:

- Total intervention durations of less than 10 hours appear insufficient.
- If other speech/language objectives are included, 20 hours of PA instruction may be necessary
- PA instruction is effective in individual or small group sessions
- An unknown factor in determination of intensity is classroom instruction. There is a possibility that less time would be necessary with core curriculum that includes PA instruction.

Dosage

Ukrainetz, T. (2009). Phonemic Awareness: How much is enough within a changing picture of reading instruction? *Topics in Language Disorders, Vol. 29(4),* p. 344-359.

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Example of Dosage for PA Program

Variable	Definition	Intervention
Dose	Episodes	Not specified
Dose form	Delivery mechanism for presenting teaching episodes	*Say-it-and-move-it Letter naming activity Letter sound activity*
Dose frequency	How often intervention is delivered (daily or weekly)	4 days a week 20 minute lessons
Total intervention duration	Complete length of time intervention is delivered	11 weeks

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Progress-monitoring

- Most EB programs have observation, record, or monitoring formats/forms
- If your program does not, designing a monitoring device is important

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Progress-monitoring: PA Example

Level on PA continuum	Match	Blend with assistance	Segment with assistance	Independently blend & segment
Syllable				
Onset-rime; rhyme				
Phoneme (CVC)				

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Phonemic Awareness is addressed in MO ELA Standards as Part of Reading Foundations: Examples

Develop phonemic awareness in the reading process by:

Kindergarten:
    Blending spoken phonemes to form one-syllable words
    Segmenting spoken words into two or three phonemes
First Grade:
    Producing and identifying sounds and syllables in spoken words
    Recognizing the change in a spoken word when a specific phoneme is added, changed, or removed

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Video Clip Examples

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Phonics

A system that builds on the alphabetic principle of which a central component is the correspondence between letters or groups of letters and their pronunciations.

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How Do We Maximize Success in Decoding Instruction?

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3. Dosage
   (Related to Fidelity) How much of the method/program/technique is critical. Make sure you implement the practices often enough.
4. Monitor progress
   Check frequently and make adjustments. Check students' progress often to make sure intervention is working.

Adaped from: Carta, J. Enhancing Young Children's Growth in Early Literacy and Communication. Available online at http://www.jgcp.ku.edu/
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A misunderstanding: too many exceptions in English…

Its true that the English spelling system is not as transparent as Spanish, Italian, or Croatian BUT…

- Only 4% of English words in print defy explanation and are truly irregular.
- Speech sounds in English words are spelled with one of several possible spellings which are determined by various kinds of patterns.
- 50% of English words can be read and spelled accurately by sound/symbol correspondence patterns alone and another 36% can be read/spelled accurately except for one speech sound-usually a vowel.

Moats, L. and Tolman, C. (2009). Language Essentials for Teachers of Reading and Spelling. Spellography for Teachers: How English Spelling Works. Boston: Sopris West

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Phonics: Scientific research strongly indicates that *systematic* phonics instruction

1. is significantly more effective than incidental or non-phonics type of instruction.
2. produces the biggest impact on growth in reading when it begins in kindergarten or first grade and much more effective than phonics instruction introduced after first grade.
3. is significantly more effective than incidental or non-phonics instruction in preventing reading difficulties for at-risk students and in helping to remediate reading difficulties in disabled readers.
4. results in significant growth in younger students' (K and 1st grade) reading comprehension as well as for older struggling readers and reading disabled students.
5. produces significant growth in spelling among kindergarten and first graders
6. is beneficial to students regardless of SES
7. is a means to an end. To be able to make use of phonics information, children need phonemic awareness
8. is not a total reading program. Reading programs for K, first, and second grade should integrate decoding instruction with systematic read-alouds (using dialogic components) to build a sense of story and to develop vocabulary and comprehension.

TAKE AWAY: Systematic phonics instruction is critical to decoding and comprehension for all students and has much stronger results when instruction begins early (K & 1). Instruction integrated with phonemic awareness and strategic use is best practice.

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Evidence-based programs and practices for phonics:
Research and evidence support these *key characteristics* of phonics and word study instruction

- ✓ Choose a program or develop one that is SYSTEMATIC. The hallmark of systematic phonics programs is that they delineate a planned, sequential set of phonic elements. The order of instruction is important so that students can read words early. This means that the placement of vowels is very important.
- ✓ The phonic elements are instructed explicitly/directly.
- ✓ No one phonics program has been found to be strongly superior to another but a simple sequence of elements moves from the easiest to the more difficult.
- ✓ High frequency words should be a part of a phonics/word study program.
- ✓ Six syllable types should be addressed in phonics/word study programs.
- ✓ Attention to multisyllabic words should be part of the progression.
- ✓ Morphology should be addressed through affixes (pronunciation is an important characteristic).
- ✓ Practice to automaticity is important.

Automaticity

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Examples of what the research has not told us yet…

- Dosage: intensity, duration, and length of instructional sessions
- Whether there is a best sequence of letters/sounds
- Whether some essential elements are more powerful than others

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Phonics is addressed in MO ELA Standards as Part of Reading Foundations: Examples

Develop phonics in the reading process by:

Second Grade:
  Decoding multisyllabic words in context by applying common letter-sound correspondences including single letters, consonant blends, consonant and vowel digraphs, and vowel diphthongs

Third Grade:
  Decoding words that double final consonants when adding an ending
  Using the meaning of common prefixes and suffixes

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Video Clip Examples

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Vocabulary

Word Knowledge
Lexicon
Comprehension and Expression

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Myths in Vocabulary Learning in Children with Disabilities & At-risk for school failure

- Hearing a word 8 times ensures that a student will know the word
- Direct instruction is not the best method because there are too many words to teach
- A valid recommendation to a teacher for a child with language impairment would be to use basic words to enhance comprehension
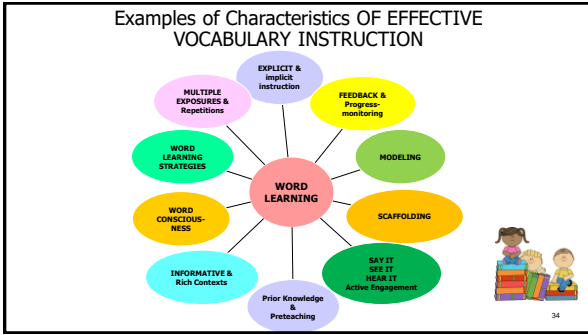- Wide reading is not necessary for vocabulary learning

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Adaped from: Carta, J. Enhancing Young Children's Growth in Early Literacy and Communication. Available online at http://www.jgcp.ku.edu/
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Examples of Characteristics OF EFFECTIVE VOCABULARY INSTRUCTION

EXPLICIT INSTRUCTION

- **Step 1: Select Word(s) for direct instruction**
- **Step 2: Introduce the word**
  - ➤ Write the word on the board or overhead
  - ➤ Read the word and have the students repeat the word.
  - ➤ If the word is difficult to pronounce or unfamiliar have the students repeat the word a number of times.
- **Step 3: Present a student-friendly explanation.**
  - ➤ Tell the students the explanation
  - ➤ Have them read the explanation with you.
- **Step 4: Illustrate the word with examples**.
  - ➤ Verbal examples
  - ➤ Concrete examples
  - ➤ Visual representations
- **Step 5: Check students' understanding.**
  - ➤ (a compilation of information from Nagy, Beck, Biemiller, Baumann & Kame'enui, Stahl)

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Implicit Learning

- Early word learning takes place in oral contexts and this type of learning continues throughout life. Gestures, body language, intonation, for example, assist in word learning in oral contexts.
- Later word learning for rare words occurs in written contexts. HOWEVER, written language is less effective than oral language for learning the meaning of words.

　　Research indicates that of 100 unfamiliar words encountered in context, 5 to 15 will be learned and multiple encounters of those words are required for learning to take place.

So…

1. Wide reading is necessary for print contexts to influence large vocabulary growth.
2. Ability to infer meaning from context is necessary.
3. Students must be able to read fluently and automatically in order to read widely and to free cognitive space for inferring meaning.
4. (Beck, I. L., McKeown, M.G., Kucan, L. (2013); see additional references in Beck, et.al.: Nagy, Herman, & Anderson; Swanborn & deGlopper)

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How much for Tier 2 and 3 students? Increase frequency, intensity, and duration.

Early research is demonstrating that increased intensity and duration increase breadth and depth of word learning. Examples:

Puhalla, E.M. (2011). Enhancing the vocabulary knowledge of first-grade children with supplemental booster instruction. *Remedial and Special Education, 32 (6),* 471-481.

Students received read-aloud interventions for 5 20-minute booster sessions. Key component of the intervention included the read-aloud, activities as in the Tier 1 instruction with target vocabulary, and review across the 5 sessions.

Sobolak, M.J. (2011). Modifying robust vocabulary instruction for the benefit of low-socioeconomic students. *Reading Improvement, 48 (1),* 14-23.

15 minutes for 3 additional days on vocabulary targets

15 minutes for 3 more days

*4-6 word sets were targeted in this research. Pre-post assessments were indicators for word learning.

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Number of Cumulative Exposures Needed to Learn a New Word

Level of Intelligence	IQ	Required Exposures
Significantly above average	120-129	20
Above average	110-119	30
Average	90-109	35
Slow learner	80-89	40
Mild cognitive impairment	70-79	45
Moderate cog impairment	60-69	55

(Gates, 1931; McCormick, 1999 from Montgomery, J. (2005) Words, Words, Words: The Development of Language and Reading Vocabulary. Presentation at Oakland Schools, Waterford, Michigan)

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Research to the school and classroom: Goals

• How many words to teach explicitly?

- Consider that not all words need to be explicitly taught.

- Consider that the average 3rd grader already knows about 8,000 word families (Nagy & Anderson (1984); Biemiller (2001).

- About 400 words per year have been successfully instructed (explicitly) in several research projects. (Beck, I.L., and McKeown, M.G.)

Examples:

Classroom instruction as previously described.

Whole school goals and processes for vocabulary learning.

Computerized vocabulary programs

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Progress-monitoring: Vocabulary

Word	Multiple choice examples	Fill in blank in verbal sentences	Describe meaning with examples	Use in sentence	Inflections & derivations
curious					
regret					
grumpy					
wonder					
remind					

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Vocabulary is addressed in MO ELA Standards as Part of Reading Foundations: Examples

Develop an understanding of vocabulary by:

Kindergarten
  Using words and phrases acquired through conversations, reading and being read to, and responding to texts

First Grade
  Distinguishing shades of meaning among verbs and adjectives

Second Grade:
  using knowledge of the meaning of individual words to determine the meaning of compound words
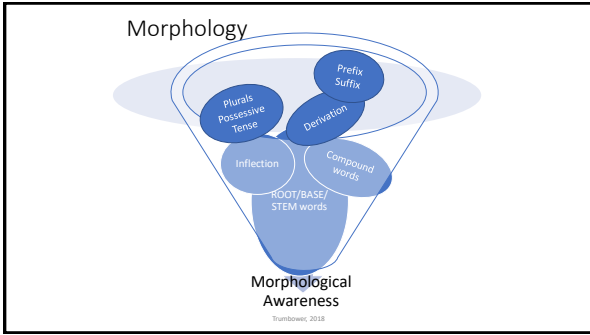
Third Grade
  Determining the meaning of the new word formed when a known affix is added to a known base word

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Thinking about morphology:

	The	student	s	have	wonder	ful	teach	er	s
free	X	X		X	X		X		
bound			X			X		X	X
Inflec-tional			X						X
Deriva-tional						X		X	

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Morphology

Prefix
Suffix

Plurals
Possessive
Tense

Derivation

Inflection

Compound
words

ROOT/BASE/
STEM words

Morphological Awareness

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Vocabulary Instruction video clip

- Introduce the word
- Student-friendly explanation
- Illustrate with examples
- Check for understanding
- Words chosen from a story book or content instruction
- Children hear, see, say the word
- Multiple exposures
- Multiple exemplars
- Explicit instruction
- Feedback
- Systematic

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Video Clip Samples

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Tiers 1,2,3 in 5 pillars (5 Big Ideas): Reading Intervention Programs, a comparative chart

A Resource:

Commercially available intervention programs
Reading Rockets website:
http://www.readingrockets.org/article/reading-intervention-programs-comparative-chart

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Thank You

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