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

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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.

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.
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.

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

<table>
<thead>
<tr>
<th>Skill</th>
<th>Kindergarten</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
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<tbody>
<tr>
<td>Print Awareness</td>
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<tr>
<td>Phonemic Awareness</td>
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<tr>
<td>Phonics</td>
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<tr>
<td>Vocabulary</td>
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<tr>
<td>Morphology</td>
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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.
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.

Adapted from: Carta, J. Enhancing Young Children’s Growth in Early Literacy and Communication. Available online at [http://www.jgcp.ku.edu](http://www.jgcp.ku.edu)

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.


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

**Print Awareness**

**Kindergarten**

- identifying all upper-and lower-case letters
- 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.
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 1st 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.

PA Continuum of Difficulty

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.
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.

Characteristics and Components of Effective PA Instruction

Evidence-based practices in PA: References

  www.nifl.gov
- National Reading Panel (2000) available online at:
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.


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.


Example of Dosage for PA Program

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

Trumbower, 2018
Progress-monitoring

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

Progress-monitoring: PA Example

<table>
<thead>
<tr>
<th>Level on PA Continuum</th>
<th>Match</th>
<th>Blend with assistance</th>
<th>Segment with assistance</th>
<th>Independently blend &amp; segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syllable</td>
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<td></td>
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<tr>
<td>Onset-rime; rhyme</td>
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<tr>
<td>Phoneme (CVC)</td>
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</tbody>
</table>

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
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.

How Do We Maximize Success in Decoding Instruction?

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A misunderstanding: too many exceptions in English...

It's 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.


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 & 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.

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 phonemic 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.
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

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

Video Clip Examples
Vocabulary

Word Knowledge
Lexicon
Comprehension and Expression

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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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, Baumän, & Kame’enui, Stahl)

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.

(Boesch, L., McDonald, M. G., Kramer, L. (2015); see additional references in Beck, et al.: Nagy, Herman, & Anderson; Swanborn & deGlopper)
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:


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.


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

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


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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
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

Thinking about morphology:

<table>
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<tr>
<th>The</th>
<th>student</th>
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<th>have</th>
<th>wonder</th>
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<td>Derivative</td>
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</table>
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

Video Clip Samples
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

Thank You