Fun with Phonemes

Assessment and Intervention for Phonological Awareness during the Preschool Years

Emily Diehm, Ph.D. CCC-SLP
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Disclosures

Dr. Emily Diehm is employed by the University of Toledo

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• No relevant nonfinancial relationships exist

What Will We Discuss?

• Defining Phonological Awareness
• Development of Phonological Awareness Skills
• Foundations of Written Language
  • Theories of Reading Development
• Phonological Awareness Assessment
• Principles of Phonological Awareness Intervention
Models of Language

- Bloom and Lahey (1978)

Metalinguistic Skills

Form
- Phonology
- Syntax
- Morphology

Content
- Semantics
- Pragmatics

Use
- Orthography

Content: • Phonology • Syntax • Morphology

Use: • Semantics • Pragmatics

The University of Toledo

Phonological Awareness

- An “umbrella term” for awareness of units of sound within words

word syllable onset/rime phoneme

panthers

pan th ers

pan th er s

Phonological Awareness during Preschool

“love Iowa” has 3 words

“I love Iowa” has 3 words

“panthers” has 2 syllables

Word

Syllable

Onset-Rime

Phoneme

Rhyme Awareness:
Cat/Bat

Onset Awareness:
The first sound in him is /h/

Phoneme Identity:
Car starts with /k/

Can ends with /n/

Car and can both start with /k/

word syllable onset/rime phoneme

“I love Iowa” has 3 words

“I love Iowa” has 3 words

“panthers” has 2 syllables

“I love Iowa” has 3 words

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word syllable onset/rime phoneme

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word syllable onset/rime phoneme

“I love Iowa” has 3 words

“I love Iowa” has 3 words

“panthers” has 2 syllables
Development of Phonological Awareness – KDG+

Blending:
/f/ /ɪ/ /v/ → "five"

Segmentation:
"hop" → /h/ /ɒ/ /p/

Counting:
Boy has 2 phonemes

Manipulation:
• Say the word Basketball without saying basket = "ball"
• Put /f/ in front of the word "lap" = "flap"
• Say "spat." Now take the /s/ from the beginning of the word and place it at the end = "pats"

Word Awareness
Syllable Awareness
Rhyme Awareness
Onset Awareness
Phoneme Identity
Phoneme Blending
Phoneme Segmentation
Phoneme Counting
Phoneme Manipulation

Word Awareness
Syllable Awareness
Rhyme Awareness
Onset Awareness
Phoneme Identity
Phoneme Blending
Phoneme Segmentation
Phoneme Counting
Phoneme Manipulation
Oral Language Factors Influencing PA Development

Vocabulary
- Preschool (but not later) vocabulary strongly correlated to later PA skills (Metsala 1999a, 1999b)

Phonological Representations
- “Clear” phonological representation of word is required before modifications are possible (Elbro et al., 1998)
Oral Language Factors Influencing PA Development

Speech Sound Impairment
- Production of words distinctly and accurately related to PA and later reading development (Elbro et al., 1998)
- SSI may impact ability to judge accuracy of word production (Sutherland & Gillon, 2007)

Oral Language Factors Influencing PA Development

Assessment Implications
- Performance may be impacted by frequency/familiarity of words.
- Familiar words > Unfamiliar words (Metsala, 1999a, 1999b)
- Words with many phonologically-similar words > Few “relatives”
- Words child can produce > Words with speech sound errors (Elbro et al., 1998; Sutherland & Gillon, 2007)

Code-Related Factors Influencing PA Development

Experiences with Reading & Spelling
- Formal literacy instruction improves PA (Perfetti et al., 1987)
- Understand that words are made up of sounds

Alphabet Knowledge
- Letter name knowledge may spark PA (Johnson et al., 1996)
- Bi-directional relationship between letter name/sound knowledge and PA (Lerner & Lonigan, 2016)
Code-Related Factors Influencing PA Development (and vice versa)

Reading: dog /d/ + /ɔ/ + /ɡ/

Spelling: dog /d/ /ɔ/ /ɡ/

Language vs. Literacy

<table>
<thead>
<tr>
<th>Oral</th>
<th>Written</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive</td>
<td></td>
</tr>
<tr>
<td>Expressive</td>
<td></td>
</tr>
</tbody>
</table>

Models of Reading Acquisition

- Simple View of Reading (Gough & Tunmer, 1986)

Word Level Reading ⊗ Oral Language Comprehension ➞ Reading Comprehension
Models of Reading Acquisition

- **The “Reading Rope”** (Scarborough, 2001)

Preschool PA

<table>
<thead>
<tr>
<th>Word</th>
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<th>Onset-Rime</th>
<th>Phoneme</th>
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<td>Phoneme identity: Car starts with /k/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Onset Awareness: The first sound in him is /h/</td>
<td>Can ends with /n/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>/h/ plus /im/ is “him”</td>
<td>Car and can both start with /k/</td>
</tr>
</tbody>
</table>

But don’t forget...

- **Component Model of Reading** (Aaron, Joshi, Gooden, & Bentum, 2008)

  - Cognitive Abilities
  - Psychological Aspects
  - Environmental Influences
  - Reading
National Early Literacy Panel (2008)

- Meta-analysis of existing research on young children’s literacy learning
  
  Questions:
  1) What early skills are predictive of later literacy achievement?
  2) What can parents and teachers do to improve young children’s early literacy learning?
  3) How can these actions be adjusted for different children under different circumstances

NELP Findings

1) Six variables are moderate-to-strong predictors of later decoding OR later reading comprehension:
   - Alphabet knowledge
   - Phonological awareness
   - Rapid automatized naming (RAN) of letters or digits
   - RAN of objects and colors
   - Writing or name writing
   - Phonological memory

PA in “Our” Students

- Below average PA skills, placing students at-risk for reading/spelling disorders, are often observed in children with:
  - Speech Sound Disorders (e.g., Bird, Bishop, & Freeman, 1995)
  - Developmental Language Disorders (e.g., Catts et al., 2001)
  - Autism Spectrum Disorder (e.g., Gailig, 2002) & Fragile X (Adolfo et al., 2005)
  - Down Syndrome (e.g., Lemons & Fuchs, 2010)
  - Fetal Alcohol Syndrome (with accompanying trauma) (Hyvar, 2012)
  - And more…
### Speech Sound Disorders (SSD)

- SSD = speech sound errors that occur due to problems processing linguistic (i.e., phonological) information.

#### Articulation
- Distortion or substitution (Snow, 1995)
- Not at risk for literacy difficulties (e.g., Catts, 1999)

#### SSD
- Develop or access phonological representation
- Plan and execute a phonological target
- "Pattern" of sound errors

### SSD & PA
- Poor phonological representations in oral language → Poor PA (Anthony et al., 2011) → Difficulty mapping phonemes to graphemes?
- Demonstrate delays and difficulties on PA tasks during the preschool and early elementary years (e.g., Gillon, 2000; Raitano et al., 2004; Webster & Pike, 1992)
- Explicit intervention, especially at the phoneme level, is required for change in skill (e.g., Snowling, Bishop, & Stothard, 2000)
- But... even when SSD is remediated, low performance still observed on measures of PA (Raitano et al., 2004)

### SSD & Literacy
- Early history of SSD related to poorer literacy outcomes in adolescence (Stothard et al., 1998)
- Multisyllabic word production > monosyllabic word production in prediction of reading difficulties (Larrivee & Catts, 1999)
- Persistent SSD (Peterson et al., 2003)
- More than 10% of errors are "atypical" (Preston, Hull, & Edwards, 2013; Preston, Hull, & Edwards, 2015)
- Omission of initial consonants
- Backing of alveolar sounds
- Replacing an oral consonant with a glottal sound
- Replacing a fricative with a stop sound
Models of Reading Acquisition

- Simple View of Reading (Gough & Tunmer, 1986)

\[ \text{Word Level Reading} \times \text{Oral Language Comprehension} = \text{Reading Comprehension} \]

Developmental Language Disorder (DLD)

- Multiple profiles exist (Ahmed, Lombardino, & Leonard, 2001)
  - “Dimensionality” may be simplified into semantics and syntax (Lonigan & Milburn, 2017)
  - DLD predicts later literacy challenges for approximately 50% of children (Bishop & Snowling, 2004; Catts, 1993; Catts et al., 2002; Ramus, Marshall, Ravin, & van der Lely, 2013)
  - “Better” predictor of literacy performance than history of SSD (Peterson et al., 2009)

DLD & PA

- Delayed emergent literacy skills (Bourdreaux & Hedberg, 1999; Gillam & Johnston, 1985)
  - Concepts of Print (McGirr & Justice, 2008)
  - Letter Knowledge (Catts et al., 2001)
  - Phonological Awareness (Catts et al., 2012; Joffe, 1999)
- Differential PA trajectory compared to typically developing peers (Thatcher, 2010)
DLD & Literacy

- Delays in oral language skills, at even 15 months, are predictive of future reading achievement (Justice, Mashburn, & Petscher, 2013).
- Early PA skills predict later word-level reading and comprehension (Catts et al., 2001).
- No PA problems in children with DLD who attain typical literacy skills (Catts, Adlof, Hogan, & Weismer, 2005).
- Children with DLD, who display typical decoding abilities, generally read accurately and fluently, yet display impairments in comprehension (Nation, Cocksey, Taylor, & Bishop, 2010).

Models of Reading Acquisition

- Simple View of Reading (Gough & Tunmer, 1986)

- Word Level Reading
- Oral Language Comprehension
- Reading Comprehension

Comorbid Speech and Language Disorders (S/L)

- Comorbidity occurs in approximately 25-30% of children with language impairment (Gallagher, Feth, & Snowling, 2000; Lewis, 1996) although others estimate as high as 56% (e.g., Shriberg et al., 1986).
- Speech more likely to normalize by age 6 in children without concomitant language disorder.
- Language, non-verbal intelligence, and PA lower in children with S/L than with only SSD.
- Decoding/word recognition skills are likely to be impaired (e.g., Catts, 1993; Snowling, Bishop, & Stothard, 2005).
- Reading comprehension skills are also likely to be impaired.
**S/L and PA**

- Of students with SSD, poorer PA skills associated with low receptive vocabulary and more atypical sound errors (Preston & Edwards, 2010).
- When PA intervention provided, growth occurs, and may even normalize (Gillon, 2002).
- Previously identified children with LI improve their oral language abilities, thereby being rid of the label “DLD,” their reading achievement remains significantly lower than that of children never diagnosed with LI (Catts et al., 2002) and the language impairment may reappear in later years (Stothard, Snowling, Bishop, Chipcase, & Kaplan, 1998).

**Models of Reading Acquisition**

- **Simple View of Reading** (Gough & Tunmer, 1986)

  - Word Level Reading
  - Oral Language Comprehension
  - Reading Comprehension

**The Role of the SLP**

- **ASHA 2001 Position Statement: Roles and Responsibilities of SLPs with Respect to Reading and Writing in Children and Adolescents**
  - Critical and direct role in the development of literacy for those with communication disorders; Contribute to efforts made by others
    - Prevention, Identification, Assessment, Intervention, Documentation of Outcomes, Advocacy, Collaboration…
  - “Dynamic” role
Teacher/SLP Collaborations

- SLP role in...
  - Prevention
  - Advocacy
  - Identification

Assessment of Emergent Literacy Skills

- SLP role in...
  - Selection/Choice of Assessments
    - Question format
    - Response format
    - Prompting allowed
  - Administration
    - Frequency
    - Examiner
  - Interpretation of Results
    - Developmental progression
    - Concerns
    - Comorbidity with other "red flags"

Integrated Interventions

- SLP role in...
  - Therapy
  - DLD Goals
  - SSD Goals
  - PA Goals
  - Intervention
  - Documentation of Outcomes
Assessment of Phonological Awareness

Assessment Guides Intervention!

- Type and purpose of assessment
  - Norm-referenced assessment
  - Criterion-referenced assessment
  - Dynamic Assessment
  - Curriculum-Based Assessment

- Things to consider...
  - Familiarity with vocabulary (pictures, objects)
  - Starting points (word, syllable, onset-rime, phoneme)
  - Stopping points
  - Question format
  - Response format
  - Prompting

Assessment Guidelines

- Keep phoneme “clean”
  - /p/ not /pa/ or /pi/
- Stretch continuous sounds (e.g., mmmmmmm)
- If needed, quickly repeat non-continuous sounds (e.g., /p/ /p/ /p/)
- Possible that a child may be at phoneme-level but not accurate at “easier” tasks with larger units of sound
  - Keep the purpose of PA in mind...
Norm-Referenced Assessments

- **Screening**
  - Get Ready to Read! – Revised (GRTR-R)
  - No “PA subtest” but addresses multiple early literacy skills

Norm-Referenced Assessments

- **Identification**
  - Test of Preschool Early Literacy (TOPEL) - 1 subtest
  - Clinical Evaluation of Language Fundamentals – Preschool, Second Edition (CELF-P2) - 1 subtest
  - Comprehensive Test of Phonological Processing – Second Edition (CTOPP-2)
    - 4-0 to 24-11
    - 12 subtests; Could choose which subtests based on child’s level

Get Ready to Read! Revised – Screening Tool
Criterion-Referenced Assessments

- Determine if child has met a specified “criteria” appropriate for his/her age
  - For example,
  - Ability to segment a word into syllables by 4 years of age;
  - Ability to identify two words that start with the same sound by the end of preschool

But...how do I determine the criteria?!?!?

Criterion-Referenced Assessments

- Use State Academic Standards to determine criteria if cannot find in the literature
  - “Children engage in early reading experiences” – “Demonstrates awareness that language is made up of words, parts of words, and sounds in words” (Iowa Early Learning Standard – Early Literacy (11.2))
Ohio’s Early Learning Standards – Language & Literacy - Pre-Kindergarten (3-5 years)

- “With modeling and support...”
  - recognize and produce rhyming words
  - recognize words in spoken sentences
  - blend and segment syllables in spoken words
  - orally blend and familiar compound words
  - blend and segment onset and rhyme in single-syllable words
  - identify initial and final sounds in spoken words

Ohio's Early Learning Standards – Language and Literacy

Criterion-Referenced

- Use clinical judgement regarding where to start (i.e., word, syllable, onset-rime, phoneme)
  - What could happen if you start too easy?
  - What could happen if you start too difficult?
- Use phoneme – not letter name
- Incorporate “game-like” activities (e.g., puppets, toys)
- Visual supports (pictures NOT print) may be included to reduce cognitive/memory demands
  - Response option for children who are nonverbal, use AAC, shy as well
  - If pictures used, then must ensure child understands label and referent

Criterion-Referenced

- Multiple observations (one-on-one and in small- or large-group)
- Short in duration, but frequent sessions to avoid fatigue
- Chance of guessing?
  - Avoid 2 choice questions (e.g., Yes or No)
  - “Switch up” the location of the correct answer
- If a “foil” sounds similar to target answer, ensure child’s SSD would not interfere
  - Increase complexity by carefully planning words with the same or different sounds, sound positions, syllables, etc.

See sample: [link](http://www.canterbury.ac.nz/education/research/phonological-awareness-resources)
Criterion-Referenced

- Example tasks for a child to complete:
  - Clap out syllables in words
  - Blend syllables to form words
  - Delete a syllable in a word
  - Match words that rhyme
  - Find a word that does not rhyme with the others (set of 3)
    - “Odd one out”
  - Match words that start with the same sound
  - Find a word that does not start with the same sound (set of 3)

Again, best to align with specific State Standards (if you can)

Criterion-Referenced – “I do”

- **Skill to Assess**: Blend syllables to form a word
- **Prompt**: “I need you to help me figure out my outfit. I’m going to say what I need in a funny way. Can you give me the JA ----- CKET? Can you give me what I need to be a PRIN ----- CESS?”
- **Possible targets**:
  - Jacket (2), Princess (2), Dancer (2), Mommy (2), Fireman (3), Police Officer (4), Ballerina (4)

Criterion-Referenced – “I do”

- **Skill to Assess**: Blend syllables to form a word
- **Data Collection**:
  - 2 syllable: +++  3 syllable: 4-  4 syllable: - -
Criterion-Referenced – “I do”  
- **Skill to Assess:** Blend syllables to form a word  
- **Can do? Next steps:**  
  - Segment syllables in word  
  - Blend onset to rime of a single syllable word  
- **Can’t do? Next steps:**  
  - Reduce # of syllables in word  
  - Add manipulatives (e.g., coins from the cash register)  
  - Blend words in a sentence

Criterion-Referenced – “We do”  
- **Skill to Assess:** Initial Phoneme Identification  
- **Prompt:** ‘I’m going to put something on your plate that starts with the /m/ sound. What is it?’  
- **What else could we say?**

Criterion-Referenced – “We do”  
- **Possible Targets:**  
  - /m/ for macaroni and cheese; /n/ for noodles; /b-b-b-b/ for bacon; /p – p-p/ for peas  
  - /w/ for water; /m/ for milk  
  - What else?  
(Avoid broccoli, spaghetti, etc. due to consonant cluster blends)
**Criterion-Referenced – “We do”**

- **Skill to Assess:** Initial Phoneme Identification
- **Data Collection:**
  - Phoneme to word ID
    - 🔴🔴🔴🔴 -

**Preschool PA**

<table>
<thead>
<tr>
<th>Word</th>
<th>Syllable</th>
<th>Onset-Rime</th>
<th>Phoneme</th>
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</table>
| "I love Iowa" has 3 words | "pain...thirst" has 2 syllables | **Rhyme Awareness:** Cat/Bat  
**Onset Awareness:**  
The first sound in him is /h/  
/h/ plus /m/ is "him" | **Phoneme Identity:**  
Car starts with /k/  
Can ends with /n/  
Car and can both start with /k/ |

---

- **Can do? Next steps:**
  - Find 2 words that start with the same sound (e.g., milk and macaroni)
  - Blending phonemes
- **Can’t do? Next steps:**
  - Thoughts?
### Criterion-Referenced – “You do”

<table>
<thead>
<tr>
<th>Group #</th>
<th>Phonological Awareness Level</th>
<th>Routine / Activity</th>
<th>1) How will you ask the question(s)?</th>
<th>2) What words will you use?</th>
<th>3) What will you take data on?</th>
<th>4) If child can do, what’s your next step?</th>
<th>5) If child can’t do, what’s your next step?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clap out syllables of a word</td>
<td>Home living / Kitchen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Rhyming – odd one out</td>
<td>Science Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Blending Onset-Rime</td>
<td>Sensory table</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Match words that start with the same sound (phoneme)</td>
<td>Shared book reading activity</td>
<td></td>
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</tr>
</tbody>
</table>

### (PA) Rhyme identification – “I do”

This is a bat (point to bat). And these pictures are tap, boy, cat, and pot (point to each picture as you name them).

Does bat rhyme with tap, boy, cat or pot?

### Rhyme Identification – What should our targets be? (“We do”)  

This is a “box” and these pictures are 1, 2, 3, and 4.

Does “box” rhyme with 1, 2, 3, or 4?
Dynamic Assessment

- Dynamic Decoding Measures (DDM) – a part of the CUBED family -
  - Pre-K to Grade 2 (K – 3?) for DDM
  - Phoneme Segmentation
  - Phoneme Blending
  - First Sounds
  - No “specific grade levels for benchmark screening or progress monitoring”
  - Create your own!

Intervention for Phonological Awareness

Sources of Information

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ia</td>
<td>Well-designed meta-analysis of &gt;1 randomized controlled trial</td>
</tr>
<tr>
<td>Ib</td>
<td>Well-designed randomized controlled study</td>
</tr>
<tr>
<td>Ia</td>
<td>Well-designed controlled study without randomization</td>
</tr>
<tr>
<td>Iib</td>
<td>Well-designed quasi-experimental study</td>
</tr>
<tr>
<td>II</td>
<td>Well-designed non-experimental studies, i.e., correlational and case studies</td>
</tr>
<tr>
<td>V</td>
<td>Expert committee report, consensus conference, clinical experience of respected authorities</td>
</tr>
</tbody>
</table>

https://www.asha.org/Research/EBP/Assessing-the-Evidence/
National Early Literacy Panel (2008)

- Meta-analysis of existing research on young children’s literacy learning

Questions:
1) What early skills are predictive of later literacy achievement?
2) What can parents and teachers do to improve young children’s early literacy learning?
3) How can these actions be adjusted for different children under different circumstances
NELP Findings

2) What can parents and teachers do to improve young children’s early literacy learning?

- Code-focused interventions (PA+ Alphabet Knowledge; PA+ Phonics/Decoding) produced an average effect size (ES) of 0.82 (95% CI = .68 to .96) on PA skills.
  - ES for oral language = .32 (95% CI = .09 to .56)
  - ES for Reading = .44 (95% CI = .27 to .60)
  - ES for Spelling = .61 (95% CI = .43 to .80)
  - ES for Writing = .61 (95% CI = .18 to 1.04)

NELP Findings ➔ Instructional Guidelines

- Equally effective PA instruction regardless of age (preschool or kindergarten) or previous exposure to pre-literacy instruction
  - No preexisting amount of knowledge needed before implementation of PA instruction

Potential intervention option for ALL preschoolers

NELP Findings ➔ Instructional Guidelines

- PA instruction alone, or in combination with other code-focused instruction, promote similar growth in early literacy skills
  - No statistically significant differences between PA and “PA Plus” Interventions, in terms of PA growth

We can individualize and supplement PA intervention

Be efficient and include letter training
NELP Instructional Guidelines

- Allow for Analysis or Synthesis at the syllable, onset-rime, and/or phoneme level
- Provide feedback for correct and incorrect responses
- Limit group size (i.e., small group or individual)
  - When published in 2008, more research needed re: whole-group PA intervention
  - Whole class instruction works...but not ‘enough’ for children with language impairment to translate gains in PA to Reading/Spelling (Carson et al., 2013)

Systematic Review Re: SSD and/or DLD

- Effectiveness of Early Phonological Awareness Interventions for Students with Speech or Language Impairments (Al Otaiba, Puranik, Ziolkowski, & Montgomery, 2009)
  - 18 studies
  - PreK to 3rd grade
  - Positive gains for PA instruction
  - Individual differences
  - May not catch up to typically developing peers
  - Opportunities for increased methodological rigor, reporting, and statistical analyses

Single Studies

- The effects of syllable instruction on phonemic awareness in preschoolers (Ukrainetz, Nuspl, Wilkerson, & Bodie (2011)
  - 4 and 5 year old students (n = 39)
  - **typical developing**
  - Instruction in Syllable (2 weeks) and then phoneme (4 weeks) VS phoneme (4 weeks)
  - No significant differences on phoneme blending or segmenting
  - Conclusion if syllable instruction first
  - Go Straight to Phonemes (?)
**Additional Instructional Guidelines**

- Use phoneme sound(s), not letter names (Gillon, 2017)
- Sounds that “continue” (e.g., /m/, /s/, /l/) are easier to manipulate than sounds that “stop” (e.g., /t/, /k/, /p/)
  - Continuing sounds: exaggerate by holding on to them: rrrrrring
  - Stop sounds: rapidly repeat: k-k-k-k-katie
- Two-phoneme words easier than three-phoneme words (Uhry & Ehri, 1999)
- Vowel-Consonant is easier than Consonant-Vowel (Uhry & Ehri, 1999)
- Initial sound position is easiest, followed by the final position, with the medial position being most difficult (e.g., top, pot, setter) (Gillon, 2017)
National Early Literacy Panel (2008)
• Meta-analysis of existing research on young children’s literacy learning

Questions:
1) What early skills are predictive of later literacy achievement?
2) What can parents and teachers do to improve young children’s early literacy learning?
3) How can these actions be adjusted for different children under different circumstances

Recommendation #1: Integrated Therapy
• Goal – provide intervention for multiple target behaviors during the same session (Tyler, 2016)
• Justification – language-based systems develop in parallel (e.g., Brumbach & Goffman, 2014; Theodore, Demuth, & Shattuck-Hufnagel, 2015) and may be interactive (Shriberg et al., 2015). Therefore, addressing multiple domains of language at once may be more efficient (Tyler, 2016)

Integrating PA Training into Therapy
• Phonological Awareness Intervention for Children with Spoken Language Impairment (Gillon, 2000)
• Direct Instruction
• Phoneme level
  • Segmentation
• Letter-Sound Knowledge
• Manipulatives
• Encourage reflections
• Individual or small group
• Include general language instruction prior to PA training
ED1  need # participants ges
Emily Diehm, 4/19/2018
What does it look like?

Integrating PA into Therapy

Findings of Gillon (2000):
- Greater gains in speech, PA, and reading
- Gains of children with severe SSD
- [http://www.education.canterbury.ac.nz/people/gillon/gillon_phonological_awareness_training_programme.shtml](http://www.education.canterbury.ac.nz/people/gillon/gillon_phonological_awareness_training_programme.shtml)
PA Compared to Something Else?

- Direct and indirect effects of stimulating phoneme awareness vs. other linguistic skills in preschoolers with S/L Disorder (Tyler, Gillon, Macrae, & Johnson, 2011)
- Two interventions
  - PA/SS
  - MA/SS
- Findings:
  - Speech improvement similar
  - Higher PA in PA/SS
  - Increased morpheme production accuracy in MA/SS

Recommendation #2: Contextualized Therapy

- Goal – provide intervention in the context of meaningful, functional, curriculum-related, activities (Gillam, Gillam, & Reece, 2012)
- Justification – allows for natural repetition and promotes generalization (Fuchs & Fuchs, 2001) – and is an evidence-based approach for instruction with preschoolers (Cole, 1995).

Solution? “Book-Based” Therapy

- Goal – provide intervention for multiple target behaviors in the context of a literacy-rich, contextualized setting (i.e., book reading and associated activities)
- Justification – Allows opportunities to TEACH and TEST multiple skills; Decrease “at-risk” status by providing early access to foundational literacy instruction
- Extension Activity – Syllable Suitcase – focus on vocabulary and PA
  https://www.youtube.com/watch?v=8HU4e1K_96U&list=PL36538036A609498E&index=4
**PA Intervention Ideas**

- Other ideas:
  - Corner Grocery Store Song – Rhyming -
    https://www.youtube.com/watch?v=r8EvclOx-bY&index=30&list=PL36538036A6094986
  - Picky Puppet – Initial Sound Identification -
    https://www.youtube.com/watch?v=FaSEVu0xgul&index=11&list=PL36538036A6094986

**Now it’s your turn! – Intervention Planning**

- Case Study:
  Lisa is a 4 year, 8 month old preschool student who presents with an expressive and receptive language delay as well as a speech sound disorder (~70% intelligible to unfamiliar listener). Lisa has a limited vocabulary and typically produces 2-3 word sentences.

**Activity: Intervention Planning**

Look at the picture(s) – focusing on *sounds* in words or pictures

- Which words/pictures will you use for therapy?
- Think of an idea for a extension activity - allows for continued practice of language or speech target
**I do**

“Listen for words that start with the /k/ sound. These words typically start with the letter C.”

- Cup
- Coffee
- Curly
- Calendar

**PA Intervention – “We do”**

- Target behavior to teach = production of present progressive –ing
- Lisa’s PA skill level = syllable blending / syllable counting
- What words will we use for therapy / targets?
PA Intervention – “We do”

• Target behavior to teach – production of present progressive – ing
• Lisa’s PA skill level – syllable blending / syllable counting

• What could we do for an extension activity?
  • Syllable blending – wash – ing dog; dry – ing dog; comb-ing dog; pe-ting dog; po – lish – ing nails; brush – ing teeth; spray – ing per- fume
  • Syllable counting?

You do

• Which words/pictures will you use for therapy?
• Target sound?
• Think of 1 supplemental activity to extend the topic and provide additional speech and PA practice
Pre-made Intervention Activities

- Phonological Awareness Literacy Screening (PALS) - Resources https://pals.virginia.edu/public/tools-activities.html
- Florida Center for Reading Research – VPK Learning Center http://www.fcr.org/resources/resources_vpk.html
- Crane Center @ Ohio State - Read it Again – PreK! - https://earlychildhood.ehe.osu.edu/research/practice/read-it-again-prek/
- Lesson Plans – Classroom Resources - http://www.readandthink.org/
- MANY books by Scholastic, Brookes, etc.

Use when needed... But don’t be afraid to generate your own ideas!

Final Thoughts

- PA instruction is “easy” to include into our current therapy
- More efficient; See growth over 1+ target behaviors
- Provides a strong foundation for later literacy instruction
  - At-risk feature of students
  - As “guru standard” for identifying the at-risk status yet
- When provided within contextualized interventions, promotes enhanced generalization and discourse-level competence
- Collaborative role of SLP in designing, implementing, and assessing PA instruction
Selected References (Full Reference List Available by Request)


Thank you!

Emily.Diehm@UToldeo.edu