“Individual Student Differences in Phonological Awareness in Kindergarten”
2000 ASHA Presentation
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Need for Study:

- Phonological awareness involves the ability to reflect on and manipulate sounds without regard to meaning.
- Swank and Catts (1994) believe that speech-language pathologists (SLPs) should be involved in training.
- van Kleeck, Gilliam, and McFadden (1998) found an SLP teach method to be effective in teaching phonological awareness skills.
- Warrick, Rubin, and Rowe-Walsh (1993) found apparent gains after phonological awareness training for kindergarten children with language-delays.

Methods of Study:

- Two graduate students and one SLP conducted classroom-based phonological awareness training for approximately 45 minutes per week, for 30 weeks.
- The first semester focused on phonological awareness training above the level of the phoneme (rhyme, syllable, and word awareness).
- The second semester focused on phonological awareness training at phoneme level (i.e. initial sound matching, identification, final sound, phoneme blending/deleting, etc.)
- Weekly Schedule
  1. Introduction of Phonological Awareness Skill
  2. Book Emphasizing Skill
  3. Center Time Practice of Skill
  4. Large Group Skill Practice
  5. Closure
- Subjects:
  YEAR 1: 30 students in 2 kindergarten classrooms
  YEAR 2: 79 students in 4 kindergarten classrooms

Results:

YEAR 1: All children except 1 made greater than a 30- point gain on the Phonological Awareness Test (PAT).
YEAR 2: All children except 4 made greater than a 30- point gain on the Phonological Awareness Literacy Screening (PALS).
### Year 1

#### PAT Raw Score Gain

<table>
<thead>
<tr>
<th>Gain</th>
<th>0-15</th>
<th>16-30</th>
<th>31-45</th>
<th>46-60</th>
<th>61-75</th>
<th>76-90</th>
<th>91-105</th>
<th>106-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class (n=30)</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

### Year 2

#### PALS Raw Score Gain

<table>
<thead>
<tr>
<th>Gain</th>
<th>0-15</th>
<th>16-30</th>
<th>31-45</th>
<th>46-60</th>
<th>61-75</th>
<th>76-90</th>
<th>91-105</th>
<th>106-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A (n=18)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Class B (n=21)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Class C (n=19)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Class D (n=21)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>13</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>22</td>
<td>35</td>
<td>15</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

### Summer ’00 (after Year 2)

- Three of the seven children with the lowest post test scores participated in individual phonological awareness training during the summer in a multiple baseline across behaviors single subject design.
- Training was conducted by two SLP graduate students.
- Twelve Letter/Sound correspondences and phoneme blending was targeted.

#### Daily Schedule Letter/Sound:

1. Introduced acoustic properties and description (lip popper /p/)
2. Discussed articulatory postures for sound
3. Read book with target sound
4. Wrote letter while saying sound
5. Auditory discrimination of sound in isolation
6. Sorting pictures by first sound
7. Listening for sounds in words

- All subjects began treatment with a baseline score of 64% or lower
- After no more than 10 days of treatment, all subjects had attained 100% accuracy

#### Daily Schedule for Blending:

1. Auditory blending, onset-rime
2. Auditory phoneme blending (three phonemes)
3. Blending with letters (three letter tiles)

- Scores in all areas increased after the 8 week training (50 minutes, 3 times per week).
- Baseline blending scores were 0% for 2 subjects and less than 12% accuracy for the other subject.
- After the first treatment session, scores jumped to at least 30% accuracy for real word reading.
- By the conclusion of treatment, scores had increased to at least 90% accuracy for real and pseudo word reading.

### References:

