Symposium on Development of Intervention related to Language and Literacy in DHH Elementary-School Children

Vocabulary for Success

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Purpose

• What are the effects of content-area vocabulary instruction on word knowledge of DHH children K-2?
Why teach vocabulary?

• Vocabulary is a predictor of reading comprehension

• Many DHH children are delayed in vocabulary learning
Vocabulary

Language  Comprehension

Reading comprehension

Vocabulary growth
Adapted an intervention called PAVed for Success (Hamilton, & Schwanenflugel, 2013).

Designed as a supplemental intervention for DHH children grades K-2

Centered around a content area: Science
Four components

- Fast mapping
- Interactive book reading
- Conversation
- Extension activities
Fast mapping

Which is the branch?

How did you know that?

You know this is a carrot and this is a spoon so this has to be the branch
Interactive book reading

• Read each book twice
• Ask competence, abstract, and relate questions
• Draw attention to the new words
Conversation

• Provides an opportunity for student and teacher to use target words and express concepts
• Provides opportunities for teacher to model complex language
• Provides opportunities for teacher to expand student’s language
Extension activities

**Drill and Practice**
- Repeated opportunities for practice
- Receptive and Expressive

**Conceptual**
- Extends and enriches concepts
- Provides opportunities to use words in context
Research

• Completed three single subject studies
  – Thirteen DHH children
  – Grades K-2
  – Range of Hearing Loss
  – Using Sign language, spoken language, or spoken and sign language
    – Will report results on one study
## Participants (n=5)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hearing Loss</strong></td>
<td>Implant users = 2</td>
</tr>
<tr>
<td></td>
<td>HA users range = PTA 57-100 dB</td>
</tr>
<tr>
<td><strong>Vocabulary Standard Score (EOWPVT)</strong></td>
<td>Mean = 74 (Range = 56-88)</td>
</tr>
<tr>
<td><strong>Reading Comprehension Standard Score (WJ)</strong></td>
<td>Mean = 87 (Range = 79-100)</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; graders = 2</td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; graders = 3</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Boys = 2</td>
</tr>
<tr>
<td></td>
<td>Girls = 3</td>
</tr>
<tr>
<td><strong>Communication/Language</strong></td>
<td>Spoken English = 4</td>
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<tr>
<td></td>
<td>Sign = 1</td>
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</table>
Design and Procedures

• Single Subject Multiple Baseline Design across participants
• Topic of unit was Dental Health
• Teacher/researchers met with students 20 minutes a day, three days a week for 7 sessions
• **Target Words**
  – In isolation
    • Elicited by picture prompt
  – Spontaneously in connected language
    • Elicited pre- and post intervention using an expository book from the unit

• **Definitions**
  – Scored on a 4 point scale (0-4)
    • Elicited by picture and teacher prompt “Tell me about....”
Dental Health

Sample words and pictures

A  dentist

B  gums

C  enamel
Treatment Integrity

- N3C: 96
- Book Reading: 100
- Drill and Practice: 100
- Conceptual: 100
- Conversation: 93
Results: Words Learned

The graph illustrates the progression of words learned across different sessions for three different subjects: 120023, 120021, and 120076. The x-axis represents sessions, and the y-axis represents the number of words learned. The graph shows distinct phases labeled as Baseline, Intervention, and Maintenance. The points on the graph indicate the number of words learned at each session, with different markers for each subject.
Results: Total Definition Scores* at Baseline, Intervention, and Maintenance

*max score = 24
Results: Spontaneous Word Use

*max score = 8
Conclusions

• All children were able to
  – learn target vocabulary
  – Increase their ability to provide explanations and definitions of the target vocabulary
  – Use some of the new vocabulary in spontaneous connected language

• Vocabulary for Success is a promising strategy for increasing vocabulary learning in DHH children