A Comparison of NonWords and Tier Two Vocabulary Words in Speech Treatment
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To evaluate the role of word lexicality between Tier Two vocabulary (T2) words and nonwords (NWs) in effecting vocabulary expansion and phonological change in children’s sound systems.

Summary & Conclusion
- T2 vocabulary words are comparable to NWs in the treatment of speech sound disorders.
- NW = Larger Phonemic Inventories
- T2 = Greater Consomants Correct
- T2 = More Percent Consomants Correct (PCC; Shriberg et al., 1997)
- Pre- and Post-Tx: Phenomic inventory (Gierut et al., 1994)

Children with functional speech sound disorders (SSD) often have lower expressive language scores and unintelligible communication which negatively impacts their lexical development (Camarata, 1996; Smith & Camarata, 1999), putting them at risk for early academic failure. Moreover, children with SSD often make slow progress in the treatment of their SSD due to their prior experiences with the words used in treatment.

One way to avoid possible biases associated with life experiences (Leonard, Newhoff, & Mesalama, 1980) in treatment of SSD is to use NWs (e.g., Bryan & Howard, 1992; Guertin & Morrisette, 1998; Gierut, Morrisette, & Champion, 1999; Storkel, 2004). NWs are defined as novel, phonotactically permissible sound strings that are affiliated with novel referents. NWs have been shown to cause change in children with SSDs because they are low frequency for young children due to their later age of acquisition. NWs may be better targets initially in Tx because like NWs, they are low in frequency for young children due to their later age of acquisition. NWs have been shown to provide an opportunity to practice Tx words, and use new phonological forms within lexical domains.

- Replication with increased participant sample is needed to fully evaluate T2 vocabulary treatment
- T2 vocabulary words are comparable to NWs in promoting early academic success. Moreover, T2 vocabulary words provide an opportunity to practice Tx words and use new phonological forms within lexical domains.

Background

Methods

Participants

<table>
<thead>
<tr>
<th>Participant Entry Criteria</th>
<th>NW Group</th>
<th>T2 Group</th>
</tr>
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<tbody>
<tr>
<td>No. of Treatment</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Treatment Start</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Maximum No. of Treatment</td>
<td>11</td>
<td>12</td>
</tr>
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Intervention

- Treatment intensity: Twice weekly for 1-hour sessions
- Maximum 11 sessions
- Treatment duration: 6 weeks
- Both groups received 10 minutes of a story targeting T2 words, respectively

Remaining 50 minutes of the session consisted of traditional speech treatment targeting T2 words or NWs repeatedly by the child prior to treatment.

Results

Dependent Variables

- Assessment of English Phonology (Barlow, 2013; AEP) assessment is an in-depth 256-word probe that samples all English sounds in each of their viable word positions at least five times.
  - Pre- and Post-Tx: Percent Consomants Correct (PCC; Shriberg et al., 1997)
  - Pre- and Post-Tx: Phonemic inventory (Gierut et al., 1994)

- Zero-One Two-Vocabulary Assessment (ZOT; Robinson, 2013, Session #7282 Poster Board 382) measures T2 vocabulary knowledge accuracy on a 0-2 point scale. Participants were given points for their T2 word definition and use in a sentence; 4 possible points per word.
  - Pre- and Post-Tx: Vocabulary expansion of 10 words

Questions

**QUESTION 1:** Did the T2 participants add more sounds to their phonemic inventories than the NW participants?

**QUESTION 2:** Did the T2 participants have greater vocabulary expansion than the NW participants?

**QUESTION 3:** Did the T2 participants demonstrate greater changes in their AEP percent consonants correct (PCC) scores than the NW participants?

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