Buddy Feedback

Justina Heintz, MS, CCC-SLP/ TSHA 2015
Up to 7.5% of school-aged children in the United States are affected by speech sound disorders with approximately 28% of these making no measurable progress in treatment. For these children, alternative methodologies are indicated. The current study tests a relatively cost-effective methodology in tactile biofeedback delivered via Speech Buddies® tool set.
The reason behind the study:

Working in the school district with treatment resistant students, Speech/Language Pathologists (SLP) are looking for something in addition to traditional therapy to increase rate of articulation skill attainment of their students.

Enter Speech Buddies®
Study Design:

1. Pre Test (using set sample of words)
   a. no glamour: articulation LinguiSystems

2. Therapy (with only Speech Buddies®) at least 8 sessions
   a. Probes completed after every 2 sessions
   b. Pre/Post test words not used during therapy

3. Post Test (using set sample of words)
   a. no glamour: Articulation LinguiSystems
Is the difference between production accuracy significant?

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Mean</th>
<th>St Dev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>20</td>
<td>25.9</td>
<td>22.7825</td>
<td>5.094</td>
</tr>
<tr>
<td>Sample 2</td>
<td>20</td>
<td>79</td>
<td>22.5878</td>
<td>5.051</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean 1-Mean 2</th>
<th>t</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-50.1</td>
<td>-6.98</td>
<td>38</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

There is a very small probability of this result occurring by chance. There is strong evidence using Speech Buddies® as an intervention method improves marks.
Outcomes:

- **Caseload:** children with articulation disorders may be dismissed from speech at a quicker rate = smaller caseloads
- **Student Confidence:** students may not have to spend entire elementary school educational experience receiving speech therapy
- **Further research topics:** Would the breakdown of phonemes, specifically /r/ show greater improvement, longitudinal studies, comparative studies (newly admitted versus chronic speech students)
SLP Quotes:

- “Kinder student is very slushy and requires prompts for correct production but I hadn’t been able to elicit prior to implementing SB into therapy. Now he is able to produce the /s/ in words and phrases”
- “X has been working on the /ch/ for over 3 years without significant progress and now, after Speech Buddies, he can produce the sounds at the word level”
- “X is on his way to producing his sound in sentence and conversation”
- “Major improvement at the word level on the accuracy of /s/ production. Student made comment she felt it really helped her remember placement for correct production.”
- “X was having difficulty with this /sh/ and since using the Speech Buddies he is now producing it independently in words and with a verbal prompt in sentences.”
- “Speech Buddies elicited increased production of the prevocalic /r/. X is producing it independently in words.”
- “X has been working on /r/ over 3 years, he is now producing /r/ with 80% accuracy.”
- “X was more engaged and willing to try to correct the /r/ phoneme production because she had a “cool” tool to use.”
Disclaimer:

Justina Heintz, MS, CCC-SLP has indicated she has no relevant financial relationships to disclose.