Phonological Errors in the Speech of Francophone Children

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Acknowledgements

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Sander, E. (1972). Do we know when speech sounds are learned?, 37, 55-63. Journal of Speech and Hearing Disorders, 37, 55-63.

90% of the children achieve customary production

50% of the children achieve customary production

Sander, E. (1972). Do we know when speech sounds are learned?, 37, 55-63. Journal of Speech and Hearing Disorders, 37, 55-63.
New Segment Norms for Québec French

- Casse-tête d’évaluation de la phonologie (Auger, 1994)
- 40 target words that represented all possible initial, medial, and final consonants of Québécois French
- 42.5% 1-syllable; 50% 2-syllable; 7.5% 3-syllable

Mastery prior to 36 mo:
- /p, t, m, n, f, z, η/

Mastery between 36 and 53 mo:
- /b, d, k, ɡ, v, l, w, ū, ū/ (Auger, 1994)

Mastery after 53 mo (but customary production before 53 mo):
- /s, ʃ, ʒ, j/

Pre-Treatment and Post-Treatment Speech Production Accuracy (TFP; 54 items)

<table>
<thead>
<tr>
<th>Word</th>
<th>1 syllable</th>
<th>2 syllables</th>
<th>3 syllables</th>
<th>4 syllables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clown</td>
<td>13%</td>
<td>42%</td>
<td>34%</td>
<td>9%</td>
</tr>
<tr>
<td>Chapeau</td>
<td>7%</td>
<td>33%</td>
<td>41%</td>
<td>15%</td>
</tr>
<tr>
<td>Manger</td>
<td>8%</td>
<td>28%</td>
<td>41%</td>
<td>9%</td>
</tr>
</tbody>
</table>

CV Structures

Test de Dépistage Francophone de Phonologie

French

<table>
<thead>
<tr>
<th>Word</th>
<th>weak</th>
<th>strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Château</td>
<td>s</td>
<td>t</td>
</tr>
<tr>
<td>Cochon</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>Chapeau</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>Araignée</td>
<td>s</td>
<td>s</td>
</tr>
</tbody>
</table>
CVC Structures

\[
\begin{align*}
\sigma & \quad A \quad R \quad N \quad C \\
& \quad n \quad i \quad s \quad v \quad g
\end{align*}
\]

Gn Structure (Glide in the Nucleus)

\[
\begin{align*}
\sigma & \quad A \quad R \quad N \\
& \quad d \quad w \quad a
\end{align*}
\]

Ab Structure (Attaque Branchante)

\[
\begin{align*}
\sigma & \quad A \quad R \quad N \quad C \\
& \quad k \quad l \quad u \quad n
\end{align*}
\]

-V.V-Structure (word internal empty onset)

\[
\begin{align*}
\sigma & \quad A \quad R \\
\sigma & \quad A \quad R \\
& \quad 3 \quad e \quad à
\end{align*}
\]
The items 'carte', 'table' and 'spectacle' are sampled on the TFP but not on the TDFP.
Consonant Accuracy by Syllable Stress

Impact of Syllable Stress: /ʒ/ (n = 61)

Impact of Word Length and Stress

Cluster Accuracy by Children w/ DPD

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Pre- and Post-Treatment Production of Clusters by Children with DPD (n = 21)

Segment Accuracy vs. Syllable Structure Errors

Participant 2109

<table>
<thead>
<tr>
<th>Target</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ʃapo/</td>
<td>[ʃapo]</td>
</tr>
<tr>
<td>/kaʁt/</td>
<td>[kaʁt]</td>
</tr>
<tr>
<td>/ʁaptise/</td>
<td>[ʁaptise]</td>
</tr>
<tr>
<td>/ɛliɡɔʁteʁ/</td>
<td>[ɛliɡɔʁteʁ]</td>
</tr>
</tbody>
</table>

Coda Deletions (n = 24)

<table>
<thead>
<tr>
<th>Coda Deletions</th>
<th>Deletion</th>
<th>Substitution</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>/elɪɡɔʁteʁ/</td>
<td>[elɪɡɔʁteʁ]</td>
<td>[elɪɡɔʁteʁ]</td>
<td>/elɪɡɔʁteʁ/</td>
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</table>
French vs English Comparison of Speech Error Types

Conclusions

- French is not English
- Important to consider prosodic structure when describing segment acquisition
- Phonological development in French children is not complete by age 53 months
- Developmental Phonological Disorder in French is characterized by errors at the prosodic level of the phonological hierarchy that may reflect encoding difficulties
- More controlled study is required to fully understand the impact of syllable structure, word length and syllable stress on the children’s segment errors