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Phonological Productions of Spanish-speaking Children: Case Examples and Recommendations

Raul F. Prezas, PhD, CCC-SLP

Moderated by:
Amy Hansen, MA, CCC-SLP, Managing Editor, SpeechPathology.com

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Phonological Productions of Spanish-Speaking Children: Case Examples and Recommendations

Raul F. Prezas, PhD, CCC-SLP
Associate Professor
Stephen F. Austin State University
prezasrf@sfasu.edu
Learning Outcomes

After this course, participants will be able to:

- List at least three commonly occurring phonological deviations in the speech productions of Spanish-speaking children with highly unintelligible speech.
- Identify at least three critical factors for conducting an evidence-based phonological assessment of Spanish-Speaking Children.
- Describe five important considerations for choosing Spanish target words for intervention.

Disclosures

- Financial: Honorarium from Continued for presentation.
- Non-Financial: ASHA Member
Bilingual Spanish-English Children...

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Speech and Language Concerns?
(Goldstein, 2004; Prezas, 2014)

- Case history and preliminary information
  - Family Concerns
  - Dialect(s)/Language use (e.g., home)
  - Proficiency and
  - Age
  - Program – (English immersion, dual-language)

- Assessment of skills in both languages
  - Support personnel, if needed (e.g., interpreters)
  - Scores low in one language or both?
Speech Sound Evaluation
(Prezas & Hodson, 2007; Prezas, 2015)

- Evaluation of Hearing
- Oral mechanism screening
- Child’s phonological strengths and weaknesses
  - Severity level (i.e., mild, moderate, severe, profound)
  - Percentage of intelligible/understandable words
  - Stimulability information
- Language assessment (expressive and receptive)
- Metaphonological assessment
- Direction for intervention

Assessment

- Word Position (initial, medial, final)
- SODA [substitutions, omissions, distortions, additions]

- Testing
  - Screening vs. Comprehensive Evaluation
  - Eliciting Speech Sample
    - Tests (phoneme-oriented vs. pattern/rule-oriented)
    - Conversational Speech Sample
    - Sentence or word imitation (better for severe/profound)
“Red Flags”  
(Prezas, 2015)

- Initial consonant deletion
- Fronting/backing
- Cluster/sequence reduction
- Liquids/stridency (e.g., /r/)
- Monosyllables
- Both Languages

Dialectal Considerations  
(Goldstein, 2004; Prezas, 2012)

- Most prevalent dialects in US – Mexican & Puerto Rican (consonant differences)
- Children from Mexican descent with adult-like speech vs. other dialects:
  - Sequences with /s/
    - Escuela = /eskwela/ vs. /eˈkwela/ or /e_kwela/
    - Pescado = /peskaðo/ vs. /peˈkaðo/ or /pe_ka_o/
  - Final Consonants (e.g., /s/)
    - Dos = /dos/ vs. /doh/ or /do_/
    - Guantes = /wantes/ vs. /wanteŋ/
  - Liquids (i.e., /l/ and /r/)
    - Verde = /berðeə/ vs. /belðe/
Like the clouds – we have to think “different”

- Different...
  - Backgrounds
  - Languages
  - “Rules” of languages
  - Experiences
  - Opportunities (e.g., print awareness)

- Each dialectal variety of a language is beautiful, warranted, and valid.

**Severity Continuum**

(OMISSIONS/SUBSTITUTIONS/DISORTIONS)

**Profound**
- EXTENSIVE Omissions
- Many Substitutions

**Severe**
- Many Omissions
- EXTENSIVE Substitutions

**Moderate**
- Some Omissions
- Some Substitutions

**Mild**
- Omissions Rare
- Few Substitutions

(Hodson, 2010)
PHONOLOGICAL DEVIATIONS:
OMISSIONS*

- **Syllables**
  - Reductions to Monosyllables /
    negro/ → [ne_]
  - Weak Syllable Deletions /
    kefara/ → [_ta]a

- **Singleton Consonants**
  - Postvocalic [word-final] /
    /apis/ → [api_]
  - Intervocalic [word-medial] /
    /apis/ → [i_is]
  - Prevocalic [word-initial] /
    /apis/ → [i apis]

- **Consonant Sequences/Clusters**
  - Cluster Reductions /
    /fikle/ → [fi_kle]
  - Sequence Reduction /
    /eskwela/ → [e_weja]
  - Deletions (+syllable del) /
    /eskwela/ → [_eja]

No “consistent” omissions (disordered) by age 4 (generalization – OK)

*Note: Example productions from children with Mexican dialect

MAJOR SUBSTITUTIONS

- **Stopping**
  leaf → [dip]

- **Fronting** [posterior→anterior]
  gum → [dAm]

- **Backing** [anterior→posterior]
  tea → [ki]

- **Gliding** [substitution of /w/ or /l/]
  rock → [wak]

- **Liquid “Vowelization”**
  zipper → [zipu]

- **Vowel Neutralization**
  yellow → [jAle]
### MAJOR ASSIMILATIONS (Examples)

- **Labial**  
  [regressive & progressive]  
  `spoon` → `[pum]`

- **Nasal**  
  `thumb` → `[nAm]`

- **Velar**  
  `duck` → `[gAk]`

- **Alveolar**  
  `cat` → `[taet]`

### SYLLABLE-STRUCTURE/CONTEXT-RELATED

- **Metathesis**  
  `mask` → `[maeks]`

- **Migration**  
  `smoke` → `[mouks]`

- **Reduplication**  
  `basket` → `[baebae]`

- **Epenthesis**  
  `black` → `[bəlaek]`
Examples of English Speech Productions by Native Spanish Speakers

Disorder or difference? – Take a moment to think about it

<table>
<thead>
<tr>
<th>Word</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flower</td>
<td>“fuaver”</td>
</tr>
<tr>
<td>Screwdriver</td>
<td>“eksuvraber”</td>
</tr>
<tr>
<td>Sleeping</td>
<td>“Seeipi”</td>
</tr>
<tr>
<td>Mask</td>
<td>“maks”</td>
</tr>
<tr>
<td>Clouds</td>
<td>“kaus”</td>
</tr>
<tr>
<td>Chair</td>
<td>“share”</td>
</tr>
</tbody>
</table>

Difficult to make that decision without knowledge of native language?

Transcription Practice for Spanish!

- Easier than you think!
- Pure vowels in Spanish
- Listening for consonant sounds
- Practice from Spanish sample
- Transcribing substitutions and omissions
  - Write word phonetically
  - Substitutions above phoneme; omissions – cross out phoneme
Transcribing for children with highly unintelligible speech

- Word Level
- Context is so important!
- Write out correct phonetic version
- Cross out omissions
- Write substitutions above
- Easier to see phonological deviations!

Let’s Practice!

- Listen to Example
- Transcribe
- Analyze phonological deviations
- Case Example:
  - 5-year-old child
  - Spanish-speaker
Sample 1: “Tree”

- árbol
Sample 2: “Stove”

- estufa
Sample 3: “Flower”

- flor

13. flor
Sample 4: “Guitar”

- guitarra
Sample 5: “Plate”

- plato
Sample 6: “Train”

- tren
Sample 7: “Cold”

- frío
Sample 8: “Four”

- cuatro
Sample 9: “White”

- blanco
Sample 10: “Door”

- puerta
**PHONOLOGICAL PATTERN APPROACH UNDERLYING CONCEPTS**

1. Phonological Acquisition Gradual [Ingram]
2. Role of Listening [Van Riper]
3. Association of Kinesthetic & Auditory Sensations [eventual self-monitoring] [Fairbanks]
4. Phonetic Environment of Words [Kent]
5. Generalization [McReynolds & Bennett]
6. “Problem of the Match” [Hunt]
7. Active Involvement/Participation (e.g., making it fun; karaoke!)

* [Hodson & Paden, 1991]

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**GROUP THERAPY – ALL INVOLVED!**

- Group children based on severity
- Target sounds based on hierarchical level of child:
  - Isolation
  - Syllables
  - Phrases
  - Sentences
  - Conversation
SELECTING OPTIMAL PRODUCTION-PRACTICE WORDS

- Monosyllabic Words [Real]
- Facilitative Phonetic Environment (Kent)
- Words in Child’s Lexicon (e.g., “Core Vocabulary” Dodd)

Choosing the right target words…

- First - choose the appropriate sound.
- Severity? (Mild, Moderate, Severe, Profound)
- Then, consider sounds that will increase intelligibility quickly and efficiently
- Shared sounds first (bilingual approach)
- Consider Zone of Proximal Development
- Choose right amount of complexity but still stimulating unstimulable sound when possible.
“Syllableness”

- Think about some words that you would target for “syllableness”
  - Child doesn’t have to correctly say all sounds
  - Correct number of syllables

- What would these production-practice words look like?
  - 2-syllable word combinations for Spanish
  - Vowel sequences (e.g., [a-a] - /kasa/, /mapa/; [o-o] - /oso/, /foko/)
  - 3-syllable/word combinations (e.g., /kamisa/)

Singleton Consonants

- What are some singleton consonants you might target?
  - CV – word-initial /p,b,m,w/ if lacking/omitted
  - VC – final /n/ if lacking (to facilitate final sounds)

- What would these production-practice words look like?
  - pan, Pa, pato, pala
  - Ma, mono, mu (cow call), mi
  - bota, boca, boa (snake), beso
Anterior/Posterior Contrasts

- When stimulable
  - Velars (fronting) – word initial /k/ and /g/
  - Alveolars (backing) – word initial /t/ and /d/

- What would these production-practice words look like?
  - Cuna, coche, carna, Café
  - Gorra, Goma, Gol, gallo
  - Te’, Taza, Tu’, tos
  - Dos, Di’a, Da, dama

/s/ Blends (clusters/sequences)

- Word-initial (i.e., /esp/, /est/, /esk/)*
  - Short, two syllable when possible
  - (e.g., ésto; ésta; esquí)
- *Do not target if substitution/omission of /s/ is acceptable in child’s Spanish dialect
  - Substitute /s/ clusters in English for bilingual speakers of other dialects of Spanish
  - Also may substitute weak syllable deletion here using sequences listed (e.g., espero; escoba)

- What would these production-practice words look like?
  - esto, estos, estas
  - espina, espero, espada, eski
Liquids (even if not stimulable)

- Children with severe/profound SSD become persistent SSD! Therefore, stimulate liquids.
- Word-initial /l/ [preceded by week of tongue-tip clicking]
- Flap (tapped) /ɾ/ (dependent on dialect)
  - [e.g., Puerto Rican dialect - /l/ substituted for /ɾ/ in coda position]
- /l/ clusters and tapped /ɾ/ clusters
  - Do not blend initially
  - Only for children who already produce singletons
  - Word-initial /pl, bl, kl, pr, tr, kr/ if lacking

Liquids

- What would these production-practice words look like?

- Spanish Trilled “r”: ri’o, rata, rana, rey
- Spanish medial “r”: pera, aire, cara, hora
- Spanish /l/: leon, luna, lago, la
General Recommendations

- Use slight amplification (e.g., amplifier)
- Goal is “consistent” accuracy each time
  - Choose target words carefully
    - Elicit a correct response (Remember – as close to 100%)
    - Real words that are short in length
    - Find child’s “level” for target (hierarchy)
    - Use cues/assists/models as needed to reach goal
- Avoid selecting words containing consonant at same place of articulation as error:
  - English: Dog (/d/ for /g/)
  - Spanish: Gato (/g/ for /t/)

Summary

- It is important to understand Bilingual children with highly unintelligible speech and their individual needs
- Determine the phonological strengths and weaknesses in BOTH languages
- Choose a phonological intervention approach that is specific to the needs of each child.
- Consider target words carefully to increase intelligibility
- Find the right “level” of complexity that will align with Vgotsky’s Zone of Proximal Development
Selected References