**Efficacy of a Phonetic-Based Approach**

**Case Study 1**

**Subject**
- 4 1/2 year old male
- Speech usually intelligible with contextual cues because of vowel accuracy, normal prosody, and complementary gestures and facial expressions
- Complete vowel/diphthong inventory
- Verbal language used for communication
- Comprehension adequate for age range

**Challenges**
- Limited skill in consonant production
- Diagnosis of childhood apraxia of speech
- Consonant inventory: /b/ (I), /f/ (I), /h/ (I), /l/ (I), /m/ (I), /n/ (I), /p/ (I), /s/ (I), /t/ (I), /v/ (I), /w/ (I), /z/ (I), /th/ (I), /n/ (I), /l/ (I), /r/ (I), /s/ (I), /t/ (I)
- Syntactic analysis not possible because of limited consonant inventory
- Speech usually intelligible with contextual cues because of vowel accuracy, normal prosody, and complementary gestures and facial expressions

**Treatment Program**

**Objective**
Production of /t/ (I), /n/ (I), /d/ (I), /s/ (I), and /z/ (I) at sound, syllable and word level

**Structure of the Approach**
- Use of the Phonetic-Based Approach
- In addition, because all targeted sounds were challenging, /th/ (I) and /n/ (I) were practiced at the word and carrier phrase levels for short periods during each session to provide opportunities for “easy success.”

**Parental Input and Informed Treatment Decisions**

Parents demonstrated a voiced non-speech sound the child had produced with his tongue sticking out during vocal play with his 1-year-old sister: because of the tongue control that the behavior demonstrated, the tongue /n/ sound was selected to begin shaping production of /n/ and /d/ and later /s/ with positive outcomes.

**Learning Challenges and Effective Strategies**

- Novel air direction during production of /p/ (I), /b/ (I), and /m/ (I), and resistance to inclusion of the nasal sounds because of nasal defensiveness

**Strategy**
Within four sessions, the child was receptive to the SLP’s use of two felt finger-puppets (called “our hug-nose friends”) to occlude the nares to train oral direction of the air stream.

- Inability to achieve tongue placement for /t/ and /d/ (I)

**Strategy**
Work began with a gross approximation of the sounds while sticking out the tongue; the tongue was then retracted in small increments over several sessions to achieve placement and control sound production.

- Inability to achieve appropriate control of the air stream and tongue placement for /s/ (I)

**Strategy**
Work began with an approximation of the sound while sticking the tongue out and then achieving sound production. A chip was removed when the SLP needed to remind him explicitly of the tongue movement.

- Difficulty maintaining during challenging speech tasks

**Strategy**
In addition to rotating between more and less challenging speech targets, the child was periodically blocked on a single sound or sound cluster to maintain focus. Later, two sounds were awarded for correct production, elicited self-corrected, and self-sustained rehearsal. Each designated number of /s/ received a small reward that his parents delivered.

**Treatments and Outcomes**

- Targeted sounds that were successfully evoked (i.e., /th/ (I), /n/ (I), /l/ (I), /d/ (I), /s/ (I), and /z/ (I)) were produced; however, deletions were sometimes replaced with stop substitutions.
- Non-targeted sounds (i.e., /f/ (I), /v/ (I), /w/ (I), /r/ (I), /l/ (I), /s/ (I), /t/ (I), /n/ (I)) were not produced; however, deletions were sometimes replaced with stop substitutions.

**References**


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