Remediating a Frontal Lisp in 2 ½ Hours? An RTI Approach

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Abstract

Purpose: A study was undertaken to determine the efficiency of the SATPAC Articulation/Phonology software program when used with students who have the frontal lisp for the /s,z/ sounds.

Method: Twenty students identified for treatment were evaluated using an /s/ phrase list and a spontaneous speech sample. One group of 10 students (Group 1) was seen for 15 weeks. Therapy sessions were 10 minutes once a week in individual sessions. The other 10 students (Group 2) did not begin therapy until the first group finished. After the first group was finished, all 20 students were reevaluated using an /s/ phrase list and a spontaneous speech sample. The second group then began therapy following the same procedure as the first group.

Results: After the first 15 weeks were completed, Group 1 improved at the phrase level and in spontaneous speech samples ($p < .001$) with no significant change in Group 2. When Group 2 received treatment, results were similar to the first group ($p < .001$).

Clinical Implications: The SATPAC Program was an efficient method of improving /s,z/ production in all students and in remediating the frontal lisp in approximately half the students with minimal therapy time devoted to each student (M=140 minutes).

The Six Foundational Elements of the SATPAC Program:
Coarticulation-sounds preceding and following the target sound affect production. SATPAC always has the target sound embedded in the nonsense word to simulate coarticulation in conversational speech.
Natural Prosody-using normal sound expression. SATPAC uses this in practice to simulate normal conversational inflection and to take the emphasis off the target sound.
Conversational Rate-around 140 beats per minute. Practice occurs at this rate simulating slow conversational speech.
Facilitating Contexts-certain sounds facilitate correct production of the target. BEETSEEK is often used due to the facilitating nature of the B which requires no tongue positioning; the EET which when lengthened in duration leads to correct /s/ production followed by the EE keeping the tongue in the lingua-alveolar position followed by the /k/ where the tongue anticipates moving back making it more difficult to lisp.
Nonsense Words- They eliminate the interference of the habitual error sound associated with the real word
Response Rate- A high rate of utterances provide the opportunity for both the clinician's external monitoring as well as the client's automatization of the response. It is not unusual to get 200 correct responses in the Transfer/Generalization Phase of the SATPAC Program in a 10 minute session.

Procedure: Students began the SATPAC Program in the Intratherapy Generalization Phase which is a practice phase. Eight lists of CVCCVC nonsense words were presented with each list systematically moving further and further away from the facilitating context word until the /s/ sound was produced in every phonetic context. List 9 is a contrastive stress sentence list using random CVCCVC nonsense words presented from the previous eight lists. Sounds that interfered with the target sound /s/ (e.g., th, <u>th</u>) or were not in the students' repertoire (e.g., /r/) were eliminated from the lists.

Meeting the 80% criteria, students moved into the Transfer Phase (Extratherapy Generalization). Because self-monitoring outside of therapy is a critical component of generalization (Koegel, Koegel, & Ingham, 1986; Koegel, Koegel, Voy, & Ingham, 1988), students were given a tally counter (Nelson and Hayes, 1981) and a reinforcement homework schedule. The self-monitoring began with the SATPAC Phrases for /s/. When the students reached 75% accuracy with at least a slow conversational rate, they proceeded to SATPAC Short Sentences for /s/ and finally SATPAC Sentences for /s/.

Generalization activities following the SATPAC Program involved reading and answering questions from classroom reading texts for the fluent readers or conversations about what was happening in their lives following a constructivist model (Ertmer & Ertmer, 1998). I kept a tally counter in my room that the students used in all these activities. For some students, when it became clear that they were monitoring accurately but were slowing down as a result of the monitoring, I monitored them with the tally counter having them speak at a conversational rate.

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