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Phonological Approaches to Developing Correct Sound Production

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Phonological processes are the patterns that young children use to simplify adult speech. All children use these processes while their speech and language skills are developing. For example, very young children (ages 1 to 3) may say "wa wa" for "water" or "tat" for "cat." Other children may leave out the final sound in words (for example, "pi" for "pig" or "ha" for "hat"). Up to age 3, these are appropriate productions. As children mature, so does their speech, and they stop using these patterns. By age 5, most children stop using phonological processes, and their speech sounds more like that of the adults around them.

Some children continue to use these processes beyond an appropriate age. As their vocabulary increases, their speech may become hard to understand. *Phonological approaches* provide a systematic and efficient method for removing error patterns in a child's speech. This handout discusses four phonological approaches—Minimal Pairs, Multiple Oppositions, Maximal Oppositions, and Treatment of the Empty Set. All of these approaches are evidenced-based and may significantly reduce the time that children spend in speech therapy.

Four Types of Phonological Approaches:

1. Minimal Pairs

Minimal pairs are two words that differ in pronunciation by one sound or feature. This one difference changes the meaning of the word. For example, "bee" and "beep" differ by one sound—the final /p/. Voicing could also change the meaning of the word. For example, "got" and "caught" differ by one feature—voicing of the initial sound.

A minimal pair consists of the word as the child usually says it and the word that the child needs to say correctly. In the example "bee" and "beep," the child correctly says "bee" but needs to learn to say "beep."

When a child produces two different words the same (i.e. "bee" for both "bee" and "beep"), the child's message can be misunderstood. Minimal pairs can help children become aware that their speech is not being understood the way they want it to be. This will incentivize the child to correctly produce the difference between the two words.

2. Multiple Oppositions

The multiple oppositions approach is similar to minimal pairs but the error word is contrasted with 2-4 words containing the sounds being learned. Children who produce one sound for multiple sounds may benefit from multiple oppositions. This method teaches the child several new sounds at one time. For example, if a child produces "m" for several sounds, multiple oppositions would contrast "moo" with "goo, two, shoe, boo."

3. Maximal Oppositions

While the minimal pairs approach uses words that different by one sound or feature, the maximal oppositions approach uses words that differ in more than one way, such as how the sound is made or which parts of the mouth are used. The child learns a new sound that is maximally different from a sound they already can say. For example, "shook" and "book" are maximally different because:

Sh
B

- • /sh/ is voiceless, /b/ is voiced

- • /sh/ is an alveolar sound (produced by raising the tip of the tongue to the alveolar ridge behind the top front teeth), /b/ is a bilabial sound (produced with both lips)
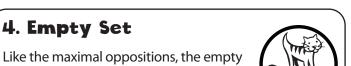
- • /sh/ is a fricative (produced by allowing air to escape the mouth), /b/ is a stop (produced by stopping air before releasing it)

4. Empty Set

Like the maximal oppositions, the empty set approach uses sounds that differ in manner of production, place of production, and voicing. The empty set approach, however, uses two sounds that the child cannot say. For example, if the child cannot produce /m/ or /k/, the words "mat" and "cat" can be used because /m/ and /k/ are maximally different. Using two inaccurate sounds has been shown to lead to greater change in the child's articulation.

Following is a list of activities that you can do at home to encourage your children to play with sounds and words.

- • Create or collect a deck of cards for the game "Go Fish" that have pairs of identical words/pictures and minimal contrast words/pictures. For example, a pair would be "pie" (or a picture of a pie) and "bye" (or a picture of someone waving "bye"). The object of the game is to have the child make pairs for the cards in his hand with identical pictures by asking the other player, "Do you have (a 'pie' or someone waving 'bye')?"

- • Write open-ended sentences that include sounds the child is familiar with, but target sounds the child is unfamiliar with or has difficulty producing. Use picture cards if necessary. For example, if the targeted phonological process is prevocalic voicing, one sentence may be "The pig is _____ (big)."

- • Gather a bunch of pictures that includes target sounds and sounds the child is familiar with. Have the child find a card, name it, find its matching pair, and name that card, too.

Resources:

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