

Articulation vs. Phonology Van Riper vs. Hodson? What's a Busy Therapist To Do?

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Sure, you've heard it all in graduate school, but what IS the difference between an articulation disorder and a phonology disorder? I know you knew it "once upon a time," but what do you do when you're confronted with a child who has unintelligible speech? Do you treat it as an articulation or a phonology disorder? Hopefully, the following information will help you decide.

Let's get it out of the way! It's definition time...

What is the difference between articulation and phonology? Webster's Dictionary gives one definition for *articulate* as, "to produce, by a speech sound, by the movement of the organs of speech." Articulation refers to the **movement** of the speech mechanisms (tongue, lips, larynx, teeth, hard palate, velum [so air escapes through nose only when appropriate], jaw, nose, and mouth) to produce speech. If any of these mechanisms are not working properly, weak, damaged, malformed, or out of sync with the rest, then a speech disorder may be classified as an articulation disorder.

Articulation is the correct movement of the speech producers to make intelligible speech.

Phonology, on the other hand, encompasses the rules of the sound system of language. These rules over-see speech sounds, including the production and combination of these sounds into intelligible speech. What happens if one or more of these rules is broken? It may result in fronting, which happens when a sound (like /g/) that is produced in the back of the mouth "breaks the rules" moves to the front, and comes out /d/. Or when a sound that only lets a little air escape when following the rules (like /s/) acts up and stops, becoming /t/ (stopping). How about sounds that want to be so much like the sounds around them, that they become them (assimilation – **Cat** becomes **Tat**)?

Well, here's the good news. Children with normally developing speech skills generally break these rules (patterns) when speech is developing. However, it's when one or more of these persist that a phonological disorder develops. Children with disorders of phonology have difficulty adhering to the rules of speech, but they don't necessarily have articulation disorders. Their speech mechanisms may be moving properly, but just not following the rules of speech production. This could make speech virtually unintelligible and negatively impact the child's academic and social success.

Phonology deals with the rules (patterns) of the sound system of language.

But how do I tell the difference and how do I treat the child?

The first part of the process is to examine the child's speech. There are a variety of ways to do this. After referring a child for a speech and language evaluation, many therapists opt for standardized assessments using picture plates. These are fine, however, but be sure not to count these as the "end all" of the assessment. If time permits, engage the child in conversation and record his/her speech on a quality tape recorder. Then, analyze the recording and obtain a speech sample of at least one hundred words.

After the articulation testing is complete, conduct an oral examination. Sometimes this is the most difficult part of the assessment. Really, who likes the taste of gloves and/or tongue depressors poking in his/her mouth? But, be sure to do this correctly and thoroughly because it is an important part of the assessment procedure. What do you look for? (The following are presented as general guidelines only.)

- * **Face** – Look for left/right asymmetry. Take note of drooping (flaccidity) of cheeks and/or forehead area. Notice the overall size and shape of the head, width of eyes, and placement of ears.
- * **Tongue** – Note general appearance, such as size, placement at rest, and/or an abundance of scar tissue. Look for abnormal or jerky involuntary movements. Inspect length of frenum (piece of tissue that connects bottom of tongue to floor of mouth). Check range of movement, control, and strength of the tongue.
 - * Using a lollipop or tongue depressor, have the child stick his/her tongue out and push against the lollipop by both protruding the tongue and placing tongue within cheek and pushing outward with lips tightly closed.
 - * Have the child lick his/her lips starting at one corner and going in a circle, stopping at where he/she started. (A good way to do this is to "paint" the child's lips with lollipop and asking him/her to lick it off.)
 - * Ask the child to try to touch his/her nose with tongue (elevation); then ask him/her to try to touch his/her chin (depression).
 - * Make up a "fun" sentence using the phonemes /p/, /t/, and /k/, and /b/, /d/, and /g/. For example, "The pussy cat talks with a purr," or "The big dog chewed on his good bone." Note the accuracy and contact strength of the underlined sounds.
 - * Assess rate and accuracy of the tongue's movement by having the child repeat, "puh-tuh-kuh" as quickly as possible (Diadochokinetic Rate).
 - * Take particular note of a child who cannot repeat sounds or motor commands upon request, but can produce the same sounds spontaneously (apraxia).
 - * [Note that the previous suggestions are general guidelines only; an examination of the tongue's strength and/or movement should be tailored to meet individual needs.]
- * **Teeth** – Inspect the teeth for overall hygiene and health, placement, and number in mouth.

- * **Palate** – Note the palatal structures, noting any abnormalities including clefts, color of tissue (possible indicator of submucous cleft), and velum. Have the child “blow” - another possible indicator of a submucous cleft (short, weak breath support).
- * **Throat** – Note the absence/presence of a gag reflex, the general shape of the throat and uvula, and any abnormalities of color and texture.
- * **Lips** – Inspect lips at rest for asymmetry and/or flaccidity.

What do I do if everything is “working?”

If all articulators appear intact, undamaged, and working properly, the next step is to administer a phonological processes analysis. First, look over the initial articulation assessment to get a preliminary idea of the child’s speech production; keep in mind that the child may have scored within “normal” range on this test due to the targeted phonemes. (For example, if a child had the phonological process, “final consonant deletion,” he/she would only be scored against on phonemes in the final position.) Then, administer the analysis of the child’s phonological processes, using a number of available assessments on the market.

What is next?

Once you determine whether a child has an articulation or phonology disorder, then you may choose the most appropriate therapy approach for that child. Remember, there IS a difference between an articulation and phonology disorder; your knowledge and choice of treatment plans are essential for success in therapy, the classroom, and at home. Good luck!

Creaghead, N., Newman, P., & Secord, W. (1989). *Assessment and remediation of articulatory and phonological disorders* (2nd ed.). New York: Macmillan.

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