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## Cued speech: Not just for the deaf anymore

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## Cued speech: Not just for the deaf anymore

### Abstract

Originally, Dr. Cornett designed Cued Speech for the Deaf to serve as a supplement to lipreading in order to allow the Deaf access to spoken English in a purely visual form. However, because of its integration of multiple senses and brain areas—sound, sight, kinesthesia, and motor movement—Cued Speech is particularly well suited to help many students with special needs regardless of their hearing status. This article will provide an overview of what Cued Speech is and how it can be used by speech-language pathologists and other professionals to aid a variety of students with special needs who may or may not have a hearing impairment.

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CUED SPEECH: NOT JUST FOR THE DEAF ANYMORE

By

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# **Cued Speech: Not Just for the Deaf Anymore**

## **Abstract**

*Originally, Dr. Cornett designed Cued Speech for the Deaf to serve as a supplement to lipreading in order to allow the Deaf access to spoken English in a purely visual form. However, because of its integration of multiple senses and brain areas—sound, sight, kinesthesia, and motor movement—Cued Speech is particularly well suited to help many students with special needs regardless of their hearing status. This article will provide an overview of what Cued Speech is and how it can be used by speech-language pathologists and other professionals to aid a variety of students with special needs who may or may not have a hearing impairment.*

## **WHAT IS CUED SPEECH?**

Cued Speech was developed by Dr. Orin Cornett in 1965. He saw that, on average, Deaf high school students read at a 3<sup>rd</sup> grade reading level. He thought that this occurs because Deaf students, who learn American Sign Language (ASL) as their first language, learn English as a second language through writing while they are in school. Dr. Cornett wanted to create a system that would allow complete access to the English language in a purely visual form so that people who are deaf could more easily access spoken English and therefore written English.

Only about 30% of a spoken message is visible on the lips, which is what makes lipreading so difficult. For example, the words “man,” “pan,” and “ban” will all look the same in front of a mirror because they are all made with the same lip movements. They can be discriminated only by the other features of sound such as voicing and resonance. In Cued Speech, the hand makes up for these unseen features of each phoneme, or speech sound. Cued Speech consists of 8 handshapes for the consonants and 4 positions around the face for the vowels (see appendix for cue chart) in addition to the visual information

provided by the mouth and lips. Catherine Lykos (1971) summarizes the system well by stating,

“The hand in combination with the lips permits precise identification of all sounds. The hand provides only a visual sound ‘sorter.’ Alone, these ‘cues’ are meaningless; alone, the lips are indefinite. Together, they offer a clear form of communication which permits the hearing impaired person to enter the unmanipulated verbal environment of the hearing person” (p. 1).

For example, while someone who has normal hearing discriminates the sound /p/ from /b/ by means of its voicing, a cue reader distinguishes /p/ from /b/ by the cue. The /p/ cue would consist of handshape 1 (only the index finger extended) and the lips together for the bilabial sound. Whereas, the /b/ cue would also have the lips together, but with handshape 4 (all four fingers extended with the thumb closed on the palm of the hand) allowing the cue reader to tell the difference between the two sounds. Then, just as spoken language is co-articulated, consonant sounds are cued with the following vowel sound. So the word “beep” or /bip/ would be cued as follows: handshape 4 (for the /b/) at the side of the lips (where the vowel sounds ee or /i/ and ur or schwa are cued) and then handshape 1 (for /p/) at the side of the face (for the consonant alone).

## **WHY USE CUED SPEECH?**

### **For Students Who Are Deaf**

Compared to other visual systems—for example, ASL or Signed Exact English, which can take years to master—Cued Speech is relatively simple to learn. Most adults can learn all of the cues with about 20 hours of instruction and can become fairly fluent with continued practice in a few months. Once all of the cues are learned, one can cue

anything that can possibly be uttered through speech including idiomatic phrases, nonsense words, onomatopoeia, and rhyme. It is possible to share all of the nuances of the English language immediately at the moment they are spoken. A deaf child who experiences Cued Speech from a very young age picks up the English language the same way a hearing child would; it does not have to be taught to them. They are ready to read when the time comes because they already have a good knowledge of the language. This is why deaf students who have been exposed to Cued Speech from a young age read at the same levels as their hearing peers.

Cued Speech can be used by itself as an instructional communication method, or it can be used as a language learning tool in addition to either Bilingual-Bicultural (ASL and written English) or Auditory-Oral methods of instruction. In the case of the Bilingual-Bicultural method, Cued Speech can be used when presenting English as a second language through reading and writing. It gives the students additional visual insight into the sounds they are reading in order to help them better understand the English language. As a supplement to the Auditory-Oral method, Cued Speech can help students internalize the English language that they are speaking, and it can help remind students of correct sound production once each sound is developed. However, speech therapy is still required to teach the correct production. In addition, there should always be sufficient time during the day for the student to use only his hearing so that he develops an awareness of and sensitivity to sounds. This is especially true for students with cochlear implants.

## **For Other Students with Special Needs**

Cued Speech is a unique system which brings together sound, sight, kinesthesia, and motor movement. Because of its integration of multiple senses and brain areas, Cued Speech is particularly well suited to help many students with special needs regardless of their hearing status. Some of the following information has been specifically researched and studied, the rest is supported clinical intuition and case studies; however, it is important to mention these theories so that others may begin to research the use of Cued Speech with these populations so that more people can benefit from the use of Cued Speech.

### ***Students with Speech and Language Impairments.***

Speech-Language Pathologist, Carol E. Schilp (1986) used Cued Speech with an 8-year-old boy, named Ben, who after three years of traditional small group articulation therapy, failed to make any significant gains in correcting his misarticulation of the /s/ and /z/ phonemes. Ben showed no other impairments except the misarticulation and was considered above average in intelligence. Because of his intelligence, he was aware of his lisp and the fact that therapy did not seem to be working, which resulted in a lack of motivation. Schilp, therefore, scheduled him for thirty minutes of individual therapy twice a week and began to teach him Cued Speech, thinking that a visual representation of the sounds, along with the auditory stimulation would reinforce accurate production. Because learning a new system kept him highly motivated, Ben quickly made progress. At the end of two months, he had no errors in his spontaneous speech and was discharged from therapy.

Cued Speech allows a student with normal hearing who needs to pay attention to and discriminate between speech sounds to simultaneously hear and see those sounds represented in a distinct visual manner. Also, because Cued Speech requires the student to focus on the mouth, it provides a model for correct speech production—in regards to the movement of lips, teeth, and tongue—for the child to imitate.

For students who need work on sequencing sounds and motoric planning for speech, such as those with developmental apraxia of speech, Cued Speech is helpful. Receptively, the student sees the sequence of sounds as well as hearing it. Expressively, when the student copies the sequence by cueing and saying it himself, the motoric pattern of his hand reinforces the motoric pattern of his articulators, building a neurological pattern in his brain. After learning and using the cues, the motor movements of the hand provide a trigger for the muscles of the face to perform the associated movements (Beck, 2002, p. 5).

For students who stutter or have problems with speech prosody, Cued Speech reinforces normal rate, duration, and rhythm of speech. If students who stutter learn to cue expressively, it could take some of the pressure off the musculature of the face and onto the hands. Therapists can also use Cued Speech to show visually what certain disfluencies “sound” like.

### ***Students with Autism or Other Pervasive Development Disorders (PDD)***

Pamela Beck (n.d.) explains why Cued Speech works for students with PDD. First, these students tend to process better visually than auditorily. Cued Speech allows for these students to perceive and process speech through their sense of vision, which is the ideal modality for them. Cued Speech can even be presented without voice, allowing

those students who are hypersensitive to sound to still receive the same phonemic message without having to listen to it. Second, these students have difficulty relating socially to other people, often have poor eye contact, and have problems noticing and interpreting facial expression. Cued Speech requires the listener to look at the face of the person who is talking, reinforcing this social skill. Additionally, many students with PDD benefit from sensory integration therapy. Cued Speech integrates the senses of sight, sound, and kinesthesia.

### ***Students with Auditory Processing Difficulties***

For students who have difficulty processing information auditorily, Cued Speech is a useful tool. Instead of having to receive speech through the impaired auditory sense, these students can perceive the same exact linguistic message through their visual sense. Also, for students who need more time to process the incoming signal, Cued Speech can be presented at any rate of speech and still show the length and duration of the sounds. For example, Pamela Beck (2002) explains that you can cue and say a long “ahhhhhhhh” or “mooooooo” allowing the student’s brain time to process, recognize, and understand the sounds. As the student’s auditory abilities improve, you will be able to say and cue successively shorter “ahhh” and “mooo” until finally the student can understand speech sounds at a normal rate (p. 3).

### ***Students with Deaf-Blindness***

Developing a way for students who are Deaf-Blind to communicate has been a long-time issue for special educators in the field. One way to communicate is through fingerspelling into the palm of the hand. Another way, the Tadoma method, involves the student placing the student’s hands onto the face and neck of the speaker in order to feel

the movements and vibration of speech. The Tadoma method is similar in results to lipreading—about 30% of the message is understood. Reed et al. (1992) researched ways to improve the performance of the Tadoma method by adding other supplementary tactual displays. They found that someone who was Deaf-Blind could be extremely successful at interpreting speech if the Tadoma method was combined with Cued Speech. For this combination, one hand would be placed like the Tadoma method for reading the lips, and the other hand would follow the shape and placement of the cueing hand.

### ***Students with Physical Disabilities***

Some students may be physically unable to cue near their face or only make some of the handshapes, or not be able to cue at all. In this case, the student can still gain access to the spoken language base by those around him cueing to him. Then, expressively, he can use the Nu-Vue-Cue grid to point—with his hand, head, foot, eye gaze, etc.—to the phoneme on the chart, allowing him to say anything that can be spoken with a simple and inexpensive tool (Beck, 2002, p. 5).

### ***Students with Down Syndrome and Other Developmental Disabilities or Cognitive Impairments***

Students with Down Syndrome and other developmental disabilities have been taught Cued Speech using the student's ability to watch and imitate. Cornett (2001) explains that it takes no more intelligence for a deaf child to learn spoken language through Cued Speech than it does for a hearing child to learn spoken language through hearing, and "it is in our experience that gifted deaf children perform like gifted hearing children, average deaf children like average hearing children, and slow deaf children like slow hearing children" (p. 546). However, he warns that for students whose capacity is at

the barely trainable level, the use of Cued Speech is questionable. If the child is unlikely to learn to read, then the advantage of using Cued Speech is limited; it would probably be more beneficial to the child to use natural gestures and signs, which are more descriptive of what they represent and are therefore easier to learn (pp 546-547).

### ***Students with Attention Deficit Disorder***

Many students who have problems with attention benefit from increased sensory stimulation. Receptively, Cued Speech gives students visual and auditory input; expressively, it gives them visual, auditory, and moto-kinesthetic input. Cued Speech can help them pay attention for longer and regain attention more quickly once it is lost.

### **Cued Speech for Reading and Phonics Development**

Since Dr. Cornett originally designed Cued Speech with deaf student's reading in mind, it is no surprise that Cued Speech can benefit all people for reading. Cued Speech portrays all of the phonemes of the English language during speech through the visual sense. This can help students who have poor phonemic awareness—the awareness of the sounds (phonemes) that make up spoken words. Phonemic Awareness is crucial in learning to read because in order to learn the correspondences between letters and sounds, students must have some understanding of the fact that words are made up of phonemes. Cued Speech emphasizes this fact, and is therefore useful in reading development. Cued Speech has been used with hearing children to help them distinguish the difficult-to-differentiate short vowel sounds and to assist with learning phonograms (two letters grouped together to make one sound). Cued Speech is beneficial to learning because it makes a visual distinction and because of the added motor activity.

## **WHO SHOULD USE CUED SPEECH?**

The uses and benefits of Cued Speech are multiple; therefore, it can be used by many people. Some of the people that should consider using Cued Speech are teachers and families of students who are deaf or hearing impaired, families and teachers of students with other disabilities, speech-language pathologists, audiologists, special education teachers, reading specialists, and regular classroom teachers. Because Cued Speech can be learned fairly quickly and easily by almost anyone and because of its beneficial application to other disabilities, more parents and professionals should consider using Cued Speech with their students, clients, and children.

## **WHY HAVE I NOT HEARD OF CUED SPEECH BEFORE?**

Cued Speech is still relatively new and its use is not yet widespread. During the first 20 years after Cued Speech was developed, there was little professional research (only anecdotal “success stories”) to support its efficacy claims. This problem has remedied by supporting research performed in recent years. As Cornett and Daisy (2001) point out in their book, “It takes time for an innovation in education to catch on. For example, consider the history of Braille, which educators of the blind ignored for 25 years” (p. 375). Slowly, but surely, the news of Cued Speech reaches more families, teachers, and school systems. One can only wonder how many students it will be able to help as its use becomes more widespread.

## **WHERE CAN I LEARN MORE ABOUT CUED SPEECH?**

The National Cued Speech Association is a great place to start learning about Cued Speech. On their website—[www.cuedspeech.org](http://www.cuedspeech.org)—there is plethora of information pertaining to Cued Speech, as well as information for finding other resources. I would

also recommend The Cued Speech Resource Book: For Parents of Deaf Children by Cornett and Daisy (2001) and the rest of the resources listed in the resources section.

### **IMPLICATIONS FOR FUTURE RESEARCH**

Further clinical trials are warranted for the use of Cued Speech with the populations of students with special needs that I have discussed in this paper. The little information that is available looks promising, and the more it can be supported by additional clinical research, the better. Other research could be conducted on the use of Cued Speech with people with cochlear implants and on the efficacy of using Cued Speech as a tool for language learning in combination with other philosophies of hearing impaired education.

### **RESOURCES**

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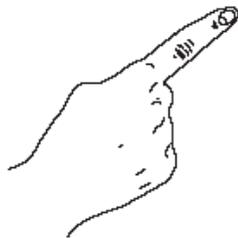
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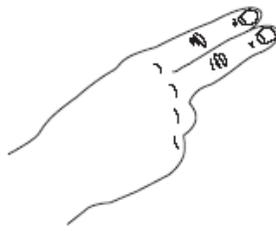
(2<sup>nd</sup> ed.). Bethesda, MD: Woodbine House, Inc.

# APPENDIX

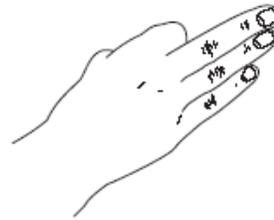
## CUED SPEECH PHONEME FAMILIES



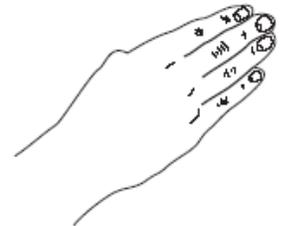
Handshape 1  
/d, p, ʒ/  
**deep treasure**



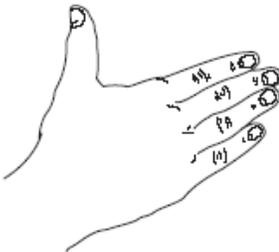
Handshape 2  
/ð, k, v, z/  
**the caves**



Handshape 3  
/s, h, r/  
**sea horse**



Handshape 4  
/m, b, n/  
**white bone**



Handshape 5  
/m, t, f/ & vowel alone  
**my taffy**



Handshape 6  
/w, ʃ, l/  
**wet shell**



Handshape 7  
/θ, dʒ, g/  
**thin jogger**



Handshape 8  
/j, ŋ, tʃ/  
**young child**



Mouth  
/i, ə/  
**leisure**



Chin  
/ɔ, u, ε/  
**tall blue tent**



Throat  
/ʊ, ɪ, æ/  
**Look, big crabs!**



Side  
*consonant alone*



Side Forward  
/ou, a/  
**boat dock**



Side Down  
/ʌ/ or /ə/  
**sun**



Chin to 5 Throat  
/ɔɪ, eɪ/  
**moist snail**



Side to 5 Throat  
/aɪ, aʊ/  
**light house**