

Cued Speech for American English

Visually providing the building blocks needed for communication, language development, and literacy.



/d, p, zh/



/ee, ur/



/k, TH, v, z/



/aw, e, ue/



/h, r, s/



/a, i, oo/



/b, n, wh/



consonant alone



/f, m, t/
vowel alone



1/2" - 3/4" down
/uh/



/l, sh, w/



1" forward
/ah, oe/



/g, j, th/



/ay, oi/



/ch, ng, y/



/ie, ou/

Introduction:

Cued Speech was designed to help eliminate the difficulties of English language acquisition and literacy development in children who are deaf or hard-of-hearing. Results of research show that accurate and consistent cueing with a child can help in the development of language, communication and literacy but why is this so important and how does it happen? This paper addresses the issues behind literacy development, traditional deaf education, and how using Cued Speech makes such a difference in the lives of children.

What Is Literacy?

Literacy is how we define a person's reading and writing abilities. The Workforce Investment Act of 1998 defines literacy as "an individual's ability to read, write, speak in English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society." This definition takes a broader approach to understanding literacy than perceiving it simply as an individual's ability to read, which has long been the traditional concept of literacy.¹

With regard to children and adults who are deaf or hard-of-hearing, literacy is typically measured in terms of grade-level achievement. Studies have shown that the average American adult reads and writes at an eighth-grade level, and the average deaf adult at a fourth-grade level. The most recent data are from 1996, when the Gallaudet Research Institute (GRI) collected raw data from 17- and 18-year-old deaf students who were in school and took the Stanford Achievement Test, 9th edition. The section from the test used for measurement was the reading comprehension multiple-choice subtest of the SAT. The median score corresponded to the 4.0 grade level, which means that only 50 percent of 17 to 18 year old test-takers scored above the typical hearing student at the beginning of 4th grade, and 50 percent scored below that grade.² (Note: This is not an arithmetic average score.)

However, the Institute for Education Sciences (part of the U.S. Department of Education) recently conducted a large-scale literacy assessment compared to international countries. The assessment is based upon a 500-point scale, with the U.S. rating about 271 out of 500. For more information, see the National Center for Education Statistics web site. No research has been done yet to evaluate deaf adults' literacy levels within the redesigned international viewpoint of literacy assessment. The following bulleted items provide an overview of what constitutes their levels of literacy achievement.³

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- The report follows four main literacy levels, which are based on work done by the National Research Council's Committee on Performance Levels for Adult Literacy. All the scores are based on arithmetic average calculations.
 - *Proficient* means that someone can do complex activities such as comparing viewpoints in two editorials or interpreting a table about blood pressure and physical activity.
 - *Intermediate* means that a person can do moderately challenging tasks such as calculating the cost of an order from an office supply catalog or identifying a specific location on a map.
 - *Basic* means a person can perform simple and everyday tasks such as comparing the ticket price of two sporting events or understanding a pamphlet that describes how a person is selected for jury duty.
 - *Below Basic* indicates the lowest levels of performance, such as understanding the directions for signing a form or adding the amounts on a bank deposit slip.

According to Reid Lyon from the National Institutes of Health, the ability to read and write has been linked to phoneme awareness and understanding.⁴ Phonemes are the “building blocks” on which languages are based, and are what we typically think of as “sounds.” When people “sound out” words, they are really processing those words phonemically. When children learn to read and write, they are “mapping” the print form to what they have been hearing since they were born.

Children who are deaf and have hearing parents typically enter school with a language delay as a result of limited access to the native language of the home. Children who are deaf typically struggle with decoding the printed information and mapping it to their poorly internalized phonemic understanding. Therefore, children who are deaf with limited access to the home language also struggle with developing literacy skills.

A Brief History of Deaf Education & Literacy in the United States

The field of deaf education has long been fraught with controversy. The two largest groups of educators focused either on an aural/oral approach or a manual approach. Those who promote aural-oralism teach children who are deaf or hard-of-hearing through the use of residual hearing, speech and speechreading. Those promoting manualism advocate for the use of signed languages (such as American Sign Language) to educate the deaf.

Prior to the 1960s, the majority of children who were deaf or hard-of-hearing were educated in residential and day schools for the deaf. In the 1960s, around the time of the civil rights movement, another movement went largely unnoticed – the push to educate deaf children in the mainstream, alongside their peers who were hearing. Around the same time, people started trying to come up with ways to improve the literacy rate of deaf adults, which hovered around the third- to fourth-grade level (where it remains to this day). In the 1970s, parents began to ask for Cued Speech to be used in schools.

When literacy was first tracked, the education gap between students who are deaf and hearing became an issue. Since then, the debate on how to improve deaf children’s reading and writing skills has been contentious. Some people believe that signs in English word order (manually coded English⁵) provide deaf children access to English. Others feel that teaching American Sign Language (ASL) as a first language

with English as a second language is the way to go. Still other educators of the deaf believe that children with hearing loss can learn via the use of residual hearing and speech. Dr. Cornett studied the literacy issue at Gallaudet University and developed the Cued Speech system. All of these modes of communication are still used today by teachers of the deaf and hard-of-hearing.

The only manual form of communication that is a language in itself is ASL. The manually coded English systems are not languages. The sign systems show English at the word level, not the phonemic level. For example, the sign for *dog* is done by snapping your fingers, as if to call your dog to come. The sign does not reflect the English phonemic structure of *dog* as /d, aw, g/.

In some sign systems, fingerspelling or created signs represent plurals and different verb endings (to indicate future and past tense) in English. In this morphological representation of English, the word *dogs* is expressed by signing *dog*, then fingerspelling “s” (DOG + S). This does not show the phonemes of the word as /d, aw, g, z/. Therefore, a person who is deaf might assume that the “s” in *dogs* is pronounced the same as the /s/ in *cats*, rather than the /z/ sound.

Cued Speech and Literacy

The Cued Speech system visually represents the phonemes that occur in any traditionally spoken word or syllable. We usually think of phonemes as individual sounds or, more meaningfully, as consonants and vowels. Handshapes represent consonant phonemes, and hand placements represent vowel phonemes. Phonemes that look similar on the lips are assigned different handshapes or placements. By combining a handshape with a placement and a corresponding mouth shape, a visually clear, unambiguous representation of the phoneme occurs. It is possible to cue while speaking, though it takes time and practice to increase speed and proficiency in cueing skills. Many say it is akin to learning how to touch type. It is important to note that the production of speech is *not* required to be part of the cued message. Cued languages are clear through vision alone.

Recent research studies have produced some interesting findings. One study showed that deaf cuers make similar spelling mistakes as hearing children; for example, they might write “blue” as “bloo” or “done” as “dun,” which are phonemic representations of those words. However, deaf signers’ spelling mistakes tend to be related to sequencing, such as “bule” instead of “blue” (LaSasso et al., 2003).⁶

Also, deaf signers with weak literacy skills typically struggle with the idea of rhyming and do not understand how words such as *bird* and *word* are rhymes, but *bear* and *hear* are not. So much of their understanding of English is based on their memorization of sight words, not an internalized phonemic awareness of the language. However, deaf cuers typically have the same understanding of rhyming as their hearing peers and can identify rhyme pairs as well as produce spontaneous rhymes (LaSasso & Crain, 2003).⁷

Results of research studies have consistently shown that native deaf cuers with no coexisting learning or information processing disabilities have achieved literacy levels comparable to their hearing peers. Though no formal studies have been done recently to assess deaf adult cuers’ literacy rates, the studies that focus on deaf cueing children (aged 7-16) have shown them to outperform deaf signing and oral peers on several standardized reading and writing tests. Recent fMRI data show that deaf adult cuers decode phonemic information much as hearing adults do. Results are in the publication process.

Native Deaf Cueing Adults

Many cuers have gone on to college and graduate school and are succeeding in the workforce. A sampling of the colleges and universities deaf cuers have attended include Stanford, Brown, Yale, Massachusetts Institute of Technology, Harvard, Georgetown, Columbia (NY), Bryn Mawr, Louisiana State, Rochester Institute of Technology, Gallaudet, University of Maryland, University of North Carolina at Chapel Hill, University of Texas at Dallas, Boston University, California State University at Northridge, New York University, Penn State, Wellesley, and many, many more.

With cueing still very much in its infancy, we are looking forward to seeing where our current cueing adults will go. The Board of the National Cued Speech Association now comprises native deaf cuers who are taking over the reins of passing down cueing to the next generations of deaf children. Deaf cuers are part of the cohort of trained and certified instructors of the Cued Speech system, as well as teaching at the university level. The cueing community has come a long way in the last 40 years and looks forward to the next 40.

Conclusion

Cued Speech is a key to unlocking the code of English (or 60 other spoken languages and dialects) for children to develop language and literacy skills that are needed to participate fully in the world of work and family. The gift of complex language, communication with family members, and the foundation of skills for school and work is a precious one made available by the development of Cued Speech.

Additional Resources

- Paul, P.V. (1998). *Literacy and deafness: The development of reading, writing, and literate thought*. Boston: Allyn & Bacon.
- Schwartz, S. (1996). *Choices in deafness: A parents' guide to communication options*. (2nd ed.). Rockville: Woodbine House.

- 1 <http://nces.ed.gov/fastfacts/display.asp?id=69>.
- 2 Gallaudet Research Institute. <http://gri.gallaudet.edu/Literacy/>.
- 3 <http://nces.ed.gov/surveys/all/issuebrief.asp>
- 4 White House Summit on Early Childhood Cognitive Development. Address by G. Reid Lyon, Chief, Child Development and Behavior Branch, National Institutes of Health. Summary Comments. (July 27, 2001)
- 5 MCEs include the following: Signed English, Seeing Essential English (SEE 1), Signing Exact English (SEE 2), Conceptually Accurate Signed English (CASE), and Linguistics of Visual English (LOVE). All were developed throughout the 1960s and 1970s.
- 6 LaSasso, C., Crain, K. & Leybaert, J. (2003). Rhyme generation in deaf students: The effect of exposure to Cued Speech. *Journal of Deaf Studies & Deaf Education*, 8(3), 250-270
- 7 LaSasso, C & Crain K (2003). Research and Theory Support Cued Speech. *Odyssey*. Fall, 30-36.