



# Supporting Success for Children with Hearing Loss

**BIMONTHLY  
UPDATE  
Early September  
Update 2016**

Topic: Listening Bubble Effects -  
Speech Perception Impact on  
Educational Performance



[Karen L. Anderson, PhD](#)

Director & Update Editor

Next SSCHL update  
in late September.

**Topic:  
Accommodations  
for Students with  
Hearing Loss**

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Schools](#)

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**Upcoming Speaking  
Engagements**

Sept 28th - Riverside CA  
Oct 6-7 - Maine

**Dear Karen,**

The primary difference between students with hearing loss and their typically hearing peers is that they do not access speech as fully. This is well known to the readers of the SSCHL Bimonthly Updates but is often unrecognized by school staff who 'know' that the child can hear them just fine.

Classrooms are often noisy and the person the child needs to hear is often more than 3 feet from the hearing aid microphones. While individuals can detect sound occurring beyond 3 feet, to truly perceive sounds like s, f, t, p (as in cat, cap, cast, calf) speech must be within the student's **listening bubble**. For most classroom communication students who are hard of hearing must work harder to listen, thus having fewer resources needed to process what was said so that it can be comprehended and remembered.



Our students who are Deaf and communicate visually will only perceive what is provided via their interpreter and/or captioning, which in combination with language ability may or may not result in complete understanding.

**How well a student is able to perceive speech in a classroom will impact educational performance.** This Update will review how reduced speech perception is likely to impact learning. These impacts are often overlooked or misunderstood by school staff as they review whether it is necessary to evaluate a student with hearing loss to determine eligibility for specialized supports and services. Hopefully, the information mentioned below will provide the hearing loss professional with the information needed to make the case that this access issue indeed has educational ramifications.

Oct 21 - Lansing, MI  
Book NOW for Spring!

**Find out about  
affordable  
captioning in the  
regular education  
classroom**



[Using Interact-AS in the Classroom Video](#)

**First FREE webinar will be September 30th, 1:30 CT. [Register NOW.](#)**  
Check out the helpful [I-AS Video Library](#)

Future free webinars on [Oct 26th](#) & [Nov 30th](#) at 1:30 CT

### NEW Products

Digital version of the [Recorded Functional Listening Evaluation Using Sentences - FLE](#) now only \$99 for your whole district!

NOW an updated version of the [Social Language Development Test](#)

### Products ON SALE!

[Social Language / Behavior Cards](#)

[Understanding Math Story Problems](#)

[Stand Tall Molly Lou Melon](#)

[Pragmatic Language Observation Scale](#)  
manual + form

[Nonverbal Language Kit](#)

## WHAT'S NEW?

### YOUR HELP IS NEEDED!

The 2014 policy clarification (see Advocacy below) made it clear that schools must ensure that students with hearing loss are communicating (accessing speech) as effectively as their class peers. To abide by this requirement we need to KNOW a student's level of access. HOW DO WE DO THIS? **Be a part of figuring out practices that work!** Get together with your DHH Team to review the draft [Estimating the Level of Communication Effectiveness / Access](#). What do YOU do? What is practical for auditory learners, visual learners and our students who do not participate using verbal language? Establishing these best practices has never been more important as our students enter school with better skills and fewer are made eligible for special instruction. Add your thoughts to this working draft and become an interactive part of this development process. Contact [Karen](#) with your thoughts!



**Videos!** Ever wanted to know just a bit more about a product before ordering? Cara King will be recording brief YouTube videos about products featured in the Bimonthly Updates. Connect on [FaceBook](#) to see them released and the other great information Cara shares on FB!



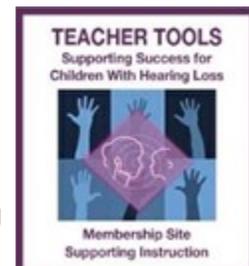
New article! Karen Anderson authored: [Audiologists Play Key Role in Classroom Access to Verbal Communication](#). Read this ASHA Leader article and share it with your student's educational audiologists and/or clinical audiologists!

## TEACHER TOOLS

**September Teacher Tools materials are up! A great kick off for 2016-2017!**

This year the *Maximizing Acceptance* section of Teacher Tools focuses on *why* students resist using their devices and *what can be done* to try to prevent students from refusing to use their hearing aids or FM systems. **Thanks to those who have completed our survey! We need more responses!** *The Children Rejecting Hearing*

*Devices: Who, Why, When?* survey will help us all to better understand this phenomenon. Take a few minutes to complete the 10 questions now! You can complete the



[Friends, Like You Kit](#)

[School's Out! Creating Successful Summer Experiences for Children with Hearing Loss](#)

survey using your knowledge of students from last school year or your caseload this year.

[Go to Teacher Tools e-magazine](#)

## SUPPORTING SUCCESS CONFERENCE

**Fall is here - ask your supervisor NOW for permission to attend!** The race for dollars is on! In many districts those who put in their requests early are much more likely to be permitted to attend.



**Earn up to 14.5 CEU clock hours!** Topics are relevant for teachers of the deaf/hard of hearing (instructing auditory and/or sign students), speech therapists and educational/pediatric audiologists. The conference includes topics specific to students who are **both auditory and visual learners**. Topics include:

- Visualizing Literacy: Strategies to Teach Reading to Visual Learners
- Language Assessment & Intervention for Students who Use ASL [MORE CONFERENCE INFORMATION](#)

### TOPIC: Effects of Hearing Loss on Speech Perception

#### Hard of Hearing Students - comprehension from bits and pieces

Audibility refers to how much sound, especially how much of the speech signal, can be heard. How well language can be used to 'fill in the blanks', level of interest and motivation to understand, and level of fatigue from extended listening all contribute to how well a student comprehends what was said.

#### Audibility

The **Speech Audibility Audiogram for Classroom Listening**, on the [Speech Perception page](#) of the website, shows the difference in audibility for

Loudness in dB HL	250	500	1000	2000	4000	8000 Hz
	Soft speech (35 dB HL)			Teacher voice (50 dB HL)		
0	95% audibility			98% audibility		
10	75% audibility			98% audibility		
15	60% audibility			98% audibility		
20	40% audibility			81% audibility		
25	25% audibility			60% audibility		
30	15% audibility			45% audibility		
35	10% audibility			30% audibility		
40						
45						

'Teacher Speech' versus 'Soft Speech.' Examples of soft speech include comments from peers spoken 6 or more feet away (class discussion) and many of the comments during social situations in school. Group learning when competing conversations are occurring also reduces audibility very significantly. A student with hearing levels in the 25-30 dB range will experience 81% audibility of the teacher's voice and only 25% audibility of soft speech. This hearing level is not

uncommon for children wearing hearing aids. Obviously, hearing aids are not enough to allow these students to fully access class communication, especially class discussions, unless an FM/DM is used and the pass around microphone is used.

### Specific Speech Sounds

Decreased audibility looks different from child to child based on their hearing loss and how well their hearing aids are fit. The *Speech Perception - Formant Representations for Vowels and Consonants* is revealing about the challenges a child with a hearing loss that has 'peaks and valleys' that cause islands of hearing. In general, higher pitched consonant sounds (s, f, th, p, k, t, etc.) and brief words and endings are most easily missed, unless speech is presented within 3 feet.

### Prereading

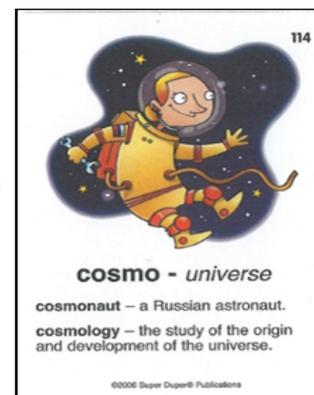


A child needs to listen for about 20,000 hours before the brain has developed a clear idea (mental referent) of what each of the discrete speech phonemes sounds like. This requires precision hearing and is a necessary step before children can develop a consistent understanding of sound/letter relationships. It is not a surprise that many students who are deaf or hard of hearing fall behind in their phonological awareness skills. Without these skills

students work harder to 'sound out' words as they read, which interferes with comprehension. Poor reading fluency will cause even the smartest students to read more slowly and work harder than peers. Students with hearing loss need to have an in depth assessment of their phonological awareness skills.

### Reading Comprehension

A recent study\* explored reasons why so many students with hearing loss seem to plateau in their reading achievement at the 4th grade level. They found that (1) morphologic awareness was a prerequisite to high reading test scores, (2) speech intelligibility was not correlated with language proficiency (i.e., even if a student has 'good speech' this does not predict good language), and (3) language proficiency (measured by the CELF-4) predicted reading achievement. Thus, speech perception has an impact on student's hearing and learning



how to interpret morphological information, such as learning the meanings such as cosmo-, mal-, bio-. *Teacher Tools - Words, Words, Words* is focusing on morphemes this year.

For a summary of the impact of hearing loss on learning, refer to ***Why Involve the Teacher of the Deaf***. Download it from the free handouts below.

\*Nielsen, D. C, Luetke, B., McLean, M., & Stryker, D. (2016). The English-language and reading achievement of a cohort of deaf students speaking and signing Standard English: A preliminary study. *American Annals of the Deaf*, 161(3), 342-368.

## PRODUCTS SUPPORTING THE TOPIC

***Help make room for new 2017 products, see items on sale!***

### **Products related to deficits caused by a reduced listening bubble and decreased exposure to incidental language:**

The Functional Listening Evaluation may be the *most useful* information we can obtain to inform us of how effectively a student is able to access classroom communication. The



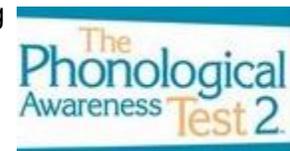
**Recorded Functional Listening Evaluation Using Sentences** makes the FLE fast and easy and can be performed by the teacher of the deaf/hard of hearing or the educational audiologist. Load the audio files onto your phone, iPad or computer. Includes computer fillable response forms. CD is \$20, Digital version is \$18 or only \$99 for use within your whole district.



If your school team does not accept the FLE results as being scientifically-based enough, illustrate the impact of a student's hearing loss with the **Developmental Test of Auditory Perception**. The DTAP is administered via a CD. This norm-referenced test

for ages 6-11 assesses the accurate perception of language sounds and common environmental sounds.

We know that having a smaller listening bubble impacts perception of phonemes and will often delay phonological development. Screening is not enough as the hearing loss is likely to affect some phonemes more than other. ALL need to be assessed. The *Phonological Awareness Test -2* provides norm-referenced results and is helpful for intervention planning.





Per the information above, morphological awareness is also very vulnerable to reduced speech perception and can greatly impact reading ability. The **500 Prefixes, Suffixes and Stems Super Fun Deck** makes it easy to increase understanding of morphological elements in an engaging way.

### MORE INFORMATION ABOUT THE TOPIC

Find more information on the Supporting Success website:

- [Speech Perception and Learning](#)
- [Access via the ADA](#)

Download your free materials [Handout\(s\)](#)! Including:

- Visuals of the listening bubble for young children and for students in classrooms
- ELFLing Assessment to assist in estimating listening bubble size in quiet and noise
- The Cascading Impact of Hearing Loss on Access to School Communication (great to share with administrators!)

### FEATURED WEBCAST PROFESSIONAL DEVELOPMENT ANY TIME!

#### [Using the Recorded Functional Listening Evaluation \(FLE\) Using Sentences](#)

This 1.25 hour webcast describes why performing the FLE is so critical for our students who are hard of hearing. It also has almost 30 minutes of video showing how to use the audio files and fillable response form to administer the FLE. Only \$24. The FLE is discounted when the webcast is purchased.



### Hearing Peer Interactions with AUTOMATED CAPTIONING

**Providing a student with access to communications of peers in group discussions is challenging both from a technology availability perspective as well as from a discipline perspective if the technology is available.**

The team at *Supporting Success for Children with Hearing Loss* has been checking into best practices being used in K-12 classrooms to identify an approach for combining the use of an FM/DM system and the Interact-AS real-time captioning

accommodation to provide better access to communications from both the teacher and from classmates. **The [Multimedia Hub](#) from Phonak can be very helpful in addressing this challenge.** This device accommodates multiple microphones and delivers audio to multiple receivers thus allow the audio from the teacher's microphone and the audio from a Roger Pass-around Mic to be transmitted by the Multimedia Hub to both the student's receiver(s) and to a tablet PC for automated real-time captioning. Of course the benefit of accurate captioning for the D/HH student depends upon the discipline of using the pass-around microphone properly. Click for [more information](#) or contact [Mike Massine](#), Interact-AS Support.

## ADVOCACY NOTES

### A Game Changer - the ADA Policy Clarification

In short, the ADA exists to prevent discrimination against persons with disabilities. Hearing loss reduces access to classroom communication. The [November 2014 policy guidance](#) requires schools to **ensure** that communication for students with hearing loss is **as effective as** communication for others so that these students will have an **equal opportunity** to obtain the same result, gain the same benefit, or **to reach the same level of achievement** as that provided to others.



IDEA only requires that eligible students with disabilities perform commensurate to class expectations. **The ADA sets a higher bar** in that student's access issues must be addressed so that they have an equal opportunity to achieve. Thus, if a student enters school with a 120-130 IQ then he or she must receive appropriate aids and services to have the opportunity to perform like other high IQ students. If this thoughtful provision of needed supports is not provided, then the smart student who is made to work harder and harder as they go from grade to grade who eventually moves from achieving easy As to struggling to get low Bs or Cs has been discriminated against per ADA requirements.

The recent release of the ***Every Student Succeeds Act*** (which replaces NCLB) has specified that *specialized instructional support providers* (like teachers of DHH and educational audiologists) can support literacy and collaborate with classroom teachers within a multi-tiered system of support. This means that it is permissible under *ESSA* for us to work with general education students to determine their level

of effective communication access and to be involved in providing specialized supports (via the 504 Plan). With more and more students with hearing loss not being found eligible for special education services, there is now a permissible way in which these students need no longer 'sink or swim' without the involvement of a specialized instructional support provider.

Refer to the [Access-ADA](#) page of the website for more information and worksheets to use with teams to discuss student access needs.

The mission of Supporting Success is to help YOU to improve the futures of children who are hard of hearing or deaf via (1) accessible information resources, (2) professional development, (3) products selected specifically for children with hearing loss, (4) sharing information to assist in advocating for appropriate services and supports.

This 'go-to' site is for professionals and family members seeking more information about the learning and social issues of children with hearing loss and what can be done to better support the future success of these children.

Information resources are at no cost, relevant, designed to be easy to understand quickly, and practical to use.  
Purchase materials at SSCHL - one stop shopping for your desired items, for sale at the best possible price!



Supporting Success for Children with Hearing Loss | 15619 Premier Drive, Suite 101 | Tampa | FL | 33624