

Karen L. Anderson, PhD, Director, *Supporting Success for Children with Hearing Loss*, 2017 Conference Keynote Session

Session Objectives: The participant will be able to:

1. Describe the analogy of zebras versus horses when considering the needs of children with hearing loss versus other populations of students.
2. Describe the differences in competencies between the roles of the teacher of the deaf/hard of hearing, speech language pathologist, and the special education teacher
3. Describe ways in which this knowledge can be used to advocate for appropriate student services.

Children with Hearing Loss **may** have a unique language and culture; **will** have issues regarding Hearing vs. OVERhearing. **Will** have issues related to reduced opportunities for incidental learning. This FACT about hearing loss is not widely recognized because of the low incidence nature of hearing loss. HL ≠ LD with Hearing Aids. Hearing loss is rare – only 1% of kids with IEPs have hearing loss as the basis of learning needs. <http://www.gao.gov/new.items/d11357.pdf> 38% LD, 22% SLP, 19% intellectual, emotional or Developmentally Disabled.

If you've seen one child with hearing loss you've seen one child with hearing loss! There are some vulnerabilities in common but actual learning issues can be very different, especially with variations in early ID & EI outcomes.

Hearing loss looks like other learning issues

“When you hear hoof beats, they are usually horses and not zebras.”

- Hearing loss is not a disorder, like LD or language disorders
- Hearing loss is not an attention disorder, like ADHD or ASD
- Hearing loss is not a cognitive disorder, but academic delays and some functional classroom issues are common
- Hearing loss can LOOK like every one of these issues.
- Students with Hearing Loss truly are ZEBRAS! We need to advocate for our 'Zebras'!

“He hears just fine.” Classroom Teacher Study

- **Study said...half of teachers thought hearing loss and academic problems were not linked.**
- **Teachers accused students of daydreaming because they participated inconsistently. Teachers 'knew' the child could hear.** Study by Ross, Brackett, and Maxon 1991

But his speech is great!!!

- Age appropriate speech and language at age 3 is a triumph of the hard work and dedication of the family and EI providers. A good start does not *inoculate* a child from developing learning gaps in the future

Hearing Loss is not the same as other Special Education populations. Hearing loss is an ACCESS Issue creating barriers to learning in the typical classroom environment and impacting social interactions. This *invisible* barrier is why it is necessary to consider functional performance in the classroom across situations. There are often CUMULATIVE learning gaps due to incidental learning/overhearing deficits

We live in challenging times....

- Because of early diagnosis of hearing loss, better amplification and early intervention, fewer students are signing AND more have abilities 'within normal' at school age (*this is good but misleading*)
- The typical result of early intervention is language performance at low average – standard scores of 85-88 rather than 100
- Hard of hearing students are often ignored or their needs are minimized because they are not 'Deaf enough'
- Students are evaluated using the same tools that teams evaluate suspected learning, language or IQ disorders
- Expertise in hearing loss is often not sought on teams evaluating students with hearing loss
- Many Schools for the Deaf are closing/have closed
- Many (most?) districts no longer offer self-contained DHH options
- So despite the IDEA requirement for a continuum of alternative placements, intensive support specific to the needs of students with hearing loss is becoming less available
- 'Inclusion' has resulted in students who are DHH being in the regular education classroom, whether they have the skills to compete, or not – often with 'pull out' time discouraged

- More DHH teachers are deemed to be in a consultative role only or allowed only to 'push in' or 'team teach', again regardless of the intensity of intervention needed by the student

HANDOUT: Why Involve the Teacher of the Deaf/Hard of Hearing on the Student Team and the IEP?

HANDOUT: IEP Planning guide for Students with Hearing Loss

Educational Practices Less Effective for Students with HL. From Visible Learning for Literacy, Fisher, Frey, Hattie 2016

- Condenses research on educational practices. Statistical analysis of the level of influence the practice had on actual outcomes. Reports the effect sizes of common practices. A practice needs to have an effect size of 0.40 to account for learning that will occur simply due to the maturation of attending school for a year.
- Nearly all the things teachers do work when we ask what improves student achievement. But only a few things work at ensuring that students **gain a full year's worth of growth** for a year of enrollment in school.

Examples of practices that have effect sizes less than 0.40

- Homework (effect size of 0.10 in elementary, 0.55 in high school)
- Teaching test taking (0.27)
- Grade retention (0.13)
- Ability grouping (0.17) vs mixed small group learning (0.49)
- Matching 'learning styles' with instructional style (0.17)
- Open vs traditional learning spaces (0.01)
- Whole language (0.06)
- Co-/Team-Teaching (0.19)
- Summer school (0.23)
- Mainstreaming (0.24)

What is learning?

"The process of developing sufficient surface knowledge to then move to deeper understanding such that one can appropriately transfer this learning to new tasks and situations."

- If tasks are too easy, students become bored. When they are too difficult, students get frustrated. There is a sweet spot for learning, but it differs for different students. A student only learns when work is moderately challenging that student, AND where there is assistance to help the student master what initially seems out of reach. Too vastly different from peers and they can become 'class mascots'

Levels of learning? Surface – Deep - Transfer

- Students are first exposed to information to gain surface or general understanding. They must acquire and then consolidate information. They then need to move their knowledge to deep learning via interaction with the material, comparison to what is already known, and integration into their knowledge base. Without adequate surface-learning students cannot go deep. Activities then need to occur for students to transfer the knowledge so it is readily available to them for recall and application to multiple and broad situations. **Specific instructional routines, procedures, or strategies need to be matched with the appropriate level/phase of student learning.**
- Up to 90% of instruction can be completed by students using ONLY their surface-level knowledge
- Mismatching an approach with the level of learning will not create the desired impact

Mismatch examples

- Problem-based learning has an effect size of only 0.15 when it is used during the surface-learning phase (0.61 during deep instruction)
 - Students need to possess the knowledge needed to engage in inquiry-driven investigation about a topic.
- Checking for comprehension by way of asking recall questions tends to be the norm (54% of questions asked by teachers gr 5/6)
 - When asked during initial reading of a text, comprehension questions interfere with the comprehension of the material unless the student had a high level of reading proficiency
- Contrast example: Note-taking enhances surface level learning and repeated reading or cloze reading enhances comprehension

Levels of learning? Prior knowledge

- Prior knowledge is an excellent predictor of performance on new tasks. **Effect size is 0.65.** Impact for students with hearing loss: a) 'Swiss cheese' language, b) Reduced world knowledge due to limitations in effective exposure, c) Reduced audibility impacting early literacy skills most children develop naturally by age 4
- Add to this the impact of fragmented hearing, listening in noise, listening at a distance, fatigue, etc. - Less information is received. **WE CAN EXPECT THAT SURFACE LEARNING WILL TAKE LONGER FOR STUDENTS WITH HEARING LOSS THAN TYPICALLY HEARING PEERS.**

- Assess prior knowledge in addition to vocabulary review = Routinely perform the cloze procedure:
 - Select a passage, like end of chapter summary
 - For upper elementary and secondary use a 250-word passage and remove every 5th word
 - For younger or less developed students use a shorter passage and remove every 7th to 9th word
 - The student writes in the word s/he believes is the best fit for the meaning of the passage. The word must be an EXACT match to be counted correct:
 - Independent level = 60% or more correct answers
 - Instructional level = 40%-59% **Make the case re: impact of HL and increase precision of your teaching**
 - Frustration level = 39% or below

Levels of learning? Phonological Awareness Instruction

- Phonics instruction establishes/strengthens the brain structures that will form the phonological loop that links processing of the sounds of language with the long-term memory needed to sustain meaningful reading. As automaticity with decoding improves, less cognitive space has to be devoted to decoding and attention can shift to comprehension. Teaching vocabulary, without sufficient phonological awareness will NOT develop the reading fluency needed to comprehend. Repeated reading technique will strengthen reading fluency. 1) student listens to passage 2) reads it aloud 3) reads it again 4) repeat until oral fluency norms are achieved. Pronunciation, pacing and other errors are corrected along the way with immediate teacher feedback.

Levels of learning? Phonics & Vocabulary Instruction

- Phonological awareness needs to be assessed in depth for students with hearing loss. Direct teaching (effect size 0.59) of the 12 phonological awareness subskills needs to occur when deficits are identified. Vocabulary review is likely insufficient: Need to identify prior knowledge, need to work on reading fluency, and need to integrate new vocabulary into growing web of knowledge.
- Effect size of classroom vocabulary growth programs = 0.67. COMPREHENSIVE INTERVENTION FOR STUDENTS WHO ARE LEARNING DISABLED = 0.77. We can assume something similar for DHH students.

Levels of learning? Vocabulary Instruction

- Teaching vocabulary will not guarantee success in reading, just as learning to read words will not guarantee success in reading. However, lacking either adequate word identification skills or adequate vocabulary will ensure failure. Effective practice for teaching vocabulary. Students are taught to:
 - Look inside the word or phrase for structural clues (syntax, roots, stems)
 - Look outside the word or phrase for contextual clues
 - Look further outside the word or phrase for resources

Levels of learning? Self-Assessment

- Showing students near the beginning of a series of lessons what success at the end should look like is among the more powerful things we can do to enhance learning. i.e., Kool Kidz Vidz as a part of self-advocacy skill development. When students understand the success criteria, they can be more involved in assessing their own success and their progression toward success. It mobilizes peer tutoring and cooperative versus competitive learning as well as building student-centered learning.

I do not yet understand. I need coaching	I am starting to understand. I need coaching but want to try some on my own.
I understand! I make a few mistakes, so I'm working through those.	I understand very well. I can explain this to others Without telling them the answers

Levels of learning? Participation in the Classroom

- The Common Core Standards requires that each student be able to fully participate in classroom activities.
- Surface learners are described as relying on memorization and are concerned about failure; therefore, they are risk-averse. Deep learners seek to interact with content and ideas, and actively link concepts and knowledge across content. We can assume/generalize that students with hearing loss tend to be at the surface learning level longer than hearing peers. Due to uncertainty with what has been said (fragmented hearing) in addition to 'spotty understanding' they are less likely to participate. **This is a required skill. Direct instruction is important!**

Levels of learning impacted by hearing loss – Mainstream

Cooperative learning does NOT enhance learning surface information. It DOES engage students in moving from surface to deeper levels of learning. Lack of access during group discussion and group work impacts deep learning.

(level of learning and rate). *Estimates indicate that group work and interactive lessons together comprise 34% of the day in a typical classroom* (Feilner, Rich & Jones, 2016). Students who benefit most from classroom discussions are those who are struggling to comprehend text. Students with hearing loss + class discussion:

- 1) May have less surface knowledge to be able to benefit
- 2) They may have a greater need to effectively learn from class discussion due to auditory fragmentation /comprehension issues

This further strengthens the need for effective use of FM, communication repair skills, self-advocacy skills and self-concept. The teacher repeating key information is not a fair substitution.

'Zebras' really aren't the same as 'Horses'!

- Amplification does not restore normal hearing
- Issues are beyond those only from equal access to instruction due to poorer acoustic perception
- 'Swiss cheese' language and incomplete perception impact the rate and level of surface learning, resulting in students who are less prepared to move to deep learning phases of instruction
- Mismatch of instructional level with learning level can result in slower overall learning
- We need to inform school staff of effective practices and the impact of hearing loss on resulting learning

EXPOSURE IN THE SAME CLASSROOM ≠ SAME LEARNING

A look at roles and responsibilities for persons providing services to students with hearing loss

Roles – DHHT vs Other School Providers: There is no one resource that 'speaks for' teachers of the deaf/hard of hearing and their specific services. There is no Scope of Practice which makes it easy for other fields to 'creep' into responsibilities of the DHH teacher / educational audiologist. The lack of role definition has made it challenging for teachers to easily respond to *"What do you do that is different from the..."* Few administrators are aware of the unique learning needs of students with hearing loss and the special training of DHH teachers. Evidence-based practices are assumed to apply to everyone, equally. We need to be able to advocate for appropriate services for students which includes advocating for our own involvement.

Can his/her needs be addressed by the LD/SpEd teacher?

Resource Teacher (LD/SpEd) potential issues: Lack of experience working with HL due to low incidence. Teachers tend to see hearing aids/FM as a cure all – *"They hear fine."* Lack of understanding of:

- Difference between the sense of hearing and skill of listening
- How language develops, interference of HL, and how to break down to teach to specific gaps
- Pragmatic language and link to social skills, 'disclosure' and self-advocacy
- Why this kid with HL doesn't learn like their last kids with HL
- Classroom accommodations related to hearing loss needs
- Link between decreased incidental language exposure and behavior
- Why increasing academic gaps are NOT due to disordered learning. ETC!

HANDOUT: Role Comparisons: Supporting Students who are Deaf or Hard of Hearing

A Word on Hearing Loss + Other Disabilities: Opaki = part horse, part zebra, part? Hearing loss is invisible and is easy to disregard. We need to be involved in planning appropriate educational services for our zebras and the opakis!

How can we use Zebras to Advocate?

1. Use your zebra clipboards and wear zebras proudly!
2. Talk about access – it is at the heart of developing zebra 'issues'
3. Be prepared to list specific learning challenges typically caused by hearing loss – have your "Why Involve the Teacher of the D/HH" handout ready to share!
4. Be sensitive to effective practices and potential challenges with HL
5. Be prepared to describe the unique skills you bring to the team; why your services are most appropriate – have your 'Role Comparisons handout' handy
6. Be ready to address the potential result in outcomes if another professional without DHH training is providing needed services
7. Advocate for the intensity of services **needed** for the child to close gaps and to prevent further gaps from developing or compounding