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Including students who are deaf or hard of hearing: Principles for creating accessible instruction

Tamby Allman, Samantha Wolters Boser, and Eileen M. Murphy

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Including students who are deaf or hard of hearing: Principles for creating accessible instruction

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The majority of teachers agree that students who are deaf or hard of hearing (DHH) should have the opportunity to learn alongside their hearing peers (Luckner, 1999). However, the strategies and instructional modifications necessary to make the general education classroom accessible to students with hearing loss have not been part of their professional training (Knoors & Marschark, 2014; Krywko, 2012). Advances in technology, new legislation, and a deeper understanding of pedagogy are significantly changing teaching practices for educating students who are DHH (Krywko, 2012; Rekkedal, 2012; Yoshinaga-Itano, 2003). As a result of these changes, more students who are DHH are receiving instruction in general education classrooms (Antia, Kreimeyer, & Reed, 2010). Further, knowing how to address the learning needs of students who are DHH can be challenging because students with hearing loss are not a homogenous group, and individual instructional needs may vary greatly (Knoors & Marschark, 2012). While classroom teachers understand the significant impact of not having early and complete access to language on student learning, they are often less familiar with how even a mild hearing loss can similarly impact long-term academic success (Richburg & Goldberg, 2005; Werfel & Hendricks, 2016) or how to how make their teaching more accessible for these students.

In this article, the authors share six key principles for creating effective language and literacy instruction for students who are DHH. These principles address the most frequently recurring questions general education teachers asked during professional development workshops. Within these key principles, we suggest practical instructional modifications to complement general classroom instruction in order to effectively teach literacy skills across all educational settings. The six principles are (1) optimize the learning environment, (2) pre-teach vocabulary, (3) determine how to teach skills related to sound, (4) include print to support comprehensible word learning, (5) provide authentic opportunities for language growth, and (6) individualize writing instruction and support as needed.

Strategies to create an optimal learning environment and successfully teach academic content are shared recognizing that classroom instructional patterns are one of the most common barriers students who are DHH face in the general education setting (Berndsen & Luckner, 2012). The authors recognize that challenges beyond the typical general education classroom can complicate classroom instruction and may need to be addressed. Some of these additional challenges may include multiple teachers, alternate communication methods, and different settings including self-contained, co-taught, and general education classes. To illustrate teaching modifications in a variety of situations, we share the learning journeys of a few students who are DHH that are likely to be similar to other students' in classrooms across the nation.

Optimize the learning environment

Access to spoken language

Designing a flexible and inclusive learning environment from the beginning provides a foundation for successful learning. In order to create this optimal learning environment a teacher must analyze how each student will access spoken language. To optimize the auditory environment for students who access language through listening, teachers may need to meet with the school district's educational audiologist or specialists who can interpret a student's audiogram. Educational audiologists or other specialists can explain what the student can or cannot hear and will be able to recommend classroom modifications to optimize both the auditory and visual learning environment, such as the best seating arrangement for the student. While our focus in this article is on ways a teacher can optimize the classroom environment, we want to emphasize that a collaborative partnership with families and related professionals is essential for positive outcomes, regardless of the age of the student (Yoshinaga-Itano, 2014).

Another factor in optimizing the learning environment is managing background noise: Classrooms can be noisy, and noise can greatly impact academic learning. Background sounds need to be continually monitored and addressed in order to create effective learning environments for all students. A free application that can be downloaded on a personal smartphone can help teachers and their students monitor classroom noise levels: http://www.healthyhearing.com/report/47805-The-best-phone-apps-to-measure-noise-levels (Almutlaq, Kanjo, & Alsafadi, 2014; Plotnick, 2018). A

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decibel meter app that can be displayed on a classroom SMART board gives students in the class immediate feedback and a visual representation of the impact of reducing their volume. The decibel meter can also be used by adults working in the classroom to identify simple environmental modifications that may make a significant difference to the noise level in the classroom. The American Speech-Language-Hearing Association (2015) recommends turning off noisy equipment such as projectors when not in use, reducing white noise from fans and heating and other machines, or adding carpet or rugs to absorb noise (Werfel & Hendricks, 2016).

Students who are DHH may use different personal amplification systems, such as hearing aids, a bone-anchored hearing aid, or cochlear implants (CIs). To ensure maximum benefit, any amplification system needs to be checked daily. While most students will take personal responsibility for this task, some younger students may need some support for self-advocacy tasks such as routines to replace batteries that have died during class. A one- or two-minute daily routine with younger students learning to use their amplification systems can be completed by a classroom teacher, speech language pathologist (SLP), or paraprofessional. The gold standard for quickly checking to be sure the amplification system is working is the Ling six-sound test, which checks speech sounds across different frequencies (Ling, 1989). A link to a daily chart and "how to" video of the Ling six-sound daily check (Central Institute for the Deaf, 2016) can be viewed online at https://www.youtube.com/watch?v=Ot1zRYY9Lbg.

A classroom-based sound system that can work with personal amplification to bring added benefit to all students, especially students who are DHH, is a frequency modulation, or FM, system. An FM system can be anything from a small piece coupled with a student's hearing aid to a sound field system in the classroom. For some FM systems, a classroom teacher wears a transmitter microphone and the student uses an FM receiver that connects to their hearing aids so that the student hears the teacher's voice as if she were standing close to them. Newer systems also include microphones for peer use (Werfel & Hendricks, 2016). Regardless of the type of FM system chosen, the speaker's voice is amplified for the listener over the noise in the classroom. Research has documented multiple benefits of using a classroom-based amplification system, including increased student attention and listening, increased auditory analysis, improved general student performance, decreased teacher fatigue, and improved student performance for English language learners (Hall, Meyer, & Rose, 2012). Most manufacturers also provide connectivity options for use with iPads, computers, or other technologies for FM systems and personal amplification. When well used, sound field systems can benefit all students.

Accessibility of visual environment

Optimizing the classroom environment to ensure that the visual environment is accessible and distractions are minimized is crucial to learning success for any student who is DHH (Smith, 2010). In the same way that it is critical to understand the hearing loss and make adjustments to the auditory environment for students who access information auditorily, it is equally necessary to understand how students use a sign language interpreter, facial expressions and gestures, or lipreading to access classroom content through a visual language. The best seating option varies for each student and each classroom situation. Optimal solutions will come from collaborating with the student and educational team members.

A sign language interpreter is a critical member of the inclusion team and participates in the daily life of the classroom (Cawthon, 2001). Students who use a sign language interpreter need visual access to both the interpreter and teacher to get critical nonverbal information from body language and facial expressions. Strategic seating arrangements that provide a clear visual line to the teacher, interpreter, and visual media used during classroom instruction are critical to providing accessibility for students with hearing loss. Good lighting is also important, so it is necessary to address poor lighting and glare from windows that might occur during the day. Teachers need to make accommodations for activities that might include turning off the lights in the classroom, recognizing that a student who is DHH will need to see the interpreter and/or teacher as well as the visual screen or demonstration. Suggestions for working with a classroom interpreter can be found at http://www.classroominterpreting.org/Teachers/potential_limits.asp (Boys Town National Research Hospital, n.d.).

Teaching videos are frequently shown in classrooms and should always have captioning options activated. However, teachers need to be aware that captioning often runs at approximately 140 words per minute and many young children do not read at that level (Jensema, McCann, & Ramsey, 1996). Teachers can manually caption their own videos using several of the tools available in YouTube's video manager. The National Center on Disability and Access to Education (2015) provides clear directions on how to caption YouTube videos: http://ncdae.org/resources/cheatsheets/youtube.php.

Providing direct and comfortable sight lines and minimal visual distractions creates a physical environment conducive to learning. Guardino and Antia (2012) researched classroom modifications for students who are DHH and reported that modifying the seating arrangements, organizing classroom materials, and reducing visual distractions increased student engagement and decreased levels of disruptive behaviors. Other modest classroom arrangement modifications related to visual distractions included changing the lighting, facing students away from doorways and windows, and placing barriers or partitions in the classroom to influence where attention was drawn. Teaching classmates to make minor changes in their classroom communication routines such as raising their hands and talking one at a time helps all students, but especially students with hearing loss who are trying to follow multiple speakers.

Pre-teach vocabulary

Teach target word in multiple formats

As previously stated, academic success is highly correlated with language abilities (Edwards & Feun, 2005). Teachers know that children learn language through incidental learning or learning by overhearing. Due to hearing loss, students who are DHH have much less access to the words around them unless they have comprehensible language input at home from the start (Suskind, Suskind, & Lewinter-Suskind, 2015). Consequently, their teachers must make a conscious effort to pre-teach vocabulary that the student will need to effectively participate in the learning activities.

One of the challenges with pre-teaching vocabulary is ensuring that the student clearly understands the target vocabulary word. Deliberately providing the word in multiple ways reinforces the long-term learning of target vocabulary (Hall et al., 2012). Discussion and spoken or signed language during class is impermanent and easily forgotten. Providing the word in English print form provides a permanent and clear version of the word. For a student who uses sign language, a technique called "chaining" was documented by Humphries and MacDougall (2000) and can be intentionally included in any teacher's toolbox. "Chaining," making an explicit connection between different forms of the same word, might include saying or signing the target English word, pointing to a picture of that word, writing the world on the board, or finger spelling the word.

Equally essential to pre-teaching vocabulary is making instruction visually comprehensible for students who are DHH as well as emergent bilingual learners (Roberts, 2017). For example, younger students who are reading picture books benefit from a planned interactive picture walk through the new book. The picture walk provides labels for unknown words and allows students to connect new vocabulary and clear images to their prior experiences. Digital media offers unlimited opportunities to provide vocabulary learning opportunities in other formats for diverse learners. Google Images allows teachers to create a dictionary of key terms quickly by importing the images into a PowerPoint presentation. Cannon, Fredrick, and Easterbrooks (2010) reported increased vocabulary learning for students who were DHH and English language learners when explicit pre-teaching of target vocabulary included both visual cues using multimedia that provided examples and non-examples. One important consideration when teaching with visuals is that unlike hearing students who can take in new information through simultaneously listening and watching visual support, students who are DHH cannot watch an interpreter or lipread a speaker and look at a visual at the same time. Teachers need to allow time for students to preview images information before beginning the classroom discussion.

Case example

Ki's classroom provides an example of how teachers personalize these principles. Ki is profoundly deaf, uses a CI, and communicates with simultaneous communication of both sign and spoken language. As a bimodal trilingual student, he often uses both English and Korean spoken language to communicate expressively with his family and hearing teachers and friends, but he depends on American Sign Language (ASL) in a receptive academic setting. His second-grade class includes five students who are DHH and is co-taught by Ms. Hernandez, a general education teacher, and Ms. Clifton, a teacher of the deaf. They noticed that Ki's literacy assessment results stalled at a beginning first-grade level. During guided reading in small groups, Ki's teachers plan picture walks through the books with him as a strategy to pre-teach vocabulary that he needs to comprehend the books he is reading in English. During whole-class instruction, new vocabulary words are purposefully printed on the chart paper next to the teacher's easel, and students are asked to watch or listen for the words as the story or lesson is being read aloud. Math problems are displayed on the projector and math word problems are prepared ahead of time and displayed so that key words can be highlighted visually. Ki has knowledge and experiences to share, but he needs additional instruction to learn, recognize, and use the new vocabulary words in order to connect his experiential knowledge with his growing language skills.

Determine how to teach skills related to sound

Finding ways to present auditory information challenges even highly experienced teachers. To add to this uncertainty, the efficacy of teaching phonological awareness tasks to students who are DHH is often debated in the literature (Paul, Wang, Trezek, & Luckner, 2009). Teachers need to know that embedding phonological awareness instruction as a part of literacy instruction is appropriate for many students with hearing loss (Schirmer & Schaffer, 2010). However, it is necessary to understand that this instruction may require specific modification for students who are DHH, depending on how they access sound.

Lederberg, Miller, Easterbrooks, and Connor (2014) implemented a five-year study using "Foundations for Literacy: An early literacy intervention program for DHH children." They provided experiences that included visual, multimodal, and meaning-based vocabulary taught in meaningful context. The children involved in the intervention made significant gains on tests of phonological awareness, letter-to-letter sound knowledge, and expressive vocabulary when compared with the comparison group of children that did not receive the intervention. Even though improved technologies provide many children who are DHH with more access to spoken language than ever before (Bergeron, Lederberg, Easterbrooks, Miller, & Connor, 2009), the classroom teacher needs to know how each student accesses phonological cues and plan instructional modifications not only for phonological awareness but for all types of learning throughout the school day.

Integrate visual options to teach auditory information

Gardner, Cihon, Morrison, and Paul (2013) reported that general education teachers who work with hearing students struggling with letter-sound skills have experienced success by adding a visual component such as See the Sound/Visual Phonics (STS/VP) to their teaching (See the Sound/Visual Phonics International Communication Learning Institute, 2011). Visual phonics is a system of 46 hand shapes used to represent the phonemes of English and has been researched and recommended as a way to make the phonemic aspect of spoken language visual. Visual Phonics can be added to any school literacy program simply by including the STS/VP cues. The hand cues represent how the sounds are created in the mouth: For example, the sound associated with the letter *f* includes a hand shape that moves out from the mouth like the air released when the sound associated with the letter *f* is articulated. These hand shapes can be learned in a one-day workshop and multiple resources, such as charts, videos, and professional workshops are available online at http://seethesound.org/.

Consistently using STS/VP is one way to modify phonemic awareness instruction to visually teach the sounds to students who cannot identify them auditorily. For example, Nussbaum, Waddy-Smith, and Doyle (2012) recommend using STS/VP when teaching rhyming words and homophones by presenting words using the STS/VP hand cues. In the same way that hearing students hear the similarities, students who are unable hear those similarities can see them using the hand shapes. See the Sound/Visual Phonics also uses written symbols, which can provide additional cues.

There is often little correspondence between a word's sign and its English spelling. For example, the sign for "children" comes from a gesture that looks like someone is patting the heads of imagined children, not from any of the letters or sounds of English. In contrast, finger spelling, which is a manual representation of the English alphabet, is a way for students who are profoundly deaf to use a system that has a direct relationship to alphabetic print (Hirsh-Pasek, 1986).

Finger spelling has also been found to aid in retaining new vocabulary words more than print for learners who use sign language (Haptonstall-Nykaza & Schick, 2007). New or targeted words can be introduced or emphasized with finger spelling (Baker, 2010). For students who use sign language, a strategy similar to the chaining strategy described earlier, called "sandwiching," is an especially effective way to incorporate finger spelling (Humphries & MacDougall, 2000). An example of using a sandwiching technique would be signing the target word, then finger spelling the word, then signing the word again, creating a "sandwich" around the spelling of the target vocabulary word. The sign language alphabet can be learned in an hour by any teacher from a deaf individual or someone who uses sign language or from a video and has been used to aid teaching letter-sound knowledge to all students, hearing or DHH. For example, a teacher may explain that the letters *gh* are said with the *f* sound in words such as *tough* or *rough* but are silent in the word *though*. Teachers and students can have fun incorporating finger spelling of new vocabulary or spelling words into their weekly spelling work. Students can finger spell the new spelling or vocabulary words to each other and have their partners say, sign, or write the words as part of their weekly spelling practice.

Case example

In Ms. Hernandez and Ms. Clifton's co-taught classroom, all of the students use finger spelling frequently. In stations, they sort words based on their word patterns. As two students who are DHH, Crystal and MiYoung, select word cards and pick up an unknown word, they deliberately finger spell the new word (*r-a-c-k*), then they flip the card over and see a familiar picture of a clothes rack and sign the word. They read the column of words, sometimes signing the words and sometimes finger spelling the words: *black, track, back, sack*. When they come to the new word, *rack*, they sign the word, finger spell the word, and sign it again using finger spelling as a coding system to remember the words, in the same way a hearing student uses an auditory representation of the word.

Include print to support comprehensible word learning

Word work instruction for students who are DHH must be more extensive than word work for hearing students because the very nature of hearing loss includes missing spoken language (Schirmer & Schaffer, 2010; Suskind et al., 2015). In general, high-frequency English words that are part of most student's daily conversations such as *because, for, thought, do, saw,* and *went* may be challenging for students with hearing loss. Teachers often include a quick daily review of English sight words to connect students' spoken language with the printed words that they are learning to read and write (Cunningham, 2004). However, these English words are often not used in ASL and are signed inconsistently across English sign systems. For students who are relying on audition only, these words are often the very words that are not heard. Some students may be clearly understanding only a portion of the words in a spoken sentence and focusing on the key or meaningful words (e.g., grandpa went hospital). Consequently, students who are DHH often need more extensive instruction and time to integrate high-frequency English words into their own conversational or written language.

In addition to reading and writing high-frequency words, readers and writers need to internalize the spelling patterns of English words beyond knowing the initial letters. Some words, such as irregular past tense verbs, may develop more slowly for students who are DHH. Word sort activities that include seeing the printed words that students are sorting support word learning for students who are DHH because they (a) are taught visually, (b) engage learners to discover the common patterns, and (c) expose students to words they might not see otherwise (Cunningham, 2004). Word sorts can be easily differentiated according to the learners' word knowledge abilities. As students sort words, such as present

and past tense words or regular and irregular past tense words, they discover the similarities and differences across visual patterns. Exposing students who are DHH to multiple words with similar orthographic patterns allows them to identify vocabulary that other students have heard through incidental language exposure.

Provide authentic opportunities for language growth

Set expectations high by providing a model

Students who are DHH often need additional instructional support with English language skills compared to their hearing peers (Cawthon, 2001) While students' language proficiencies will vary greatly, some students may require additional language support for several years to fully master English grammar and vocabulary (Spencer & Marschark, 2010). Teachers can scaffold English grammar in the classroom using a modification of the commonly used word wall and create a "question and answer wall" by posting commonly used questions or sentences in their classroom. The authors watched a co-teaching team and their first-grade students using a "question and answer wall" during the school year. Common student questions were organized and placed on the wall such as "Will you say that again? I didn't understand what you said." The students referred to the wall and contributed their own suggestions and requests. The expectation of asking and answering questions in complete sentences was clear, engaging, and visually supported in this classroom. The teacher of the deaf collected and analyzed spontaneous classroom language samples during the year and shared students' language growth with parents during parent–teacher conferences.

A commonly used auditory strategy used by SLPs and TODs to support students is acoustic highlighting, emphasizing a specific sound, word, or phrase. Teachers and parents can become more aware of grammar errors that students make during informal conversations and respond with a correct model, emphasizing the correct form or target word. For example, a student may misuse or omit a preposition, pronoun, or verb tense. The student may say, "Julie was mean. *He* pushed me." Acoustic highlighting can make the student more aware of the communication errors by repeating the sentence while highlighting or emphasizing the correct pronoun, "SHE pushed me. Julie is a she."

In addition to less proficient language skills, social and pragmatic language skills often lag behind and require repair and practice for some students who are DHH (Goberis et al., 2012). Students learn from their classmates, and this classroom talk forms the foundation of many research-based instructional activities such as interactive reading instruction, workstations, partner reading, and writing and reading workshop. However, students may need clear and specific strategies for communicating with their classmates who are DHH. Elizabeth Rosenzweig (2014) posted suggestions on helping classmates understand hearing loss at http://cochlearimplantonline.com/site/helping-classmates-understand-hearing-loss/. Creating a classroom where students who are DHH have opportunities to positively interact with their peers benefits everyone (Antia, Jones, Luckner, Kreimeyer, & Reed, 2011).

Case example

In MiYoung and Crystal's class, Ms. Hernandez and Ms. Clifton gave their students tools to communicate with one another effortlessly. The teachers modeled the fact that every student was an important and equal member of the class and both teachers worked with all of their students. Every student was given a sign name and those names were used by both teachers. Students all learned the signed alphabet (finger spelling) as part of their spelling and word work. The word wall included a picture of the sign next to the printed word, and sign language dictionaries were on bookshelves and used often. Many of the general education teachers attended the weekly sign class and learned to communicate with students who used sign language. Students in MiYoung and Crystal's class worked in flexible groups and learning to sign came quickly to many of the children. On the playground, it was difficult to identify who could hear and who could not, allowing for greater inclusion and further development of social learning and incidental language exposure.

Individualize writing instruction and support

Writing is an essential component of literacy and an ideal place to teach language skills because of the visual permanence of print. In contrast, spoken language and classroom explanations are often elusive for students who are DHH due to the speed at which they occur and the inability to reexamine a statement after it has occurred. A language lesson in print is something a student can refer to as often as needed. However, when the writing task is arduous and challenging, the student may not have enough time or stamina to complete the task. Classroom strategies to support writers can make all the difference in the writing experience for students.

Provide strategy instruction

The challenges that students with hearing loss experience in English phonological awareness, vocabulary, and English language knowledge impact the writing process, especially for young students. While all of these challenges may occur simultaneously during writing, they may need to be addressed in different ways. For example, young writers may struggle to write a sentence in their kindergarten journals to match their drawings because they do not have enough letter-sound knowledge to use the strategy of "sounding it out" that young hearing students use. Some students may need explicit instruction on how to use other strategies such as (a) referring back to the word wall, (b) using classroom picture dictionaries or personal word banks that they create for writing, (c) writing the first letter, (d) leaving a line or blank space to go back to the word or (e) drawing an icon until

they can find the word or ask someone for help, and (f) partner writing (Graham, Harris, & Troia, 2000). As discussed earlier, some students may need more individualized instruction on letter-sound knowledge and those specific strategies, such as using Visual Phonics as a visual cueing system, can and should be incorporated into writing.

For other students, the roadblock to writing may be a lack of vocabulary, not knowing the words for what they want to write. A personal word bank with key vocabulary can be generated together very quickly on a post-it note or 4×6 note card *before* the writing assignment for students who need more vocabulary support. The student is held responsible for creating the content and writing the sentences. Support for key words, especially story-specific words that are not in the dictionary, can be provided to facilitate the writing process.

Children who are DHH experience more delays in developing English syntax skills than any other language area (Lederberg, Schick, & Spencer, 2013). Lack of knowledge of English syntax, especially for students who are learning English as a third language, can also slow the writing process. Oral language errors can be seen in written language. SMART board technology during the editing process provides both teacher and students with a visual way to identify errors and correct them. A strategy to edit sentences with a younger student who is DHH and struggles with English syntax is to write the sentence, cut it into individual words or phrases, and ask the student to put the sentence in the correct order and identify missing words.

Case examples

Suzie was identified at kindergarten with hearing loss that greatly impacted her learning. At the beginning of first grade, Suzie worked with a TOD to develop early writing skills twice a week. Part of Suzie's daily classwork was a response to a written journal prompt, and she struggled with answering the prompt by drawing a picture and writing. Suzie and the TOD would talk about Suzie's picture part of the response and brainstorm words that she would need to write her journal entry, and together they would formulate a sentence. At first, Suzie could only identify the letter that corresponded to the initial sounds of a word, but they worked together to spell words as they wrote the response. As Suzie learned more letter-sound correlations, writing support was slowly reduced.

Mateo is an example of 21st-century learning, using video technology to translate his expressive language to print. He is a fifth grader who is deaf, communicates through ASL, and uses a sign language interpreter in his general education classroom; he also struggled with putting his thoughts on paper in an organized way. He completed brainstorming and graphic organizers with his classmates, but when it was time to write the first draft, he signed and recorded his story in ASL first. Then using the recording, Mateo was able to translate his ASL version of the story to written English.

Conclusion

Creating an accessible classroom learning environment for students who are DHH is possible and promotes learning for all students. Teachers can create an effective language and literacy teaching environment for DHH students as they work collaboratively with a team, optimize the physical classroom, and implement instructional modifications such as those shared here. At first it may seem overwhelming, but students who are DHH can be included more easily by addressing these key principles and walking through the checklist provided. Looking at the individual strategies outlined in this article, a pattern very similar to teaching language and literacy skills to students without hearing loss is evident. Effective educators take the time daily to create an optimal learning environment in which to effectively teach literacy and language skills in their daily instruction, integrate learning across multiple modalities, and individualize instruction as needed. While it is easy to forget the inherent challenges that students who are DHH face, the strategies of accessible instruction coupled with added awareness of the challenges facing students who are DHH will allow teachers to create accessible language and literacy instruction for all students. Q10

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Appendix

Checklist of Strategies

- Optimizing the Learning Environment
  - Analyze how each student will access classroom language.
  - Know what a student can and cannot hear (collaborate with an audiologist or specialist).
  - Monitor classroom noise with a decibel meter (free app).
  - Determine who will check personal amplification system daily (Ling six-sound test).
  - Consider classroom FM system if appropriate.
  - Analyze the visual environment.

- Read suggestions for how to collaborate with the educational interpreter.
- Enable the captions on videos.

- Pre-teach Vocabulary
  - Plan pre-teaching of words with multiple formats (chaining strategy).
  - Implement picture walks (teach new vocabulary through visual pictures).
  - Use Google Images and other technologies to provide visuals.
  - Allow time to process visual images and visual language.
- Determine how to teach skills related to sound
  - Include visual and multimodal instruction.
  - Consider using a visual cueing system such as Visual Phonics.
  - Explore ways to incorporate finger spelling in instruction.
- Include Print to Support Comprehensible Word Learning
  - Teach high-frequency words at the sentence level.
  - Include word sort activities in literacy stations.
- Provide Authentic Opportunities for Language Growth
  - Provide a sentence wall to help students communicate in full sentences.
  - Practice acoustic highlighting strategies.
  - Create opportunities for student interaction.
  - Teach classmates how to communicate with classmates with hearing loss.
- Individualize Writing Instruction and Support
  - Use the permanence of print and the visual accessibility to teach English skills.
  - Create student word dictionaries or word banks.
  - Implement partner and shared writing.
  - Cut sentences apart and reorder to support editing.
  - Consider having students record their story before they write.