

Reading Comprehension Delays – An Expectation for Most Students with Hearing Loss



*What does it mean to teach kids how to read text effectively?*¹ Initially, it means making certain that they can decode so proficiently that they can decode the words without much conscious attention. Texts are going to place increasing demands on students' linguistic abilities, memories, conceptual analysis, logic, and knowledge of the world. Those demands — not question types — are the potential barriers to kids' comprehension. The teaching of reading comprehension and learning from text should focus on how to help students surmount these cognitive, linguistic, and intellectual barriers. Students who can make sense of a text's ideas will be able to answer any kind of questions about that text. While students who fail to scale those linguistic and conceptual barriers will struggle with the simplest of questions. All of this is especially true for students with hearing loss, who are at high risk for being a couple of years delayed in reading comprehension compared to their hearing peers.²

Research consistently has shown that phonological skills, specifically phonemic awareness, are strong predictors of later reading proficiency. Improving students' phonemic awareness skills alone is not sufficient. It is also critical to explicitly teach students how to apply the phonological skills they learn and connect letters to sound.³ Students who are deaf or hard of hearing do not need to use (only) spoken language to understand and use phonological awareness, Supplementing this understanding through visual, tactile, and kinesthetic cues is often needed.⁴

Essential components of reading instruction⁵ for students with hearing loss means explicit and systematic instruction in –

- **Phonemic awareness:** Reliant on ability to perform fine auditory discrimination, including high frequency hearing
- **Phonics:** Reliant on ability to clearly hear the sound/letter associations to be able to compare/contrast
- **Vocabulary development:** Reliant primarily on incidental learning and exposure through having been read to by family
- **Reading fluency, including oral reading skills:** Requires appropriate intonation, pronunciation, 'instant' phonics recognition, understanding of syntax and punctuation, knowledge of wide range of vocabulary, etc.
- **Reading comprehension strategies:** Relies on understanding story grammar, being able to take the perspectives of other (Theory of Mind), broad vocabulary, understanding of multiple meaning words, figurative language, idioms, etc.

A 2015² study that compared children with hearing loss to typically hearing students found:

- Reading comprehension difficulties of children with hearing loss may be poorer than predicted from word-reading skills. There is a need to examine BOTH the word reading and reading comprehension for stories that are within the child's word-reading ability.
- Children with hearing loss may be especially poor at integrating their outside knowledge with information in the texts. They are likely to benefit from guidance when answering inference questions to help them use more efficient comprehension strategies and encourage them to incorporate different sources of information.

The teaching of reading comprehension and learning from text should focus on how to help students surmount these cognitive, linguistic, and intellectual barriers. Major attention needs to be spent on reading and making sense of texts rather than upon answering particular types of questions about texts.¹ Learning strategies that happen before and during reading can help students overcome challenges that they face when gaining access to and attempting to understand text, resulting in improved comprehension.²

Comprehension instruction should be aimed at teaching students:¹

- Word meanings and the meaningful parts of words (morphology).
- How to infer word meanings from context and structure.
- How to untangle the complex syntax of sentences.
- How to interpret the cohesive links across a text.
- How to identify and interpret the organizational plan or structure of a text and how to use this organization as a memory aid.
- How to interpret an author’s tone.
- How to use (and not overuse) one’s knowledge to help make sense of a text.
- How to summarize text information effectively.
- How to monitor one’s comprehension — recognizing whether understanding is taking place and taking appropriate action if it is not.
- How to rehearse text information so that it is remembered/learned.
- How to interpret the graphic elements of texts (e.g., illustrations, charts, graphs, tables).
- To develop the reading stamina required for understanding longer texts.
- To recognize what a text says and what it does not.
- How to compare and combine information appropriately from multiple texts.

Teaching morphology to students who are deaf or hard of hearing is often necessary.^{6,7} Facilitating the learning of morphologically complex words is particularly important because these words comprise 60-80% of the new words that school-age children must acquire to successfully read grade-level text.³

Similarly, problems with understanding syntax may result in difficulties with reading comprehension.^{3,8} These challenges become more pronounced when reading academic texts that comprise complex grammatical structures.⁸

Underdeveloped vocabulary becomes insufficient to support effective reading comprehension and writing, and in turn, has a negative impact on overall academic performance.³ Vocabulary is the key to content literacy for students with hearing loss.⁹ A variety of educational strategies are recommended to improve vocabulary and reading comprehension.^{3,10}

For more information see Maximizing Effectiveness of Reading Comprehension Instruction in Diverse Classroom.

Good versus Poor Readers: Before, During, and After Reading²	
GOOD READERS	POOR READERS
Before Reading	
-Use text features (e.g., headings, illustrations) to get a sense of what they will read and help themselves set a purpose for reading. -Set goals and ask questions that will help them be selective in the focus of their reading. -Consider what they already know about the topic. -Observe how text is organized, which prepares them to make connections between and among concepts.	-Begin reading without a purpose for reading. -Do not consider (or do not have) background knowledge about the topic. -Do not recognize how text is organized and therefore do not have a plan for how to approach reading it. -Lack motivation or interest in reading.

During Reading	
<ul style="list-style-type: none"> -Read fluently (quickly and accurately) and use word identification strategies to decode unfamiliar words. -Use strategies (i.e., context clues, prior knowledge) to figure out the meaning of vocabulary and concepts. -Recognize and use text structures to make connections between the meanings of sentences and/or concepts. -Ask and answer questions while they are reading. -Make predictions about what will happen next and evaluate their predictions as they read further. -May make mental images of what they are reading to help them visualize what they read. -Identify the main ideas as they read to determine what is important, what is supportive, and what is less important. -Monitor their reading by recognizing comprehension problems and using fix-up strategies to repair their understanding. 	<ul style="list-style-type: none"> -Have difficulty decoding words, particularly multisyllable words, resulting in slow labored reading that detracts focus from comprehension. Laborious reading is also likely to result in frustration and a desire to just “get it done.” -Have limited vocabulary and lack strategies to figure out new words. -May not have background knowledge of the topic of the text, which impedes their ability to make connections between the text and what they already know. -Do not recognize text structures. -Move through the text, even if they do not understand what they have read. -May be easily distracted because they are not actively engaged with the text. -Are not aware when comprehension has broken down and/or lack strategies to repair comprehension problems when they do.
After Reading	
<ul style="list-style-type: none"> -Reflect on content that was read. -Summarize important points from the reading. -Draw inferences. -May go to other sources to clarify concepts they did not understand. -Believe success is a result of effort. 	<ul style="list-style-type: none"> -Do not use strategies to reflect on reading. -Cannot summarize important points. -Do not seek out information to help them understand what they read. -Think success is a result of luck or some other external variable rather than strategic effort.

References

1. Shanahan, T. (2017). If you really want higher test scores: Rethink reading comprehension instruction. [Website link to blog.](#)
2. Kyle, F.E., & Cain, K. (2015). A comparison of deaf and hearing children’s reading comprehension profiles. *Topics in Language Disorders, 35*(2), 144-156. [Link to PDF](#)
3. Berkeley, S. & Barber, A.T. (2014). **Maximizing Effectiveness of Reading Comprehension Instruction in Diverse Classroom.** Paul H. Brookes Publishing, Baltimore, MD. [Link to book source](#)
4. Narr, R.A.F. (2006). Teaching phonological awareness with deaf and hard-of-hearing students. *Teaching Exceptional Children, Mar/Apr*, 53-58. [Link to PDF](#)
5. Antunez, B. (2002). English language learners and the five essential components of reading instruction. [Website link to blog.](#)
6. Koppenhaver, D.A. & Wollak, B.A. (2014). Morphemic decoding instruction for students who are deaf or hard of hearing. *American Reading Forum Yearbook, 34*, 1-14.
7. Bow, C.P., Blamey, P.J., Paatsch, L.E., & Sarant, J.Z. (2004). The effects of phonological and morphological training on speech perception scores and grammatical judgments in deaf and hard-of-hearing children. *Journal of Deaf Studies and Deaf Education, 9*(3), 305-314. [Link to abstract](#)
8. Cannon, J.E. & Kirby, S. (2013). Grammar structures and deaf and hard of hearing students: A review of past performance and a report of new findings. *American Annals of the Deaf, 158*(3), 292-310. [Link to abstract](#)
9. Dunaway, A. (2017). Content literacy in students with hearing loss: Vocabulary is key. [Link to blog](#)
10. New Mexico School for the Deaf. Educational Strategies that Work with Deaf and Hard of Hearing Students. [Link to PDF of PowerPoint presentation](#)