

# Effective Tutoring Practices with Deaf and Hard of Hearing Students

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## Abstract

In part due to the Americans with Disabilities Act, deaf and hard-of-hearing individuals are obtaining postsecondary educations in a wider variety of programs. However, many programs are new to providing services to deaf and hard-of-hearing individuals and may not be aware of special needs that can arise. This paper targets tutors who may be working with deaf or hard of hearing individuals for the first time. It covers basic communication information, as well as tips and techniques that other tutors have found work well with deaf and hard of hearing students.

## Hearing Loss and Communication Preferences

Deaf students and hard-of-hearing students have two very distinct groups of needs. While it is true that both groups have a hearing loss, they tend to deal with the loss in very different ways. Students who are hard of hearing tend to depend upon amplification, speech reading, and print to accommodate the hearing loss. Students who are deaf tend to use sign language. Deaf students may use speech reading to supplement the visual sign language input, but rarely depend upon speech reading alone for communication. They may also identify themselves as members of the Deaf culture. Hard of hearing students typically identify with the hearing culture.

Late-deafened students are those who have lost their hearing after they have acquired speech,

often as adolescents or adults due to illness. These students sometimes learn English sign systems in addition to developing speechreading skills. They generally identify with the hearing culture, not the Deaf culture. They may be more dependent on print communication than students with other hearing losses.

Some students you tutor may have a cochlear implant (CI). CIs do not return hearing to normal. You will need to talk with the student who has a cochlear implant to find out if he or she has any special communication needs. Oftentimes, their communication needs will be similar to those of hard-of-hearing students, as they will still use speech reading to supplement what they pick up auditorily.

Communication methods depend upon individual preference, not his or her audiogram. The best thing you as a tutor can ever do is to ask the student what will work for her in a given tutoring situation, and continue a dialogue with the student.

*Communication tips.* Many people feel uncomfortable when a deaf or hard-of-hearing student approaches them because they are anxious about how communication will occur. In general, though, deaf and hard-of-hearing students expect that you will not know what to do. Keep in mind, some students will be better at communicating their needs than others. Whatever the case, be courteous. This will go a long way toward keeping communication open.

Many people use humor to get through uncomfortable situations, to loosen up new students,

or to get the session going. While a sense of humor is very helpful, telling puns and jokes that are based on sound and plays-on-words may fall flat. While not considered offensive, they simply may not accomplish your objective. Even using an interpreter may not ease the situation. Few of us are aware of how often we use idiomatic language or language that is tied to a context such as television programs (e.g., “Danger, Will Robinson! Danger!,” or “Where’s the beef?”). Older programs and commercials are not generally captioned, and the student simply may not have had access to them and they will not carry any significance for them. These phrases can and should be explained if the student does not understand, but it is a trade off. Does the phrase add to the tutoring session, or is it superfluous? Does the student catch on with explanation, or does it confuse and detract from your goals?

A nod does not always mean that you are understood. Sometimes, the individual is just trying to keep a positive feel to the communication and will nod in encouragement, recognizing that you are trying. Additionally, when working with interpreters, the student may be nodding to the interpreter as a way to let her know that she has his attention. Always double check that the student understood important information, such as dates and times, by asking him to repeat or write down the information.

Also, be aware of alerting the individual to noises in the environment. If you are chatting with someone and your phone rings or someone walks by and calls your name, let the individual know with an ‘excuse me’ before turning your attention away and responding. Otherwise, you may come across as abrupt or rude, since the deaf or hard-of-hearing person will not know why you are suddenly distracted or looking away and talking.

Always remember, if you do not have eye contact, you do not have communication. This is very important to remember throughout the tutoring session. Avoid breaking eye contact in mid-sentence (for Deaf students, this is a cultural point and may be interpreted as a lack of interest on your part). Similarly, you may be accustomed to writing or demonstrating and explaining at the same time. The student will not be able to watch the demonstration and ‘hear’ the explanation (i.e., watch the interpreter or read your lips) at the same time. Instead, remember to do one thing at a time.

This may be the most difficult habit you must change!

Gestures can be used to help get a point across. Facial expressions and body language assist in communication. You may find it helpful to establish a particular sign or action for high-frequency words and concepts.

Finally, if the other techniques you are using just are not getting the point across, grab a pen and paper and write it out. It may be a key word that the person is not getting or the entire sentence. Just remember to keep the language simple—write only enough to get your point across. Remember the language needs and skills of the student you are tutoring. If a computer monitor is visible, you might try typing out the message, too. Setting the font to a larger size will make it easier to read at a distance. Hard-of-hearing and deaf individuals greatly appreciate it when someone is willing to take the time to communicate, no matter what medium is used!

*Speechreading.* After you have gotten the student’s attention, then what? Speaking up helps. Enunciating by making a clear separation between words helps. Yelling does not help. Misunderstandings may occur because you look tense, when you are actually trying to talk louder.

You should continue to speak at a normal pace. Be aware of words that may be more difficult to speechread or that may be unfamiliar to the interpreter (e.g., jargon, words that look alike on the mouth).

Speechreading is a skill much like playing the piano: it can be improved with practice, but you might not ever become a virtuoso. At best, only 33% of English phonemes are visible on the mouth. As much, if not more, information is gained through context, facial expression, and body language. Other variables may interfere with speech reading as well, including glare, facial hair, accents, and noisy environments.

You should not expect speech reading to be 100% effective. When the student indicates that he did not hear something you said, you might first try repeating it. If this does not work, do not keep repeating yourself. It may be that that word is not very visible on the mouth or that the student cannot hear the frequencies in that particular word. You might try spelling or writing the word or saying the word or phrase in a different way.

Also, it is very helpful to you if the student indicates what part of what you said he did understand, instead of just saying 'what?' For example, if the student says, 'You want me to look on *what* page?' then you know exactly what you need to clarify instead of struggling through the whole sentence. Not all students will be aware of this useful communication technique. You may need to ask the student to phrase his questions this way.

*Using an interpreter.* Sign language interpreting is a dynamic process, requiring the interpreter to facilitate communication between two language modes and cultures. Interpreters follow a code of ethics. For example, they are not allowed to participate other than to say what is signed and sign what is said impartially. They often have access to many situations involving deaf individuals, and thus must keep information gained while on the job confidential. There may be some period of adjustment in working with an interpreter to ensure that communication is satisfactory to all participants.

You should remember that most hard-of-hearing individuals do not use sign language. When they do learn sign, it is more likely to be a signed English system rather than American Sign Language (ASL). What may be very useful, though, is an oral interpreter. Oral interpreters use special techniques to mouth everything that is said for the deaf or hard of hearing individual. They are aware of words that are difficult to speech read and words that look the same on the mouth (e.g., bomb, mom), and may paraphrase so that the word or phrase will be understood. Oral interpreters are especially useful so that the hard-of-hearing person will have continuous access to the interpreter's face to ease speech reading, whether or not the speaker has turned his or her head or is looking down.

In group situations, the interpreter will indicate who is speaking and when speakers change, and also noises in the environment, such as laughter, sirens, and alarms. If you are working in groups, you must play 'communication cop.' That is, do not let people talk over each other. It helps to regulate the pace if the student first says his or her name before speaking. Remember, the hard-of-hearing student will not hear what she does not see. If the students cannot be seated facing each other, the hard-of-hearing student will either need an oral

interpreter or need all comments repeated by you. Also, the speaker will need to visually identify himself, by raising his hand, for example, so that the student will know where to look.

Many people feel awkward when they first attempt to communicate through an interpreter. You should sit so that you are facing the student, with the interpreter positioned so that the student can see both of you without a lot of back-and-forth movement. In a lecture situation, the interpreter would be next to the speaker. In tutoring situations, however, the interpreter may need to be able to maintain the proper line of sight with the student while at the same time be able to see print materials the student and/or the tutor may be referring to. This in itself may take some adjustment to work out.

Avoid saying, "Tell her..." as this is talking to the interpreter, not the student. Just talk to the student, and let the interpreter take care of the communication. Also, if you want information about the student, ask the student through the interpreter. Do not leave the student out by asking the interpreter "Does she..." The interpreter may or may not have the information; indeed, the interpreter is bound by the Code of Ethics and should not respond with this kind of information.

After the session, check in with the interpreter to see if she has any issues or concerns related to the communication process. Again, avoid talking about the student, instead focus on communication.

*Assistive Listening Devices.* Many hard-of-hearing students, including those with cochlear implants may find assistive listening devices (ALDs) beneficial. ALDs are portable electronic devices that help hard of hearing individuals hear better by bringing the sounds they want to hear directly to the ear. The tutor speaks into a microphone. The student picks up the sound through a receiver with a volume control and listens through a head set or some other device to get the sound to the ear, depending on whether or not the student uses hearing aids or has a cochlear implant. (Note, the student does not have to wear hearing aids to benefit from the devices.)

Depending on the student, you may still need to maintain visual contact. Nonetheless, ALDs are very beneficial. They help reduce background noise, which can be very intrusive for hearing aid

users (hearing aids amplify everything, not just speech sounds). They also amplify only what is coming in through the microphone, so they help the student to focus in on your voice. This allows the student to attend to the content, and reduces the strain of simply decoding the message. For more information, a paper by the author entitled “Demystifying Assistive Listening Devices” is located elsewhere in these proceedings.

### A Note on Notes

Deaf students usually have notetakers for their classes. The reason is simple: to look down to take notes would mean missing the next piece of information, with the end result being the student becoming completely lost during the lecture.

One unavoidable disadvantage of using notes written by others is that these students are missing numerous opportunities to practice writing that students who take their own notes get daily. Without a concerted effort, it may be that the only time the student sits down to write in English is when she must write a paper or answer essay questions on a test. It may be useful to review these notes with the student. Check that the student satisfactorily benefits from what is written and can relate it to the class lecture. As you go over the notes, focus on the content. Have the student tell you what it means. Having the student take notes from the notes is a very useful exercise. It not only helps the student to firm the information in her own mind, but also provides practice in writing.

### English Usage Issues

People often, without realizing it, equate English language skill with intelligence. You may assume that students who can speech read (or speak more clearly) are more intelligent than students who cannot. **YOU SHOULD AVOID MAKING THIS ASSUMPTION!** Especially for Deaf, sign language using students, English language skill level tells you one thing—English language skill level. In these cases, it may help to think of the student as using English as a second language, with American Sign Language being his first language. Hard-of-hearing individuals simply lack the auditory cues to help them evaluate their speech clarity.

It is often said that English is best learned by listening. Think for a moment how much auditory exposure a person with no hearing loss has to the English language. TV, radio, movies, and conversation (even those overheard) contribute to our language learning. Deaf and hard-of-hearing students do not have the same exposure to this incidental learning. In order for the deaf or hard-of-hearing person to ‘overhear’ something, they must be focused on it visually.

ASL is a three dimensional language separate from English, with its own grammar and syntax. It is a signed language, not a written language. Visually, many things can be communicated simultaneously. A simple example of this might be ‘The woman walked by slowly.’ The way the woman is walking, and the information that she is walking by would be indicated by a single moving handshape.

You may notice writing problems that resemble the problems of students using English as a second language, such as missing articles, problems conjugating verbs, difficulties with comparatives and absent referents, and misuse of words. Sometimes you may notice that the words are written in an unexpected order. The student may be applying the grammar rules of ASL to English.

The passive voice that is used so often in academic writing and newspapers is absent from American Sign Language. Homonyms can cause confusion for deaf students. Take for example, **run**: run out, run off, run up, run down, run against, run into, run around, run (in stockings). The dictionary lists two columns of uses of the word ‘run’. ASL is highly contextual. Each conceptual use of the single word is signed differently in ASL.

You will probably find that understanding the structure of ASL will enhance your ability to explain English. The student must grasp how elements that are expressed simultaneously in ASL are realized linearly in English. It is very difficult to explain in English how to use English. If the student does not have a strong background in either language, it may be that skills in *both* languages need to be strengthened, instead of only focusing on English.

Make sure that the student understands that hearing students must write, edit, and rewrite papers, too. No one writes a paper perfectly the first time. The first draft is usually done to get the

information down on paper. Revisions focus on clarity and grammatical structure. Students often believe that others do not have any problems in writing. The student should understand that everyone's writing is improved with editing.

## Reading

*Vocabulary.* Due to lack of auditory exposure, deaf and hard-of-hearing students may need to spend more time studying new vocabulary. Students should practice, practice, practice: practice spelling the word, practice writing the word, and practice reading what they have written.

Where possible, break down the word into its root, prefix, and suffix so that the student might apply this tool on her own later (e.g., the French 'mort' or 'death' is the root of mortician, mortuary, mortal, mortify). Also, watch for situations where overgeneralization might be a problem (e.g., mortar). Having students use words in context and in sentences that they make up will help you identify problems the students might have in understanding so that you can help them understand the limits and exceptions to the rule.

Suppose a student has a list of vocabulary words she must memorize. One way to do this is through a 'fold and compare' technique. The student would first list all the words in a column on a piece of paper. The student would then write definitions for each word in another column. Then the student would fold the column of words so that it is hidden, and write the correct word next to the column of definitions. Then the definition column would be hidden and the student would rewrite the definitions in yet another column. Other techniques include fingerspelling or writing the word until memorized, and using flash cards.

*Advance Organizers.* Students who have difficulty with reading may need a great deal of support pulling information from reading assignments. For example, some students may not be fully aware of how to use headings and other advance organizers to help them navigate through a reading assignment. Knowing what you are about to read can aid comprehension as you move through an assignment.

One helpful method that teaches the student to be very interactive with the reading material is

called SQ3R. It involves surveying the materials, questioning what you are about to read, actively reading it, reciting information from the reading, and then reviewing that information. If you are not familiar with SQ3R, more information is available on it from the Tutoring and Writing Links website at <http://www.wou.edu/nwoc/tutorlinks.htm>.

*Study questions.* Research has been conducted showing that deaf students who are poor readers, when given study questions to guide their reading, performed similarly to skilled readers given text only in tests of immediate factual recall. See Dowaliby and Lang (1999) for more information.

*Check for Knowledge.* When you are checking for understanding with a student, avoid asking yes/no questions. Students may be reluctant to admit they do not understand the content, or may nod in agreement to keep the interaction feeling positive rather than to indicate their level of understanding. Do ask open-ended questions that require the student to respond with the content. If the student is having difficulty pulling the concept together, ask the student how he would explain it to someone else, such as a friend or a child. Always have the student use new concepts and vocabulary in a sentence or paragraph. Examples of these probes include: compare, contrast, criticize, define, describe, discuss, evaluate, explain, illustrate, interpret, justify, list, prove, relate, review, summarize, and trace. Using these types of probes with students to check their level of understanding on the subject will also teach the student critical thinking skills they can use for life.

## Writing

*Grammar.* Make sure that students not only know the rules of English, but also are also able to apply them. Some students find that it helps to actually sign the sentence instead of just reading it when they are looking for errors.

Provide many opportunities for practice. If relevant, have the student keep a journal or communicate with you through e-mail so that writing becomes an everyday task for him. Explaining English grammar using English can be very difficult. Make your explanation, but follow it up with many, many examples. Help the student to

experience the information for himself. It will be remembered much better than the interpreted message. Some exercises are conducted by filling in the blank.

Use as many visual cues as possible. For example, use colors to indicate pluralization, nouns vs. verbs, articles, etc. Using the same color for the same part of speech each time will help the student to identify to what category the word belongs. Students can use pens with 4 colors in one for some of these assignments. It may help students if they do not erase their mistakes, but write the corrections above their original answers.

Finally, be sure the student is able to generalize from examples given by the professor. The student may only be able to give back examples identical to those provided in the classroom. Practice with generalization helps to firm conceptual grasp, as well.

*Organizing Information.* When the student has information that he needs to organize, such as writing a paper, developing a mind map is a useful technique. This graphic representation of the topics to be covered often helps the student to develop the topics more fully. One computer program that is very useful for this purpose is Inspiration. Examples of mindmaps can be found on the Inspiration website <http://www.inspiration.com>. The main idea is placed in the middle, and the related ideas are placed around it, with arrows to show the connections between ideas. Mapping out ideas is such a successful technique, that many educational programs have students write papers totally using programs such as Inspiration. These computer programs make it easy for the student to manipulate the relationships between ideas, allow for easy editing, and can convert the map to an outline, and vice versa.

What if the student does not have access to this kind of a program? Students can also write out ideas on separate cards. These can be moved around until an appropriate fit and order is found. Colors can be added to indicate subordinate levels.

While maps and charts are very visual and graphic, outlines are very linear. Word processing programs such as WordPerfect and Microsoft Word make outline construction much easier than in the past. Ideas can be easily moved around until the desired order is found.

*Style.* While tutors must avoid proofreading papers, there are several things he can do to help the student improve her writing. Watch for patterns in the student's writing, and help the student to identify these patterns. Strategize with the student about ways to resolve negative writing patterns. For example, the student may use the same transitional phrases repeatedly. Point this out to the student, and help the student brainstorm other possible transitional phrases. Maybe the student uses a particular word repeatedly. Word processing programs can provide help in choosing alternates, but the student must be wary of nuances in meaning.

Help the student with the flow (remember, the student can't hear how it sounds). Ask the student what he is trying to say. You may need to help the student break the paper into sections (mapping and charts can be very useful for this). Identify problems within each section, and help the student evaluate quality: Is the introduction clear? Is the idea well developed? Are there transitional sentences? Is there a closing or summary for the section?

All papers can be improved with proofreading and rewriting. The student should try trading papers and getting feedback from friends. Finally, students must plan ahead when writing papers. They cannot be put off until the last minute. You may need to help the student develop an organizational plan or time line for writing the paper that would include gathering research, reading resources, developing an outline, writing the draft, revising it, and finalizing the paper.

## Math and Sciences

Math is a subject worthy of strategically planned tutoring steps for deaf students. Problem-solving strategies are key to success in math. Students' problems in mathematics vary. He may tend to work quickly and make errors; be unable to identify and sort out relevant features of a problem situation; or misunderstand the problem goals.

Always have the student write out every step until he is firm in his understanding of the process. When you are talking through steps, especially if you are working through an interpreter, be sure to pause between each step to give the

interpreter a chance to finish conveying the message and the student a moment to process the information. As with English, it is helpful to use color to identify different operations. It also may help to indicate that you are moving on to another step if you draw a line or change colors. If you are working with formulas, talk through the formulas, and then show with an example. Again, students will remember things much more easily when they have understood it for themselves than when they are decoding an interpreted message. Teach by using many different examples. This will help the student to make the connection.

Talk strategy before attempting the problem. Research has shown that modeling and discussing problem-solving strategies does help students learn how to approach problems. Explain to the student how and why a problem should be solved a particular way. Then when the student is preparing to solve problems, have the student explain, in his own words, how he would approach a problem and why. Always have the student convey to you *what* he is doing (this helps to firm the information in his own mind) and *why* he is doing it. Help the student massage less complete statements into more complete statements (e.g., 'We're doing LCD' into 'We're combining algebraic fractions and using common denominators'). Asking students reflective questions about their problem-solving procedures using the evaluative probes listed above can be very enlightening for the student.

Find out if the student is allowed to use calculators in solving problems, and then use them to their fullest, including fractions and graphing calculators.

With word problems, extra care must be taken to be sure that the student understands the English, and then understands the math that would solve the problem. Where possible, keep it functional. Relate the information to something the student might need to do. This will help keep interest high and maintain motivation.

Graphing out or sketching the information can be very helpful in getting the student to visualize the problem. A drawing of 'A person heads

north for three miles, then turns east' or 'A line is tangent to a circle' is immediately understood.

Students may benefit from developing a 'cheat sheet' that lists the variety of vocabulary found in word problems and their symbol equivalents. For example, in a word problem the subtraction symbol might be communicated by phrases such as 'decreased by,' 'less than,' 'difference,' 'diminished,' 'remainder' or 'reduced.'

## Summary

Ultimately, students are responsible for their own education. Tutors are responsible for helping students learn which study skills work for them so that they can survive on their own. Many new students do not understand this and will have unrealistic expectations of tutors.

Set up ground rules at the first session and let the students know what to expect. Taking the student through a series of quick questions at the end of each session will help him review his progress and reinforce the idea that he is the one doing the work and making the progress. Simply asking the questions that review progress will help the student who may have never thought about the process apply the information to other tasks he encounters.

Especially in tutoring around English writing skills, realize that the student may have had many negative experiences. Face resistance with a positive attitude. Encourage the student to try. Help them to develop a positive attitude. Regularly remind the student of the progress she has made.

## References and Resources

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