

A description of communication methods

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-Note, for the sake of brevity, and clarity, the pronoun “he” is used, although it is assumed that we are referring to people of both genders.

-The person using the communication method is referred to as a consumer, as he may be a young student, or an adult.

Signed languages

There are many communication methods that use signs. For example, American Sign Language (ASL) is used by many deaf people in the United States and elsewhere. Other countries have their own signed languages, including MSL (Mexican Sign language) and BSL (British Sign language). Each of these is a distinct language, with its own grammar structure, vocabulary, and cultural norms, such as idioms. A deaf person who uses English Sign Language will not understand a person using American Sign Language without studying the language. Many people who use one of these formal signed languages cite this as a reason why deaf people are part of a cultural unit (referred to as Deaf culture), because of their use of a shared language.

Each sign has a distinct meaning, like a word in English, but there is not necessarily a one-to-one correspondence. A few English words can sometimes be expressed one sign, or they may be a few signs to describe one English word. For example, one asks, “How old are you?” with two signs, but there are several different signs for a hat depending on what kind is being referred to. Fingerspelling is also used in American Sign Language. Fingerspelling is a manual method of spelling out words using individual letters. Each letter has its own sign, or handshape; Fingerspelling is used in several different ways. Specific or technical words used only in one field are often fingerspelled, for example, “Doll sheep”. Proper names are often fingerspelled. Some other words are commonly fingerspelled as well, such as “bus”, “gas” and “job”.

Aside from formal signed languages, such as ASL, there are also signed codes for English (and another spoken languages). These are ways of communicating in English using a manual sign for each word that would be spoken. It is not considered a formal language, since it uses the grammar structure of English. There are a few names for these communication methods, each following English to a different degree. For example, Pigeon Sign Language, or Signed Exact English follows each word of English. The sentence "What is your name?" Would have four signs, just like the spoken equivalent has four words. You would sign, "What is your name?" Signed English often refers to the use of English words and grammar patterns, but it leaves out many words, and takes up some aspects of ASL. The sentence above would be signed "What your name?" Both also use Fingerspelling when appropriate. ASL, on the other hand, would use its own grammar structure, and the same sentence would be signed "Your name what?"

Sign language is not easy to learn, whether it is American Sign Language, or a form of signed English, but many people, including older adults, can pick it up with practice. It is a very beautiful language, and its best reward is being able to communicate with deaf friends, students, and family members! Everyone has a lot to say, if you know how to "listen".

Speech and the deaf child

When hearing people first meet deaf people, the first thing they may notice is that many deaf people's speech is atypical of a hearing person's. There may be misunderstandings as to why this is.

For example, let's pretend that two hearing elementary school-aged girls are on the phone. They are discussing their recent figure skating competition. One complements the other on a fancy new jump that she performed, and asks the other how to do it. Now both students are good at figureskating, and neither have a disability, but describing how to skate using only the auditory channel, while not having the visual input of seeing the jump done would put her at a great disadvantage. Even after describing the jump in great detail, the other girl might miss details that weren't explained, such as

how to move her hands,; she only understands details that were specifically told to her. Also, although she may have been told each detail, such as what to do with each foot, or how to bend or twist her torso, she doesn't have an overall picture of what the jump would look like, giving her a second disadvantage. Later, as she tries to practice it, She may do the jump incorrectly, Not having seen her friend model the movements for her, she may assume that she is correct, and continue to do it incorrectly, receiving low score at a competition despite her overall ability in figureskating.

The congenitally deaf student finds these same obstacles when learning speech. Although some deaf people can learn to speak well, they encounter the same obstacles faced by the two girls on the phone; they don't have an auditory model to copy. Speech is an extremely complex process, involving the muscles of the mouth, face, neck, and chest. One must breathe at the correct time, inhale and exhale the correct amount of air, coordinate the many muscles of the mouth with that of the tongue, and use proper pitch and speed. Without a model to copy, this is an extraordinary complex learning process. This, understandably, is reflected in some deaf people's speech patterns. Keep in mind that this is a result of their hearing loss, and is not necessarily a reflection of their ability to move their face and chest muscles, of their ability to use or understand language, or of their intelligence.

Does this mean that deaf students should not be taught speech? Not by any means. Being able to communicate with their peers, family and community can be one of the most important goals for any student. Many deaf students do learn to use speech to help them communicate.

Then how do you start to teach speech to a deaf child? The answer is that visual, tactual, kinesthetic, and residual auditory senses are used. Teaching speech is a complex process, and your child's speech and language therapist is the one to consult. They are experts in knowing how to teach speech and language skills. I have provided a background here, so you understand some of the activities that the student may do in speech therapy sessions.

There are some aspects of speech that are more easily taught to a deaf student, because they use senses that are available to them.

There are two kinds of sounds that you may not be aware of. As you make the sound "b" as in "bee", put your hand to your throat, and you may notice a vibration in your neck. Sounds that

vibrate your vocal cords are called “voiced” consonants. Consonants that do not vibrate your vocal cords as much, such as “p” in “pea” are called voiceless. Notice that these two sounds are made the same way, but by changing how much you vibrate your vocal folds, you can change the sound completely.

Some sounds are called “nasals”. These include the “M”, “N”, and “ing” sounds. Note that “ing” is one sound, even though you write it with three letters. As you make these sounds, feel the bridge of your nose, and you can feel your sinuses vibrate.

There are other differences in consonants that can be taught to deaf students to assist them in learning speech sounds. There are groups of consonants that are produced in a similar manner. For example, both the “f” and “v” sounds are made by forcing air between the upper teeth and the lower lip. The sounds “B” and “P” are made by suddenly opening the lips, creating a “pop”. This kind of information can often be taught to deaf children because it is visually and tactually observable, and so it can be modeled.

Speechreading

Speechreading is the process of using visual input to understand spoken communication. It traditionally was called “lipreading”, but the term was changed to reflect the use of context clues, such as facial expressions, to understand a spoken message.

One interesting aspect of speechreading is that many letters, although they may sound very different, look exactly the same on the lips. For example, try saying the words “bob”, “mom”, and “pop”. You may notice that the “b”, “m”, and “p” sound different, but look the same on the lips. Other sets of sounds that look the same are “F” and “V”, the “th” in “the”, and the “th” in “thistle”.

On the other hand, many sounds look different. For example, the rounded shape of the lips to produce the “oo” sound looks different than the wide mouth of the “ee” sound. These visual distinctions are taught so that the deaf student can distinguish between sounds.

Risuagal hearing

It is very rare for a deaf person to have no resugal hearing at all. Even stuenets whose audiograms say that they have a profound hearing loss can sometimes respond to extreamly loud sounds. In addition, just like any skill, using ones resigal hearing can be practiced and improved upon. A typical method of doing this would be to call attention to loud sounds so the child lpractices his auditory attending skills, or practice distinguishing between his name and that of siblings when he can't see your mouth.

In addition, context clues are often utilized by heard-of-hearing students. In fact, hard-of-hearing studnets may not even be aware of their reliance on context clues and lipreading when understanding a spoken message. The author was in a dark movie theater as a girl, When her mother turned to ask her Aqueation, she answred "Sorry mom, I can't ehar you in the dark." This may seem like an odd statement, but it demonstarits a skill that many hard-of-hearing people have, the ability to use visual ques to fill in gaps in an auditory message, even if it is done subconsciencly.

It shouls be noted here that practicing using ones resugal hearing, and learning to speechread, improves ones ability to *attend to* sound and to use context clues. It does not, on the otherhand, improves ones physical ability to *hear*, or lesson the need for amplification, such a hearing aids. Also, it is important to note that "hearing" a sound, and "understanding" a message are not the same thing. Picture a radio that gets bad reption where the volume is on "low" .,The sound may be audible, but the listener can't understand the message. Hard-of-hearing students have a similar situation. Often, a hearing loss varies among frequencies. In other words, people can typically hear low sounds better than high scounds. They only get part of a spoken message, not the whole message simply "turned down". It is misleading to think that because you daughtor turns when you call her, that she could distinguish between her name an that of a sibling, or that she could understands an entire spoken message. It is important for teachers and parents to check for comprehension when speaking with hard-of-hearing students. This is expecially importing when giving directions or presenting new information. Please see the apendex for a list of questions you can use to check for comprehension.

Object cues

Object cues are often used to communicate with students with dual sensory impairments or multiple disabilities. They are objects, or objects attached to board, that represent an activity or idea. They are typically presented to a person, so that he or she understands what is happening next in the day, or what is expected of them. The consumer associates the object with the activity, and then understands what is about to happen. For example, being presented with a spoon might indicate that it is time for lunch.

It is important that the object cue be presented directly before the activity is to happen, especially when object cues are first presented. For example, the lunch cue should be presented directly before food is prepared by the student, or right before it is time to walk to the cafeteria, not to mean, “lunchtime is coming up”. This keeps the meaning of the cue clear, and shows the direct correspondence between the object cue and the activity.

For the higher functioning consumer, you can create a “calendar board”, which is a series of object cues in the order of the day, and as activities happen, the cues are removed from the board, moved, or covered. Often, when a student can predict an upcoming event, the world seems predictable and orderly. This in turn often builds independence, and may lessen challenging behavior resuming from a consumer not understanding what is happening or what is expected of him.

Object cues are typically used only to communicate *to* a person with disabilities. This is important to remember, because not only does he need to know what is expected of him, he needs to have an outlet to express himself, and make choices. See the section on communication boards for more information on one method of doing that., No one likes to spend their life simply being told what to do.,

Object cues are not hard to make, but need to be done with foresight.

First, an object is chosen that represents the activity. Eating might be represented by a spoon, for example. Keep in mind that if the student is visually impaired, he or she might not associate sitting with a tiny replica of a chair, for example. He may associate it with the sitting surface of the chair, which is the part of the object his body comes in contact with. In fact, some visually impaired students don't have a concept of a chair as being a separate, contained object, but as a seating surface that touches their body when they sit down.

Make a piece of heavy card, foamcore, or well-sanded plywood about 5"X7". Glue the object to the board securely. This adds consistency to all of the cues, and tells the consumer that the object is a "cue", and not simply a spoon. For a higher functioning consumer, a label, in print or Braille can be added. Make one for every major activity the consumer will do in a day. Focusing on major, routine activities. Choose art, for example, as opposed to picking up a pencil.

The trick with using object cues is quantity and consistency. The cue doesn't have to be presented for a long time, just long enough to be visually or manually recognized, but it must be presented *every* time the activity is done to be effective.

Tactile Sign Language

Tactile sign language is any signed language that is presented manually. It is used by deaf people who also have visual impairments. The communicator's hands are often placed over the hands of the person signing, so that the message is understood tactually, rather than visually.

When beginning to teach tactile sign language, the signs should be made under the consumer's hands, and can be repeated while the consumer moves his hands over the sign to explore what the signer is doing. Although the communicator should be persistent, signs should be presented as an opportunity to express oneself and to be understood. It is never a good idea to force the consumer to attend to a sign, as they can get a negative impression of communication.

The Deaf student in the classroom

Using an interpreter

Many deaf and hard-of-hearing students who are mainstreamed use an interpreter. This person becomes a valuable link between the student and his teachers and peers. An interpreter's purpose is to allow the deaf person full access to information. And the independence to decide what to do with the information in a non-biased way. For example, if a deaf client is at a hairdresser with an interpreter, and the dentist says "boy, this woman is really an idiot!" about the deaf client, the interpreter will simply interpret the message, allowing the deaf person to either say something back, leave, ignore it etc. Interpreters do not give advice as to how to handle the situation or change the message so that it is not so offensive. Just like anyone, the deaf person has a right to make decisions about his actions. If the interpreter never relayed that message, the deaf person might not know how unprofessional the dentist has been. If the interpreter gives advice, the advice may be wrong, or may not reflect the deaf person's values or style.

A professional interpreter is also required to keep interpreted information confidential. The interpreter can not, after the situation with the hairdresser, warn his friends not to go to this salon; all communication is confidential.

The same is true in a classroom situation. Everything a teacher says should be interpreted to the student and vice versa, including inappropriate or confidential comments. Professionals should also remember that even when the interpreter is not in the room, that a deaf child should not be referred to in the third person, spoken about when he is present, or be present when confidential information is discussed. Just like whispering around a hearing child, this can make a deaf student feel excluded or ignored.

There are a few different kinds of ways to relay a message to a deaf person. "Interpreting"

typically refers to changing a spoken language into a formal signed language, such as American Signed Language. The message can never have exactly the same nuances, as the two languages are inherently very different. They have different grammar structures, use different modalities, and have different cultural norms attached to them. The message must be passed through a screen; the interpreter's understanding of the message. Just like two photographers taking a portrait of the same person, they are the same, and yet not exactly alike.

On the other hand, the two languages have similarities as well; each language has only a very limited way to express each specific thought. The sentence "can you please hand over two nails?" is specific. It does not mean "can you please hand over four nails?" Your spoken message in English will be interpreted in an equally specific, complex sentence in American Sign Language, and will have the same overall meaning, but the sentence may mean "please pass me three nails."

A message can also be "transliterated". This means that your spoken words will be translated on a one-to-one basis into Signed English, or another manually coded form of English. A good way of looking at this is that the *words*, rather than the *meaning*, are being converted.

Note the difference between "interpreting" and "transliteration" on one hand, and translation on the other hand. Translation refers to changing one spoken language into another.

The interpreter in the classroom

There are a few things that a teacher can do to assist the interpreter in being effective, and to make the deaf person feel like a part of the classroom. First of all, the deaf student should always be addressed directly. You should look at Debbie and say "Debbie, do you want a pen or pencil", as opposed to turning to the interpreter and asking her "does Debbie want a pencil?" The main reason for this is that the deaf person has preferences and ideas just like his hearing peers. It should be Debbie's decision what she writes with, and she should be respected by being addressed directly.

In addition, you should simply talk to the deaf student, and not speak "through" the interpreter. For example, say "John, when was the Declaration of Independence signed?", and not "Can you ask John when the declaration of independence was signed?". The reason for this related to the Code of Ethics for interpreters. Should the interpreter turn to the deaf student and say "Can you ask John when

the declaration of independence was signed?" Remember, he must interpret your message exactly! The interpreter and the deaf student assume that if you talk, that you are asking the interpreter to interpret or translate your message into a signed language. As a matter of fact, an interpreter *must* interpret the message, as we discussed above.

Also, although many interpreters are willing to help out as necessary, they have a different job than a paraprofessional does (unless he has a dual position). They need to be with the deaf student, and should not be sent out of the classroom, or be asked to do paperwork while the teacher is speaking.

Paraprofessionals

Many mainstreamed deaf and hard-of-hearing students have a paraprofessional in addition to or instead of an interpreter. A paraprofessional can be an invaluable person to both the student and the teacher.

Here are some positive ways a paraprofessional can help a deaf or hard-of-hearing student succeed in a mainstreamed classroom:

- He can introduce the student to new ideas or vocabulary that will be covered in an upcoming lesson. He can then put the new information in context, and have background knowledge in the area. This is especially important for the hard-of-hearing student who has a significant hearing loss, and is receiving much of the information auditorily. Introducing the information beforehand will make the spoken ideas and vocabulary familiar, so he is more likely to recognize them when they appear in the classroom lesson. This is also valuable for the deaf or hard-of-hearing student who has intellectual impairments.
- The paraprofessional can draw the deaf or hard-of-hearing student's visual attention to the part of an object being discussed. For example, if he has a poster of the parts of a cell, the paraprofessional should point out the nucleus when that part of the cell is discussed. The student can then have a visual picture of the idea discussed. Keep in

mind that the deaf student can not attend to an interpreter when looking at a chart, graph, picture, etc.

- The paraprofessional can take notes for an older deaf as he is attending to an interpreter.
- Under the direction of the teacher, the paraprofessional can find visual representations of objects that will be discussed to aid the deaf student in comprehension. For example, he can ask the science teacher to borrow a model of a cell, or print out a photo of the Everglades to be used in a later lesson.
- The paraprofessional can help the student troubleshoot his hearing aids, such as putting in new batteries, and testing them to make sure they are working properly.
- Remind the teacher when it is time for the student to go to speech therapy or the audiologist.
- Work on additional reinforcement of work done in class. For example, reinforce vocabulary that was discussed in class, checking for comprehension.
- If the deaf student is not functioning at the same academic level as his peers, the teacher can give the paraprofessional separate but parallel work to complete while the class is working. A good rule of thumb is that all students in the classroom should be working on the same subject, and be doing similar work if possible. For example, if the class is working on the Revolutionary War, a student with cognitive impairments should be learning about the war also if it is developmentally appropriate.
- Attending meetings about the child. After all, a paraprofessional is an expert on that child!

Some ineffective ways to use a paraprofessional are:

- Creating or adapting lesson plans or curriculum for the deaf student. The teacher should be planning lessons, although a paraprofessional can create materials.
- Running errands or doing general paperwork or photocopying not related to the deaf or hard-of-hearing student.

- Spending the majority of the school day instructing the student by himself. The deaf student should be a member of the classroom, and although the student may need additional help in some areas, they should have the opportunity to join in the classroom activities when appropriate.

Helping the Deaf student acquire literacy

The deaf student finds many unique advantages and obstacles when acquiring literacy.

One advantage is that a deaf student who is proficient in American Sign language often has been exposed to a rich oral tradition. The skills of story-telling and ASL poetry that are so prized in deaf culture can add to a deaf student's linguistic understanding. For example, American Sign Language is very expressive and precise when describing actions and objects, much more so than English. Culturally deaf adults often describe a person or object in detail before discussing it, making sure the listener knows who or what is being referred to. The ability to "show" instead of "telling" is one that is often stressed in schools today.

On the other hand, deaf students have a few disadvantages when it comes to writing. One major one, is that a child with a severe hearing loss does not have a mental picture of how a word sounds. This seems to go without saying, but it comes into play in several areas that are not as obvious. For example: learning to read. A deaf student can not be told to sound out a word. Not because he doesn't have an understanding of the process of reading, but because he doesn't have a mental image of the word as being an auditory construct. The word "cat" is not comprised of the sounds "ca" and "t", but of the idea of a furry, four-legged animal, perhaps the kinesthetic sensation of speaking the word, and the way the "ah" sound vibrates the vocal folds, or perhaps the sign for cat, which indicates the whiskers. They have as much of an in-depth understanding of the concept, the word is understood in a different modality. It stands to reason that the concepts of sounding out words, as well as rhyming, alliteration, and some puns wouldn't be accessible to the profoundly deaf student. ASL, on the other hand, has wonderful forms of visual puns, rhyming and poetry, so in this way, the deaf student

can be taught what these concepts mean, and use them in their oral language activities. In addition, a deaf student learning speech can be taught typing words in the process of learning speech or speechreading, although it will not be a full understanding.

What about the hard-of-hearing student? If you remember our discussion of residual hearing and speech training, hard-of-hearing students are able to perceive some sounds easier than others. Specifically which sounds these are depends on the individual, but typically, higher pitched, soft sounds, such as “f” and “sh” are difficult to hear. When sounding out words, hard-of-hearing students may find difficulty when they come to these sounds, because they may not have a full understanding of what they sound like. For example, a typical error of a hard-of-hearing student is to leave out the “s” on plural nouns. This doesn’t reflect a grammar error, but simply the student writing what he hears. They may need to be reminded to use an “s” in plural nouns.

So what are some good literacy activities to use with deaf students? Below are some activities for the deaf or hard-of-hearing student who is acquiring literacy:

- A) Associate the word visually with the object, which may be how the deaf student perceives words. Make flashcards of spelling words or other new vocabulary where the written letters make out the shape of the object. For example, for the above example of “cat”, have the student write the word first where the “c” are the front legs, the “a” the body, and the “t” the back legs. This is most appropriate for the younger student. You should also label objects. Make flashcards of words, and go around the room labeling objects that may be spelling words or new vocabulary to be discussed later. For a science class, for example, label all of the lab equipment: “beaker”, “Flask” etc., and have the student take off the cards and try it himself.
- B) Break words into smaller parts that can be put together like puzzle pieces. Even if they can’t break down words auditorially, deaf students should be taught that some letter combinations, such as “ing” are common, and always spelled the same. Have them go on a treasure hunt and search for words ending with “ation” for example. Emphasize that because a word ends or begins with the same letters, they are not necessarily connected by

meaning. For example, “vacation”, “situation”, “altercation” and “station” are not spelled simialrry because they express similar ideas. It is more ort less a random simialrarity.

- C) Rember, that like any student, a deaf student will learn new spellings and vocabulary with practice, and shouls have spelling words. Reptition and testing is one great tried-and-true method.
- D) Read stories, and have discuss them in the student’s most comfortable mode of communication. When the student is writing a story, and if their first language is ASL or signed English, try video taping the student, and using this as a first draft of a story. Then, work to dictate their thoughts onto paper using English grammer.

It is important to work on literacy a lot with the deaf child, but it’s also a good idea to

Hearing aids

What is a hearing aid?

A hearing aid is an electronic devise that amplifies sound to improve a deaf or hard-of-hearing person’s ability to deect sound. There are two basic types.

Digital hearing aids can be attached to a computer, and digitally programmed to fir the indivigal person’s hearing loss. As discussed in the chapter on reading audiograms, many deaf and hard of hearing indivuguals have a greater hearing l;oss in some frequencies then in others. Being able to personalize the amplication can make sounds clearer rather than simply loudwer.

Analog hearing aids simply amplify sound, and can not be programmed for a specific indivugal’s hearing loss.

Hearing aids come ina few sizes. Some fit entirely or partially in the ear, while others go behind the ear and have an earmold, a piece of plastic, that fits in the ear. Typically, indivuguals with a greater hearing loss and children use the behind the ear type (BTE). BTE hearing aids have the greater advantage of having larger buttons which are easier to manipulate. They also are less likey to give off

feedback, the squeeling noise that hearing aids can make if turded up too loud, if if there is noit a sufficient seal around the hearing air or earmold. They also have the advantage of a growing child being able to simply change the earmold when it gets too small. Earmolds are relatively easy to make, and reasonably priced.

Cochlear Implants

The use of cochlear implants is probly one of the most convertual subjects in deaf education. It is important that both parents and teachers of deaf children learn about both the pros and cons of cocular impants if a family is considering implanting a child.

What is a chocualr implant?

A cochlear implant is a devise that, rather than amplificing sound like a hearing air, bypasses the middle ear, and stimulated the auditory nerves directly. Basically, it uses electoral impulses to simulate the hearing process. Unlike cataract surgery, which can actually repair an impaired eye, a cochlear implant is a tool that is used to help perceive sound. He person remains deaf, but they have an additional outlet to help them process auditory information. Some people who are implanted become very proficient at using it, and can speak and listen very well. Other have a more difficult time, and may use the implant to delect envirmental noise, such as car horns. I have seen deaf children with cochlear implants range in their ability to use their cochlear implant from some who can speak and listen as if they were hearing, to some children who do not seem to delect sound at all (although this is rare).

Just like any skill, the mind's ability to process sound and language can lesson if not used. For this reason, it is rec

In the last year, there have been tremendous improvements in Hearing aids.

Appendix I

Suggestions for checking for comprehension (great for hearing children too!)

What was the most interesting thing you learned today?

Tell me in your own words why _____ (relevant to a topic just discussed).

So, what is the first thing we are going to do?

After we _____, what happens next?

What was your favorite character in the story?

Can you draw a picture of _____ that we just talked about?

Let's try to do some more math problems that are similar to these.

We've spoken about Mr. _____ (in history), how would you have done things differently?

Why do you think the character in the story did that?

Can you describe how to do the next science experiment?

Resources related to deafness and hearing impairments:

www.deaf.com

www.rid.org This is the interpreting organization, that certifies interpreters and gives information about finding an interpreter.

www.gallaudet.edu This is a University for deaf students that has many resources for teachers and deaf people. It has the philosophy that deaf students should be taught using American Sign Language, and it advocates for the use of ASL.

www.agbell.org This is an organization for deaf children and adults that has the philosophy that deaf children should learn to speak and listen to auditory information. They do not advocate the use of a signed language.