Since the enactment of Public Law 94-142 in 1975, educational placements for students who are deaf have gravitated away from special schools, with many of these students now attending local public schools (Moores, 2001). Accordingly, an increasing number of students who are deaf are being taught in general classrooms by general education teachers who may not be familiar with the special needs of this student population. Because deafness is a low-incidence disability, these teachers may never have met or interacted in any meaningful way with a person who is deaf. Therefore, many of them might unwittingly possess a number of misunderstandings about the disability of deafness.

People’s perceptions determine their actions. Consequently, teachers’ perceptions determine the actions that form the basis of their instructional plans and accommodations for students who are deaf. We encourage teachers to examine their beliefs about deafness—particularly erroneous assumptions that might engender low learning expectations. We have compiled 10 myths (see box, “Myths About Deafness”) that have particular relevance for teachers who desire to better meet the educational needs of their students who are deaf. Replacing fallacy with reality is an important first step towards maximizing their learning potential.

Myths We’ve Heard

**Children Who Are Deaf Are Not as Intellectually Capable as Children Who Can Hear**

For many years the epithet “deaf and dumb” was an accepted way of referring to people with hearing loss. “Dumb” referred to inability to speak, as well as inability to think. Children who are deaf do have the ability to vocalize and have cognitive capabilities that reflect a normal distribution of intelligence. Researchers in the field of deaf education have consistently emphasized that people who are deaf possess the same range of intellectual potential as those who can hear (Martin, 1994; Moores, 2001). Therefore, the phrase deaf and dumb is, inarguably, inaccurate and unacceptable terminology.

Perhaps the most ubiquitous statistic in available texts and materials regarding children who are deaf is the “fourth grade standard.” The prevailing research indicates that the average reading level of students who are deaf upon leaving school is fourth grade. Invariably, this statistic is shared as evidence that they do not have “language” and “literacy skills.”

It is unfortunate that this has become the expected level of achievement even though there is a large number of successful adults who are deaf (many of whom come from deaf families) who are quite competent in using and comprehending the English language. If we expand our notion beyond that of English and include expertise in American Sign Language, the literacy profile of people who are deaf improves even more. Finally, if we look to countries such as Sweden where the educa-

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**Myths About Deafness**

1. Children who are deaf are not as intellectually capable as children who can hear.
2. Children who are deaf are “concrete” learners.
3. Most children who are deaf have parents who are deaf.
4. Having hearing parents educationally advantages children who are deaf.
5. All children who are deaf can lipread.
7. All children who are deaf can hear better with hearing aids.
8. There is a sign language.
9. Having interpreters in the general education classroom ensures access to instruction.
10. The condition of deafness imposes employment limitations.
tion of children who are deaf is present-
ed in the native sign language of the
country, there is evidence that they can
and do learn at levels commensurate
with their hearing peers when they are
identified early and given access to a
consistent visual-spatial language
(Mahshie, 1995).

In the United States, the status of the
literacy skills of children who are deaf is
perhaps more an indictment of the sys-
tem of deaf education than of the child’s
capabilities. Indeed, children who are
deaf and cognitively intact have the
potential to learn to read and write.
There is evidence that people who are
deaf can and do learn to read and write
in English and use English as a primary
source of information long after they
leave school. Unfortunately, the percep-
tion that students who are deaf are
doomed to illiteracy has been widely
accepted, much to the detriment of the
students and their instructors (Johnson,
Liddell, & Erting, 1989).

Children Who Are Deaf Are
"Concrete" Learners

At the earliest stages of learning, all
children are concrete. The first words
children use are nominals, words that
identify tangible objects in their envi-
ronment (Hulit & Howard, 1997). The
first question word that typically
emerges is what, which serves a naming
function. Because the auditory mecha-
nism of children who are deaf is not
intact, it is not surprising that they
would be more responsive to visual and
kinesthetic stimuli.

In the absence of accessible commu-
nication early in life, in which adults
convey actions, attributes, and relation-
ships, children who are deaf would
obviously be delayed in developing the
verbal labels for these conceptual cate-
gories—namely, verbs, adjectives, and
prepositions. Therefore, the issue is
exposure rather than capacity.

That there are artists, writers, poets,
and theologians who are deaf would
appear to affirm that processing abstract
ideas is not inherently problematic for
people with a hearing loss. That all chil-
dren, irrespective of their hearing sta-
tus, are concrete as infants is develop-
mentally appropriate. That some chil-
dren who are deaf remain at this level
beyond expected age limits is less a real-
ity of the child’s competency in this
regard and more a statement of adults’
ability to communicate effectively with
the child and provide a cognitively and
linguistically stimulating environment
(see box, “Instructional Accommo-
dations…”).

Most Children Who Are Deaf Have
Parents Who Are Deaf

The majority of children who are deaf
or hard of hearing have hearing parents.
Ninety percent have hearing parents,
although in 30% of those cases, there
may be a relative with a hearing loss
(Moores, 2001). Reasons for deafness
include genetics, trauma, prematurity,
and illness. There are families with a
large number of members who are deaf
who can trace their genetic family tree
for many generations. These families
are in the minority in terms of their
numbers but have important positions
in preserving Deaf Culture. Members of
this cultural group number an estimated
1 million people. They possess a visual-
spatial language (American Sign
Language, or ASL), social and political
affiliations with other deaf people, and
the shared experience of deafness in a
majority culture of hearing people
(Lane, Hoffmeister, & Bahan, 1996).

Having Hearing Parents
Educationally Advantages
Children Who Are Deaf

Research has consistently shown that
children who are deaf and have parents
who are deaf perform better than chil-
dren who are deaf with hearing parents,
in a variety of cognitive areas, including
literacy skills and academic achieve-
ment. In studies comparing the two
groups, children in the former category
generally perform better academically
and demonstrate better social and psy-
chological adjustment than children
who are deaf with hearing parents

A number of factors account for this
positive result. First, for parents who
are deaf, an adjustment process is not
necessary following the child’s birth.
Second, they have a personal knowl-
dge of deafness and its implications.
Third, they serve as readily accessible
role models. Fourth, they are aware of
resources that are available. Fifth, they
are more keenly aware of the need to
provide for visible interaction and, typi-
cally, possess the skills to establish and
maintain a consistently visually orient-
ed communicative environment begin-
ning the day the child is born.
These accommodations primarily emphasize the visual aspects of communication that are important when teaching students irrespective of their level of hearing loss. Teachers are encouraged to consider those strategies that best fit the auditory profiles of the students they teach.

- Try to minimize background noise to the greatest degree possible.
- Make sure that you are facing the class when delivering instructions. Teachers may be unaware of how often they speak while they are writing on the chalkboard, lowering the projector screen, or removing instructional materials from a cabinet.
- Consider use of the overhead projector, because it allows you to face the class while speaking.
- Make sure that your mouth is fully visible while speaking. This is an important consideration because even when teachers are facing the class, they might unwittingly speak while their mouths are obscured by a pen, a hand, instructional materials, or the arm of the overhead projector.
- Don’t stand with direct light behind you, such as in front of a window. Also, avoid standing in dimly lit areas of the classroom.
- Avoid exaggerated lip movements when speaking.
- Ensure preferential seating so that the student has an unobstructed view of the class proceedings as well as the educational interpreter, if one is used.
- Use gestures to reference information being shared. For example, if a teacher wants the class to do an assignment in the English text first and then a page in the spelling work- book, holding up (or pointing to) these materials while discussing them would serve to clarify the sequence of work that is expected. For students who use an interpreter, on days when the interpreter is absent or running behind, this course of action will be extremely beneficial for them.
- Position yourself in front of the deaf student when working one on one. Teachers are accustomed to standing, sitting, or kneeling beside hearing students when providing individual assistance.
- Address the student directly. For example, don’t ask the interpreter, “What is his favorite book?” Rather, face the student and ask, “What is your favorite book?”
- Include the student who is deaf as you would any other student in the class. For example, if you typically pose questions randomly to individual students, be sure to call on the student who is deaf with equal frequency.
- Identify students by name when conducting large-group discussions or lecture-recitation sessions. Doing so allows the student who is deaf time to identify and turn towards the classmate who is speaking.
- Repeat or summarize spontaneous questions or statements from students. In these instances, because the speaker has not been identified, students who are deaf may not be aware that something is being said or, if they become aware, they may not have sufficient time to make eye contact before the statement or question is completed.
- Write key information (vocabulary, instructions, and homework assignments) on the chalkboard or chart paper.
- Maximize visual and tactile access. Engage in copious use of real objects, charts, illustrations, graphic organizers, demonstrations, models, and manipulatives when introducing, explaining, and reinforcing concepts.
- Use advance organizers to introduce lessons.
- Provide the student with an outline of the lecture.
- Designate a classmate to take notes on NCR paper and provide the duplicate to the student who is deaf. An alternative would be to secure permission from a classmate to photocopy his or her notes. While students who are deaf will often make an effort to take notes in a class, the reality is that key information may be lost in the elapsed time between looking up at the teacher (or interpreter) and down at a sheet of paper.
- Increase wait time during the lecture to allow the interpreter time to complete the presentation of information.
- Try to find captioned versions of films, movies, or TV programs used to support instruction. Even if the student is a good lipreader, these media may contain long stretches of narration, so there isn’t an opportunity to view a speaker. Also, there may be accompanying scripts that can be provided to the student. An excellent source of captioned films is the Captioned Media Program (CMP). Educational titles are available in various subject areas. Lesson guides come with the educational films, which teachers may borrow, with no rental fees involved. CMP can be accessed at www.cfv.org.
- Provide the interpreter with a preview of the content to be taught. A key dimension of sign language interpreting is conceptual accuracy. Being able to review key concepts in advance will allow the interpreter adequate time to reflect and determine the most effective way to convey specific course information.
- Meet regularly with the interpreter to assess the delivery of communication services.
- Have the hearing students learn some basic signs.
- Provide the hearing students with information about deafness and ways they can accommodate deaf classmates.
- Maintain the same level of expectation for the student who is deaf as you do for every other student in the class.
In addition to these considerations, Akamatsu (1994) pointed out that because children who are deaf who have parents who are also deaf have had their understanding of the world mediated, they are better equipped than those with hearing parents, “to engage in structuring information, remembering, and manipulating thought in complex ways. The resulting achievements—academic, social, and emotional—should not be surprising” (p. 17).

These data notwithstanding, similar positive outcomes are also attainable when hearing parents become informed about deafness early on and endeavor to cultivate cognitively and linguistically rich home environments critical to the overall development of their deaf children.

**All Children Who Are Deaf Can Lipread**

Lipreading, or speech reading as it is often referred to today, is an arduous and extremely difficult process. Less than 30% of the English language is visible on the lips, making the majority of the language inaccessible through speech reading alone. Speech reading is affected by many factors, such as the child’s knowledge of English, the amount of residual hearing, attention, the clarity of the speaker, familiarity with the subject of the speaker, lighting, distance from the speaker, and even facial hair on the speaker. Although a difficult skill, speech reading is used by some deaf people who depend on it to supplement other cues, rather than relying on it as the primary method for receiving communication.

**Using Sign Language Negatively Affects Speech**

The issue of teaching students who are deaf using an educational approach with an oral/aural emphasis (speech and amplification) or a manual emphasis (signs and fingerspelling) has fueled a debate that has persisted in deaf education, at varying levels of intensity, since the 1800s. One of the criticisms by proponents of oralism was that the use of sign language would necessarily hamper the development of speech skills. To the contrary, Vernon and Andrews (1990) noted that “the use of signs facilitate rather than impede speech development” (p. 77). This statement has been strengthened by current research in the area of early sign language acquisition with hearing infants.

The presence of sign language does not necessarily imply the absence of speech. Most programs for students who are deaf adhere to a philosophy of Total Communication, which involves the use of both speech and signs (Nowell & Marshak, 1994). Some speech-language pathologists and speech teachers may have concerns about Total Communication programs: Some teachers using this approach may not achieve a balance between sign language and speech and may underemphasize speech development. Regardless of the level of implementation, by definition, speech is a feature of the Total Communication approach. Moreover, if speech services are identified in the student’s individualized education program (IEP), these services must be provided by speech teachers or speech-language pathologists. Finally, most children who are deaf engage in code switching depending on their communication partner. For a child with a hearing loss who is able to utilize it, speech is a significant tool in communicating with hearing peers in a mainstream or inclusive school environment.

**All Children Who Are Deaf Can Hear Better With Hearing Aids**

Hearing aids function primarily to amplify sound. They do not correct a child’s hearing. Individual children have different types of hearing loss. Their losses can increase across frequencies of sound and can change throughout their lifetimes. Because the perception and comprehension of speech are dependent on the intensity of the signal, children vary in their ability to access frequencies that carry the

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Less than 30% of the English language is visible on the lips.

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**World Wide Web Resources for Teachers of Students Who Are Deaf and Hard of Hearing**

The following resources provide valuable information and products related to enhancing the quality of life for people who are deaf and hard of hearing.

- Alexander Graham Bell Association for the Deaf and Hard of Hearing [www.agbell.org](http://www.agbell.org)
- American Academy of Audiology [www.audiology.org](http://www.audiology.org)
- American Society for Deaf Children (ASDC) [www.deachildren.org](http://www.deachildren.org)
- American Speech-Language-Hearing Association (ASHA) [www.asha.org](http://www.asha.org)
- Butte Publications [www.buttepublications.com](http://www.buttepublications.com)
- Cochlear Implant Central [http://geocities.com/ciccentral](http://geocities.com/ciccentral)
- Convention of American Instructors of the Deaf (CAID) [www.caid.org](http://www.caid.org)
- Conference of Educational Administrators of Schools and Programs for the Deaf (CEASD) [www.ceasd.org](http://www.ceasd.org)
- Deaf Resource Library [www.deaflibrary.org](http://www.deaflibrary.org)
- Deaf and Hard of Hearing Teachers of Students Who Are Deaf and Hard of Hearing [www.lhh.org](http://www.lhh.org)
- National Association of the Deaf (NAD) [www.nad.org](http://www.nad.org)
- National Institute on Deafness and Other Communication Disorders (NIDCD) [www.nidcd.nih.gov](http://www.nidcd.nih.gov)
- Professionals Networking for Excellence in Service Delivery with Individuals Who Are Deaf or Hard of Hearing (formerly the American Deafness and Rehabilitation Association) [www.adara.org](http://www.adara.org)
- Registry of Interpreters for the Deaf [www.rid.org](http://www.rid.org)
- Self Help for Hard of Hearing People, Inc. [www.sshh.org](http://www.sshh.org)
The presence of sign language does not necessarily imply the absence of speech.

There Is a Sign Language

In general parlance, people use “sign language” as a catchall phrase that encompasses any type of manual communication. But there are three basic sign systems in the United States, as follows:

- American Sign Language (ASL) is a visual-gestural language with its own grammatical and syntactical rules. After English, Spanish, and Italian, ASL is “the fourth most used language in the United States” (Lewis & Doorlag 1999, p. 369).
- Pidgin Sign English (PSE) combines standard ASL signs and English syntax.
- Manually Coded English (MCE) actually refers to a number of sign systems that include some standard and modified ASL signs, as well as invented sign elements developed in an effort to completely represent English, especially morphological endings.

Fingerspelling, a letter-by-letter representation of words, is a communication modality that may be incorporated into ASL, PSE, and MCE. In addition, signs may vary in different locations similar to regional vocabulary variations that exist in spoken English.

Sign languages also vary from country to country. For example, there is Canadian Sign Language, Irish Sign Language, and Japanese Sign Language, just as there is American Sign Language in the United States.

Having Interpreters in the General Education Classroom Necessarily Ensures Access to Instruction

General educators frequently think that having an educational interpreter for deaf students who use sign language is an accommodation that inevitably maximizes access to academic content conveyed in their classes. Two variables must be considered: the first is the quality of the interpreter. When interpreting for students who are users of American Sign Language, conceptual accuracy is a significant feature of effective communication delivery. For example, an interpreter might sign “hard” for “solid” if the lesson is on the three states of matter. So the student conceptualizes “solid” as having a firm and rigid quality. This student might disallow a cushion as an example of a solid. Therefore, it is imperative that educational interpreters carefully consider and plan the signs they will use just as thoughtfully as teachers would prepare their lessons.

The second issue is the willingness of teachers to move beyond their comfort zones in the interest of the student. Some general education teachers are resistant to being shadowed by an interpreter as they move about the classroom. But when teachers are receptive to the needs of the student, the teachers will recognize the need to lessen confusing distractions. It is difficult for any student to focus on both the teacher and the interpreter simultaneously. Teachers need to take care not to compromise communication.

The Condition of Deafness Imposes Employment Limitations

Whereas there might be challenges that face people who are deaf as they enter the work force, Akamatsu (1994) stressed that, despite the communication challenges their hearing loss might present, most adults who are deaf are gainfully employed. Research indicates that people who are deaf tend to be underemployed, rather than unemployed. They often encounter discrimination in a labor market that denies them access to higher paying jobs for which they are qualified (Schildroth, Rawlings, & Allen, 1991). The notion that they remain in positions for years without advancement is reflected in an observation by Tingley (1986) who stated that employees who are deaf “may turn out to be the only ones to receive a gold watch for 40 years on the same job!” (p. 53).

The challenges in acquiring and maintaining employment commensurate with their abilities are usually externally imposed barriers, not obstacles inherent in the inability to hear. The major barrier is the unwillingness of employers to consider and implement accommodations that meet the dictates of the employment setting—for example, handling telephone communication and visualizing auditory environmental cues. Because this situation is extrinsic and alterable, it does not suggest that the condition of deafness itself undermines the capacity for competent performance in work settings. Moreover, the mere fact that people who are deaf can be successful in numerous occupations is affirmed by the reality that they can be found in every occupational cluster: social service, business contacts, business operations, technical, science, and the arts.

Final Thoughts

Correcting misconceptions about deafness is not merely a pedantic exercise. For example, although myths about the ability to lipread at great distances might make for appealing TV and movie plots, when general education teachers fail to provide preferential seating for a student with a hearing loss based on this presumed competence, such a myth
may manifest itself as an educational barrier for the student. Further, old stereotypes about the limitations of deaf people may promote low expectations among teachers.

Ultimately, addressing myths about deafness is critical because our beliefs determine our behaviors, and our beliefs are based on the status of our knowledge. Sir Francis Bacon said: “Knowledge is power.” We have attempted to provide knowledge that will empower teachers as they endeavor to translate possibilities into realities for students who are deaf.

References