

Teaching Students with Disabilities: Hearing Impairments and Deafness ¹

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Introduction

Agricultural education teachers may encounter students enrolled in their programs who are hearing impaired or deaf. Special learning accommodations and teaching strategies can be employed to ensure that students who are hearing disabled are successful in agricultural education programs. The severity of each hearing disability is unique to each student. There are two general disability classifications of students with hearing disabilities: 1) students who are hearing impaired and 2) students who are deaf. However, each student's needs and necessary accommodations must be examined at an individual level.

Hearing Impairment Description of Disability

According to the Individuals with Disabilities Education Act (IDEA), the definition of a hearing impairment is “an impairment in hearing, whether permanent or fluctuating, that adversely affects a child’s education performance but is not included under the definition of ‘deafness’” (Bernadette & Barbara, 1998). The severity of hearing impairments varies from case to case, but any hearing impairment can affect a student’s educational performance. Hearing impairments can be diagnosed during the infant stage of development or throughout an individual’s life. Likewise, the cause of a hearing impairment can be from developmental damage or cochlear damage from exposure to excessively loud noise.

Most students who have hearing impairments will be pre-diagnosed and may have a hearing aid or cochlear implant. If a student seems hard of hearing in the classroom, it is advised that the teacher recommend the student seek a medical professional to determine if a hearing impairment exists.

Application in the Learning Environment

A hearing impairment has the potential to interfere with a student’s ability to access information presented in the learning environment. Teachers must understand the severity of a student’s hearing impairment and make the necessary accommodations to ensure that the student has equal access to instruction. Students who have a cochlear implant or hearing aid may still require additional assistive technology and modified teaching strategies (Hearing Loss Association of America, 2015). In instances of severe hearing impairment, the student may have a classroom aide to assist in daily classroom functions. Teaching strategies for students who are hearing impaired can be categorized into classroom, laboratory, and non-formal learning environments, although many of the strategies can be used in all educational settings.

CLASSROOM ENVIRONMENT

Students with hearing impairments often rely on sight to obtain classroom information. One of the best strategies teachers can apply when working with students who

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are hearing impaired is to provide written information whenever possible. In fact, according to the Americans with Disabilities Act (ADA), information must be available in alternative formats when reasonable (United States Department of Justice Civil Rights Division, 2008). Information such as directions or notes can be given as a hand-out or can be written on the whiteboard when discussed. Hand written material should be legible and of large enough size to be seen at a distance. It may be advantageous to position the student's desk at close proximity to written material. Furthermore, students with hearing impairments often rely on lip reading and facial gestures to gather information. Teachers should write material on the board first and then face students while speaking, making sure to not cover their face while speaking. Speaking in a lighted room with minimum background noise is important. Additional measures, such as using a microphone or audio-recording system, may be necessary depending on the needs of the student with the hearing impairment. If showing videotapes or DVDs, providing on-screen captioning or translating audio to print format may be helpful.

LABORATORY ENVIRONMENT

The agricultural education laboratory environment presents a unique set of learning challenges for students with a hearing impairment. If students are exposed to loud noises such as power tools, it is best to consult with the student's medical doctor on whether additional hearing protection is required for the student. Often, students who are hearing impaired need to take extra precaution when exposed to loud noises so as not to cause further cochlear damage. Students who have hearing enhancement devices such as hearing aids may be very sensitive to loud noises. If it is advised that a student not be exposed to loud noises such as those from the use of power tools, a modified task may be necessary for that student.

NON-FORMAL ENVIRONMENT

The non-formal learning environment, such as class trips, often utilizes guest speakers who may not be aware of students who have disabilities. If possible, consult with the speakers ahead of time to let them know that there will be a student with a hearing impairment. Provide opportunities for the students to be closer to the speaker and provide them with written information whenever possible. Directing an understanding and helpful student partner to assist the student with a hearing impairment may also be advantageous. Lastly, make sure the student is able to access verbal material by checking in with the student throughout the educational experience.

Deafness

Description of Disability

Deafness is defined as a hearing loss above 90 decibels (National Dissemination Center for Children with Disabilities, 2010). Students who are deaf generally have classroom aides who assist in the transfer of information. Students who are deaf typically communicate through sign language with an interpreter. In some instances, students who are deaf are effective at lip reading and reading non-verbal cues, such as facial expressions and gestures. In other instances, assistive technology is used to combat communication barriers. Deafness causes the inability to hear sounds accurately, and therefore it is often difficult for students who are deaf to articulate words clearly (Parent Information Network, 2008).

Application in the Learning Environment

Participating in the general learning environment is often challenging for students who are deaf. However, many strategies can be used to compensate for communication barriers and allow students who are deaf to excel in the general classroom. A classroom aid that translates oral communication into sign language is one of the most effective methods of ensuring that the student has access to all verbal information. Providing a designated note-taker or providing detailed printed notes is important because the student must focus eye contact on the speaker or interpreter during class, making it difficult to take notes.

CLASSROOM ENVIRONMENT

The student's position in the classroom environment is vital to ensure that students who are deaf have access to instruction. Students who use an interpreter must be positioned so they are able to clearly see the interpreter and instructor. Likewise, the interpreter must be able to clearly see the student and instructor. Students who lip read should be positioned as closely as possible to the instructor. Students should be able to clearly see the instructor's lips, facial expressions, and gestures. If participating in classroom discussion, a circular seating arrangement is helpful so the student will be able to see all other class participants. Over-exaggeration of lip shape when talking and over-exaggeration of gestures should not be used; they are not standard in communication and can cause confusion to the student and other students in the classroom. Strong visual teaching methods, such as pictures, charts, and graphs, are highly encouraged. Video is also beneficial, but should be paired with captions.

LABORATORY ENVIRONMENT

Safety is of top concern in the laboratory environment. Many modifications of assignments in laboratory-type settings may be required for students who are deaf. Students may be unable to hear verbal safety signals and therefore can be exposed to danger. If working in conditions where this may be of concern, such as welding, it is advised that the instructor work one-on-one with the student at all times, using extreme caution. Often, aides and interpreters may not have adequate training to help facilitate this type of instruction. In some laboratory settings, such as working in the school garden, safety factors associated with hearing may be less of a concern. In these situations, the use of aides, interpreters, or even pairing the student with another helpful student would be beneficial.

NON-FORMAL ENVIRONMENT

The non-formal environment provides additional challenges for students who are deaf. A school aide or interpreter should be paired with the student when traveling. Making arrangements in advance will ensure that accommodations will be in place on a given day. Furthermore, it is best to notify trip personnel that a student who is deaf will be in attendance. A safety assessment of perceived risks may be conducted to avoid potentially dangerous situations.

Conclusion

Teachers should utilize effective strategies to ensure that students who are hearing impaired or deaf have access to course instruction. Environments that are unique to agricultural education may pose additional communication barriers for such students. Individual Education Plans should always be investigated to learn of necessary and required student accommodations. Due to the varying severity of hearing impairments and varying communication ability of deaf students, the agricultural education instructor should work directly with parents, special education specialists, medical experts, and school administration to develop a plan that best accommodates the student in the agricultural education program. A variety of instructional resources exist for teachers working with students that are deaf or have hearing loss. Detailed teaching strategies are provided through ClassAct, a special project of Rochester Institute of Technology's Technological Education Center for Deaf and Hard-of-Hearing Students (DeafTEC). Other resources regarding teaching students who experience hearing loss or deafness can be found on the American Society for Deaf Children's website. See below for web links to the above listed resources.

<https://www.deaftec.org/classact>

<http://deafchildren.org/knowledge-center/educators/>

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