This review of the literature on mainstreaming students with hearing impairments begins by defining "hearing impairment," "deafness," and "hard of hearing". The paper briefly considers causes of hearing impairments and types of hearing impairments. Suggestions for preparing a class for a student with hearing loss includes having a visible class schedule and explaining to the class any necessary changes. Among suggested accommodations are use of a microphone and facilitating the student's lip reading. Other topics briefly covered are detecting a hearing impairment and difficulties for the hearing impaired such as poor communication with peers. Tips for classroom preparation include greater use of visual aids and encouraging parental involvement. Final considerations address the student's Individualized Education Plan and other rights. (Contains 11 references.) 

(DB)
Mainstreaming the Hearing Impaired Student

Sara Szelazkiewicz

Eastern New Mexico University

Portales, New Mexico
Abstract

This paper will examine the process of mainstreaming the hearing impaired child. It will discuss what teachers will need to do to prepare themselves and their classroom for the hearing impaired student. This paper will also discuss the definitions of hearing impairments and some of the causes. It will also discuss accommodations, modifications, and resources for the hearing impaired student. Finally, this paper will discuss the legal rights of everyone involved and the process of an Individualized Educational Plan for a child with a hearing impairment.
Sensory impairments are something that most people deal with on a daily basis. Whether someone is wearing glasses, contacts, or hearing aids, many people are affected by sensory impairments. Mainstreaming the hearing impaired is a challenge worth taking. There are many things that go along with mainstreaming, such as class preparation, how to detect someone with a hearing impairment, and ways to change the curriculum to suit the hearing impaired. There are numerous things the teacher must do when preparing for a hearing impaired student. These include promoting parent involvement, and educating themselves and the other students about common misconceptions of a hearing impaired student. Preparing the rest of the class about what to expect is important. For mainstreaming to work correctly it takes the effort of many people. It is explained well by Janice Zatzman Orlansky who said, "Successful mainstreaming is the result of a cooperative team effort between parents, specialized staff, regular education teachers, the principal, and the community at large." (Orlansky, 1977, p. 2)

Thankfully, there are many things that assist people who suffer from sensory impairments. There are also many different levels of sensory impairments. For people who have trouble seeing, there are glasses or contacts. For those who are blind, there is the Braille system for reading, and Seeing Eye Dogs for transportation. The same thing goes for those who are hard of hearing or deaf. "The most widely used technological aid of all is the conventional hearing aid." (Powell, Frinitzo-Hieber, Friel-Patti, and Henderson, 1985, p. 120) There are hearing aids for those with slight hearing impairments. For those with severe hearing impairments, there are many ways to cope. Lip reading is very common among those who are hard of hearing or deaf. American
Sign Language is often used for the deaf. There are interpreters who communicate with the deaf at large functions, such as school, or church. (Katz, Mathis, and Merrill, 1978, p. 64) This is a successful way for the deaf to know what is going on around them.

**Definition of Hearing Impairments**

Hearing Impairments are defined three ways. Hearing impairment is the genetic term used to describe any level of hearing loss, ranging from mild to profound. Deafness describes a hearing loss that is so profound, the auditory channel (the ear) cannot function as the primary mode for perceiving and monitoring speech or auditory language. Finally, hard of hearing describes individuals who have a hearing loss, but are able to use the auditory channel as their primary mode for perceiving and monitoring speech or acquitting language. Hearing loss is often detected and measured in decibel loss. Individuals with losses from 25 to 90 dB are considered hard of hearing. When defining a hard of hearing student it is important to consider several factors, such as degree of impairment, age at onset, etiology, and intelligence. (Paul, and Quigley, 1990, p. 56) Individuals with losses greater than 90 dB are classified as deaf. Hearing losses are also classified in many forms: conductive hearing loss is mild loss in both ears, unilateral hearing loss is loss in only one ear, mild bilateral sensorineural hearing loss is cause by sound not being transmitted to the brain, and moderate to severe bilateral sensorineural hearing loss is more severe in both ears. (Smith, Polloway, Patton, Dowdy, 2001, p. 229)

**Causes of Hearing Impairments**

There are many different causes of hearing loss. Genetic causes are among the most popular. Developmental abnormalities, such as mixing the wrong blood types can also have a high affect of hearing loss. In some states, it is required for a man and a
woman to have blood tests before they are married to prevent this from happening.

Another important cause of hearing loss is a toxic reaction. These include toxic reactions to drugs, infection, trauma, premature birth, anoxia, birth trauma, and allergies. (Smith, Polloway, Patton, Dowdy, 2001, p. 231)

Types of Hearing Impairments

There are two types of hearing loss, conductive hearing loss and sensori-neural hearing loss. Conductive hearing loss is a blockage to the ear canal. It is usually caused by earwax or an infection in the middle ear. Another factor of conductive hearing loss is congential malformation, which is the absence of the outer ear. This is associated with damage to the deeper structures in the ear. Conductive hearing loss can be corrected by surgery. Sensori-neural is more profound and cannot yet be corrected by surgery. This occurs when damage is done to the sensors or nerve fibers, which connect the inner ear to the hearing center in the brain. This is caused by heredity, drugs, excessive noise, the mother having Rubella or German measles in the first trimester of pregnancy, RH factor incompatibility at birth, meningitis, and infectious diseases, such as the mumps. (Smith, Polloway, Patton, Dowdy, 2001, p. 230) It is important to consider when the hearing loss occurred. The first three years of someone's life are the prime years for communication. If the loss occurred after the third year, the individual still has a language foundation.

Student Preparation

When preparing your class for a student with hearing loss, it is important to consider many things. Having a routine and sticking to it is vital. This allows the student some stability. Preparing a visible schedule helps the hearing impaired student become familiar with what is expected of him/her throughout the day. Having a friendly
classroom environment is also important. A teacher can prepare the rest of the class by explaining what changes are about to be made. If the hearing impaired student requires an interpreter, explain to the class what will be happening. Talk about the hearing aids or microphone with the rest of the class, and answer any questions the class has about the student. Sometimes letting the hearing impaired student answer questions is beneficial to both the hearing impaired student and the rest of the class. Preferential seating is also a factor teachers must take into consideration. Seating the hearing impaired in the center of the room, and a few rows back is the best place. This way the student can have a feel for what is going on all around. Because lip reading is a common way for a hearing impaired student to communicate, it is important not to over enunciate words. This makes it more difficult to lip read. (Quigley, and Kretschmer, 1982, p. 32)

Accommodations

Some of the ways to accommodate a hearing impaired student is to make sure they know what is going on at all times. This can be a difficult challenge for someone who is hearing impaired. One of the ways to do this is using a microphone. The teacher attaches the microphone to his/her clothing, and the hearing impaired student has the receiver in their ear. This works for students who are not severely deaf. The microphone is a great device because it can be used indoors or outdoors as long as the recipient is within a certain radius of the speaker, depending on the quality or type of microphone. Along with the advantages of the microphone are the disadvantages. It cannot go near water, or be too hot or too cold. It is also important not to wear it too close. This could cause the sound to be too loud or unclear. Turning the microphone off is vital. If a
teacher wearing the microphone and is called out to speak with someone, the recipient can still hear what is going on.

Lip reading is also a main form of communication for a hearing impaired student. Lip reading, unlike the microphone can be used by every hearing impaired student, whether they are mild, moderate, severe, or profoundly deaf. Because lip reading is a common way for a hearing impaired student to communicate, it is important not to over enunciate words. This makes it more difficult to lip read. (Quigley, and Kretschmer, 1982, p. 32) It is important to remember if the lights are turned off for a movie or film strip, there is enough light for the hearing impaired student to lip read the teacher. Florescent lights can be harsh and make lip reading more difficult. Many letters with the same sound, such as P, B, and M are hard for the lip reader to distinguish. Vowels are the easiest to distinguish. (Orlansky, 1977, p. 37)

Detecting a Hearing Impairment

It is possible that a teacher may have a student who has not yet been diagnosed with a hearing loss. Some ways to detect a hearing impaired student is when the student has trouble following directions. It is important to look for patterns when students do not follow directions. Another sign is when they are turning their head to one side or another to hear better, or when they are hesitant to participate in large groups, especially where a lot of talking takes place. These situations can make a hearing impaired student uncomfortable. When students have frequent colds that are accompanied by earaches, and problems understanding speech after the cold subsides, it usually means the student might have some kind of hearing loss. If a teacher suspects a student might have a
hearing loss they should contact the child's parents, family physician, an audiologist, a speech therapist, or the school nurse.

Difficulties for the Hearing Impaired

No one knows what it is like for a hearing impaired student, except for the hearing impaired student. They are often confused in the classroom. Having an interpreter is usually mandatory for a deaf student. Even with an interpreter, the student often misunderstands what is going on. They frequently feel isolated from their peers, and are anti-social. It is difficult communicating with peers who do not know sign language, or cannot communicate well with the hearing impaired student. They have to be alert at all times during class. The teacher must be aware of all emergency situations and know how to help the hearing impaired student. If a fire alarm goes off, the hearing impaired student will probably not hear it. It is the teacher's responsibility to get the student out of the classroom. Sometimes the classroom will be equipped with a visual alarm for the hearing impaired student. This alarm will have a flashing light to inform the hearing impaired student there is an emergency.

There are many misconceptions for a hearing impaired student. They do not have lower IQ scores because of their handicap. Their intellectual ability is not affected. (Yater, 1977, p. 161) Many students who do not have a handicap may not understand that the only difference between them and a hearing impaired student is the ability to hear. Not all hearing impaired students have the same resources to communicate better. Depending on the severity of the impairment, a student can survive the public schools with just a microphone and hearing aid. Other students require an American Sign Language interpreter, and other students can get by with just lip reading.
Classroom Preparation

It is important for the teacher to have the classroom prepared for the hearing impaired student. Having diagrams, charts, and other useful visual aids is important. This helps the student visually learn the material that might be hard for them to hear. In the younger grades, it is a good idea to have word walls with familiar words posted on the wall. This makes it easier for all students when they are writing and need help with the spelling of a common word. It is vital to keep the noise level in the classroom down to a minimum. It is very distracting for the hearing impaired student to focus on one thing when there is excess noise in the room. The teacher should expect the same behavior of a hearing impaired student as all the other students. (Nix, 1976, p. 18)

Some subjects are more difficult than others for a hearing impaired student. "Hearing impaired students will have the most difficulty in subjects such as reading, creative writing, social studies, and probably extemporaneous speaking. Math, science, industrial arts, and home economics are areas where the hearing impaired excel since observation, figuring, and experimentation do not require an extensive use of language." (Orlansky, 1977, p. 61) Some things in the regular education classroom do not have to change for the hearing impaired student. Field trips are good because there are few accommodations that need to be made. As long as there is someone to interpret for the hearing impaired student, he/she should have the same benefits as the rest of the class.

Parent involvement is necessary for mainstreaming to be successful. The more involvement, the better off the student will be. When the teacher is assigning difficult assignments, it is important to explain to the parents what is expected and teach them how to help the student. Most parents are eager to help out in the classroom, or in some
other way, so inviting them for often visits is helpful for the teacher, parent, and student. The parents are also great people to accompany the class on field trips or other activities the class may attend.

Considerations

An important consideration when a teacher knows he/she will have a hearing impaired student in the class is to determine what this student requires. If the student requires special education services, the student will definitely need an Individualized Education Plan. (Tucker, 1997, p. 4) The IEP will be made with the help of the classroom teacher, special education teachers, an IEP team and the parents of the student. It is vital for the school to protect themselves and the student. The student is entitled to a free appropriate public education in the least restricted environment. (Froehinger, 1981, p. 28) This means the student and his/her parents should expect to have every need they might have met. The school district can do this by hiring an American Sign Language interpreter and supplying the student with what they need, such as hearing aids or microphones. It is also the school district's responsibility to hire any speech language pathologists or therapists the student might require. "We also teach them rights as hearing impaired citizens, such as the right to a free interpreter for extra-curricular activities or note-taking services." (Darling, 1999, p. 35)

Being hearing impaired is something that is very difficult to relate with if the student and teacher have not experienced it first hand. No one knows exactly what it is like for a hearing impaired person except the individual themselves. Mainstreaming the hearing impaired into the regular education classroom is a challenge, but with the help of many willing people, it can be very successful. Just like the law says, everyone has the
right to a free appropriate public education in the least restrictive environment. Whether someone is deaf or blind, they deserve the best that is offered. It is the teacher's job to make proper accommodations and modifications to better serve the hearing impaired student. There are many factors that come along with mainstreaming the hearing impaired. The resources available to the student are very helpful. What it is like for the student and special considerations are definitely something for the teacher to keep in mind. Becoming familiar with the causes of hearing impairment and how to detect a student with a hearing impairment are also vital for the teacher. The teacher should also recognize ways to prepare the other students in the class and ways to make the classroom welcoming and useful for the hearing impaired student. It is necessary for the teacher to be familiar with the legal rights of the student and the school district. Individualized Educational Plans are not required unless the student requires special education services. It is important to make certain the student has an IEP that will benefit him/her for the best. A teacher's job is to successfully educate the children of the future, and by meeting the needs of every student and teaching them what they need to know, the future is secure.
References


I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche, or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature: Sara E. Szelazkiewicz
Printed Name/Position/Title: Sara Szelazkiewicz
Organization/Address: Eastern New Mexico University
School of Education
506 East 1st St.
Portales, NM 88130

Telephone: (505) 469-6379
Fax:
E-mail Address: minesaras7@com Date: 4-14-02

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

http://ericfac.piccard.csc.com/reprod.html 12/03/2001
I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche, or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature: Sara Szelażkiewicz
Printed Name/Position/Title: Sara Szelażkiewicz

Organization/Address:
Eastern New Mexico University
School of Education
506 East 1st St.
Portales, NM 88130
Telephone: (505) 469-6379
Fax: 
E-mail Address: minesaras7@com
Date: 4-14-02

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor: 
Address: 
Price: 

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name: 
Address: 

V. WHERE TO SEND THIS FORM:
Send this form to the following ERIC Clearinghouse:

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

**ERIC Processing and Reference Facility**
4483-A Forbes Boulevard
Lanham, Maryland 20706
Telephone: 301-552-4200
Toll Free: 800-799-3742
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com

EFF-088 (Rev. 9/97)