Technology Resources

for Students Who Are Deaf, Hard of Hearing, or Deaf-Blind

A variety of assistive equipment and technologies, both instructional and medical, is currently available to assist individuals who are deaf, hard of hearing, or deaf-blind at home, in schools, and in the community. The availability of this equipment and these technologies, and the impact of medical technological advances in terms of personal listening devices, continues to greatly influence the world of education.

Keeping current and informed about educational, instructional, and assistive technologies and personal listening apparatus can be overwhelming and very challenging. It is our intent that this overview will provide you with a broader understanding of what may be available to individuals in school, in the community, and at home.

Assistive Equipment

Personal and sound field devices can help enable people living with limited hearing to enhance their quality of life and lead more independent lives.

FM (Frequency modulation) and DM (digital modulation) systems are devices that provide enhanced sound to hearing apparatus through a transmitter/receiver system. This system may be paired directly to the hearing device or sent through a sound field system, which amplifies the sound through speakers placed in the room. These devices enhance speech discrimination when both environmental sounds and the speaker's voice from the transmitter must be heard together. They work as a remote microphone, overcoming common listening problems for those with hearing loss: background noise, reverberation and distance from the speaker. Many classrooms are wired to utilize this technology.

Bluetooth adapters can provide a wireless connection directly to the hearing apparatus, enhancing the quality of sound being transmitted from distances beyond arm's length.

Cell phones can be used as communication devices, as individuals can use the text messaging function to communicate. Many apps are being developed to be compatible with cell phones and other hand-held devices.

Videophone, video remote interpreting, and video relay service offer additional supports through the use of visual recordings used to enhance communication.

Additional information on assistive technology resources can be found through PaTTAN and at the PEAL Center: http://www.pealcenter.org/

Instructional, Educational, and Assistive Technology

Backchanneling, or real-time communication through the use of technology, is the practice of using networked computers to maintain an online conversation alongside live spoken remarks. Backchanneling is increasingly becoming an enhancement in education where WiFi connections and laptop computers allow students to use ordinary chat sites to actively communicate during class. From instant messaging to tweeting on Twitter, the opportunities for real-time immediate communication through electronic devices have had a significant impact upon education. Pinterest, Scoop it, Digital Books, and thousands of "smart phone " apps like Mobile ASL (American Sign Language) are linking students to teachers and to each other far beyond the walls of their classrooms.

Captioning allows people to have visual access to what is being said via print. Many products, such as DVDs or prerecorded TV programs, are closed-captioned.

Computer assisted real time transcription (CART) allows students who are deaf or hard of hearing to follow a discussion or speaker word-for-word with speech-to-text.

C-Print and TypeWell are similar to CART, but are meaning-for-meaning interpretations of what is said, rather than word-for-word.

Along with these instructional technologies, new worlds have been opened to those students who are deaf-blind via **Braille Note-takers, Optical character readers, and various translators** that enable communication to be modified either through the auditory channel, tactually, or visually to meet individual student needs.

Medical Technology

Choosing a medical technological apparatus is a very personal decision.

Digital hearing aids, cochlear implants, and bone conduction hearing aids are a few of the types of devices that provide access to sound. There are a wide range of models on the market; consultation with an audiologist and an otolaryngologist can help you determine the best choice. It is recommended to research the range of options prior to meeting with the specialists, to get answers to specific questions you may have.

Resources

Pennsylvania Training and Technical Assistance Network

American Foundation for the Blind

Captioned Media Program

Deaf Tech News

Educational Technology Blog for the Deaf and HH

The Family Center on Technology and Disability

Icanconnect: the National Deaf-Blind Equipment Distribution Program

Laurent Clerc National Deaf Education Center at Gallaudet

National Center for Deafblindness

National Federation of the Blind

Office of Vocational Rehabilitation

PA Initiative on Assistive Technology (PIAT)

Pennsylvania Office for the Deaf and Hard of Hearing

PEPNET2

Telecommunication Device Distribution Program (TDDP)

For additional assistance with technology for individuals who are deaf or hard of hearing, please contact your local PaTTAN office.

East 800-441-3215

Harrisburg 800-360-7282

Pittsburgh 800-446-5607

www.pattan.net

PaTTAN
Pennsylvania Training and Technical Assistance Network

rev. 3/19