

Assistive Technology 101

What Is Assistive Technology?

Assistive technology is any kind of technology that can be used to enhance the functional independence of a person with a disability. Often, for people with disabilities, accomplishing daily tasks such as talking with friends, going to school and work, or participating in recreational activities is a challenge. Assistive Technology (AT) devices are tools to help to overcome those challenges and enable people living with disabilities to enhance their quality of life and lead more independent lives.

Assistive technology can be anything from a simple (low-tech) device such as a magnifying glass, to a complex (high-tech) device, such as a computerized communication system. It can be big — an automated van lift for a wheelchair — or small — a Velcro attached grip attached to a pen or fork for example, for eating and writing. Assistive technology can also be a substitute — such as an augmentative communication device that provides vocal output for a child who cannot communicate with her voice.



Meeting Challenges with Assistive Technology

Assistive technology helps to level the playing field for individuals with disabilities by providing them a way to fully engage in life's activities. An individual may use assistive technology to travel about, participate in recreational and social activities, learn, work, communicate with others, and much more.

Here are several examples of AT that enables people with disabilities to enter into the community and interact with others.

- For greater independence with mobility and travel, people with physical disabilities may utilize mobility aids, such as wheelchairs, scooters, and walkers. Adapted car seats and vehicle wheelchair restraints promote safe travel.
- Hand-held GPS devices help persons with visual impairments navigate busy city streets and utilize public transportation.
- Building modifications at work sites, such as ramps, automatic door openers, grab bars, and wider doorways mean fewer barriers to employment, businesses, and community spaces, such as libraries, churches, and shopping malls.
- Special computer software and hardware, such as voice recognition programs and screen enlargement programs, enable persons with mobility and sensory impairments to carry out educational or work-related tasks.
- Education and work aids such as automatic page turners, book holders, and adapted pencil grips enable children to participate in classroom activities.
- Bowling balls with hand-grips and one-handed fishing reels are a few examples of how technology can be adapted for sporting activities. Light-weight wheelchairs have been designed for organized sports, such as basketball, tennis, and racing.
- Adaptive switches make it possible for a child with limited motor skills to play with toys and games.
- Accessibly designed movie theaters provide closed captioning and audio description for moviegoers with hearing and visual difficulties.
- Devices to assist a person with daily living tasks, such as cooking, dressing, and grooming, are available for people with special needs. For example, a medication dispenser with an alarm can be set to remind a person with memory loss to take daily medication. A person with use of only one hand can use a one-handed cutting board and a cabinet mounted can opener to cook meals with improved independence and safety.



Choosing the Right Assistive Technology Device(s) for Your Child

To determine the assistive technology needs of a child, an AT assessment should be conducted. The assessment can be conducted by the school, an independent agency, or an individual consultant. This assessment should take place in a child's customary environments -- home, school, and community.

It is important that the assessment address the child's strengths as well as his/her weaknesses. It is key, when discussing how the child participates in his/her world, to hear the perspectives of teachers, parents and siblings, as well as that of the child. The discussion should not be limited merely to what skills the child possesses but should include the ways in which a child communicates, what he likes and dislikes, and what kind of strategies and interventions are helpful in interacting with the child. Consideration must be taken on how a child's need for AT might change depending on the environment, for example on the playground, the classroom, a friend's house or in a public place like a mall or library. This type of input will provide clues as to what technology might work and how well your child will respond to it.

The end result of an assessment is a recommendation for specific devices and services. Once it is agreed that assistive technology would benefit a child, issues related to design and selection of the device, as well as maintenance, repair, and replacement of devices should be considered. Training (to use the device) and ongoing technical assistance is necessary not only for the child, but also for family members, teachers, service providers, and other people who are significantly involved in a student's life. It is also important to integrate and coordinate any assistive technology with therapies, interventions, or services provided by education and rehabilitation plans and programs.

Acquiring assistive technology does not just happen once in a lifetime. The type of devices your child needs may change depending on the child's age, abilities, physical status, and features of the immediate environment. Change in your child's life may necessitate a re-assessment of his or her assistive technology needs.

Learning More about Assistive Technology

Parents can help to identify potential AT for their child if they learn about the choices that are available. A good place to start is often with speech-Language therapists, occupational therapists and school professionals. There are many organizations that provide AT information and training to consumers and families such as parent training and Information centers (PTI's), community technology centers, state assistive technology programs and rehabilitation centers. If possible you should visit an AT center with your child to see and try out various devices and equipment. Some AT centers offer lending programs that allow families to borrow devices for a trial period.

The Family Center on Technology and Disability (FCTD) offers a wide range of assistive technology resources for disability organizations, AT providers, educators and families of children with disabilities. Families are always welcome to visit the FCTD web site (www.fctd.info) to find other AT and disability organizations and to learn more about assistive technology.

The following list includes several organizations that offer a various resources on AT.

Abledata - www.abledata.com

Assistivetech.net - www.assistivetech.net

AbilityHub - www.abilityhub.com

PACER Center - Simon Technology Center - <http://www.pacer.org/stc/>

Technical Assistance Alliance for Parent Centers - www.taalliance.org

Association of State Technology Act Programs - www.ataporg.org/stateatprojects.asp

