



Chapter 5. Assistive Technology for Education and Work

With the explosive growth of technology, increasing options are becoming available to enable persons with disabilities to achieve higher levels of education, live independently, and participate in the workplace, recreational activities, and hobbies. This chapter reviews the types of assistive technology available and discusses strategies for locating and funding them.

A. What Is Assistive Technology?

Assistive technology is any assistive, adaptive, or rehabilitative tool or device used by humans to help with the physical and mental tasks involved in daily living. These tools can include mechanical and electronic devices as well as learning and educational aids.

Assistive technologies can be broken down into three categories: The first category includes mechanical, electronic, and microprocessor-based equipment such as microcomputers, electronic communication devices, and other sophisticated devices. Specific examples include the following:

- voice recognition systems and software
- speech synthesizers
- electric wheelchairs
- sip and puff switches
- computers
- TDD/TTY machines (telecommunication devices for the deaf that allow a person to transmit typed messages over telephone lines)

The second category consists of nonmechanical and nonelectronic aids. Specific examples include the following:

- ramps to replace steps
- knowledge of or training in sign language
- head wands or head sticks, used for pointing to word boards or keyboards
- crutches
- artificial limbs

Specialized instructional materials, services, and strategies make up the third category. Specific examples include the following:

- large-print or Braille texts for persons with visual impairments
- individualized education plans
- job coaches
- sign language interpreting
- test taking adaptations (e.g., extra time allotted)
- audio description

B. Assistive Technology for Education

Assistive Technology and K-12 Students

Federal laws such as the Individuals with Disabilities Education Act and the Americans with Disabilities Act (ADA) help to guarantee a public school student's right to a complete and barrier-free education.

Assistive technology helps students with disabilities to meet their full potential. Devices such as specialized computer keyboards, screen magnification systems, and specially designed software offer students with physical, visual, or cognitive impairments the adaptations they need to succeed. Similarly, items such as augmentative communication devices and FM systems offer students with speech or hearing impairments the ability to fully participate in the educational experience. Other assistive devices help students as they

move from special education programs into the workforce.

There are three keys to ensuring that any student has access to appropriate assistive technology:

1. Understand the student's rights and the obligations of the school, the state government, and the local government. A number of organizations can assist in this process. You can contact the Family Center on Technology and Disability developed by the United Cerebral Palsy (UCP) through its Web site at <http://www.ucpa.org/fctd/> or by calling 1-800-USA-5UCP. An online article titled "Funding of Assistive Technology—The Public School's Special Education System as a Funding Source," available at <http://www.nls.org/specedat.htm> provides valuable information.
2. Know what assistive technology is available, and have a clear idea about what you want.
3. Make sure to discuss the need for assistive technology during the creation of an individualized education plan (IEP) and include it in the report.



Assistive Technology and Postsecondary Students

Students with disabilities may request accommodations to enable them to participate in and benefit from postsecondary education in accordance with the Individuals with Disabilities Education Act and the Americans with Disabilities Act (ADA). Modifications and accommodations include removing architectural barriers; supplying note takers and interpreters; extending time limits for completing exams, courses, or programs; and providing assistive technology. Any college or university that receives federal financial assistance cannot, by federal law, discriminate in the recruitment, admission, or treatment of students with disabilities. The best contact for accommodations requests is the college's disability services office.



To find out more information on funding for postsecondary students, contact the HEATH Resource Center:

HEATH Resource Center

American Council on Education

One Dupont Circle NW, Suite 800

Washington, DC 20036

Telephone: 1-800-544-3284 or (202) 939-9320

E-mail: heath@ace.nche.edu

Web site: <http://www.acenet.edu/About/programs/Access&Equity/HEATH/home.html>



The HEATH Resource Center is a national clearinghouse on postsecondary education for individuals with disabilities. Support from the U.S. Department of Education enables HEATH to gather and provide information about educational support services, policies, procedures, adaptations, and opportunities at U.S. campuses, vocational-technical schools, and other postsecondary institutions.

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C. A Beginner's Guide to Funding Assistive Technology

The process of finding funding for assistive technology can be overwhelming. This section provides tips and information resources to help you negotiate the maze of eligibility requirements, potential funding

sources, restrictions, paperwork, rules and regulations, and procedures for appealing denials.

To begin the process of locating funding for appropriate assistive technology, start by completing the following two tasks. First, determine exactly what assistive technology is needed. If you have a long-term disability, you may need to replace an outdated device. In this case, you need to determine the specific item required (make, model, manufacturer, etc.) and exactly where to purchase it. You may need to consult with a physician, rehabilitation professional, or therapist to determine what features will help you accommodate changes in disability and ability levels. Once the exact specifications are determined, you may need to acquire a prescription for the device. For those who are newly disabled, consultation with medical and rehabilitation professionals is essential.

Secondly, gather the information required by insurance companies, community organizations, and government agencies offering assistance. No matter where you look for funding, having the following information close at hand can help alleviate frustration and prevent unnecessary delays:

- primary disability
- date of onset of primary disability

- cause of primary disability
- secondary disability
- date of onset of secondary disability
- cause of secondary disability
- employment history
- family gross income
- monthly expenses (rent or mortgage payments, utilities, outstanding loans and bills, medical expenses, etc.)
- health insurance information
- names and ages of dependents and their relationships to you

Preparing a Justification Statement

Before potential funding sources will help pay for assistive technology, the applicant may be required to prepare a justification statement. The exact format and content of this statement varies based on the requirements of the agency or organization. When the funding source is a public or private insurance company, a physician or therapist is required to submit a statement indicating the medical necessity of the purchase. State vocational rehabilitation agencies generally insist that people applying for funds be able to clearly demonstrate, in writing, that the



service or technology will enhance their ability to prepare for, get, or keep a job. If employment is not an expected outcome, then the justification statement must show that the device will improve the individual's ability to function independently. School districts will often pay for assistive devices used in the classroom. Parents must first be prepared to demonstrate how the device will enhance their teenager's ability to obtain an appropriate education in the least restrictive environment possible.

Success in securing funding frequently depends on the applicant's ability to address in writing each agency's unique requirements.

Sources of Funding for Assistive Technology

Sources of funding for assistive technology may be public or private. Public sources include all agencies funded and operated by national, state, or local governments. Private sources include private insurance companies and special no- or low-interest loan programs from private lenders arranged for you by a government agency or technology manufacturer.

State vocational rehabilitation agencies: All states have vocational rehabilitation agencies to help people with disabilities become employable or employed by providing a wide range of services, financial assistance,

and training. The eligibility requirements vary from state to state. To find out more about these services, look in the blue pages of your local phone directory.

- **Insurance companies:** Insurance companies act as fiscal agents, processing funding through government agencies as well as through private industries and individuals. They are underwriters of insurance programs for individuals, major corporations, and trade unions.
- **Medicare:** Medicare is a federally funded health insurance program that helps Americans over 65 and many people with severe disabilities under age 65 to pay for their health care costs. Medicare has two parts: (1) Part A, Mandatory Hospital Insurance, and (2) Part B, Optional Medical Insurance.
- **Medicaid:** Medicaid is a program that provides medical assistance for certain individuals with a low income. Medicaid provides medical assistance to families with dependent children, Americans over 65, people who are blind, those receiving Supplemental Security Income, and certain other groups eligible for cash welfare payments.
- **Nonprofit disability organizations:** Some nonprofit organizations that serve people with disabilities can provide small amounts of money or donate equip-

ment. Check first with organizations that provide services to people with disabilities similar to yours.

- **Department of Veterans Affairs (VA):** The VA will fund any communication device prescribed for a person who has a disability related to his or her service in the U.S. military. Other funding projects vary. For further assistance, please call your local VA.
- **Private corporations:** The purchase of assistive technology or other equipment for an individual with a disability can benefit both the employee and the business. The person may be able to be more productive, the business will gain or retain a valuable employee, and the company may receive positive publicity. Try approaching a private corporation that has been associated with a disability group in the past or that needs a boost in their public image.
- **Foundation or trust fund donors:** Foundation or trust fund donors are best accessed through national foundation centers or a local library with a grantsmanship program. Look in the *Foundation Directory*, available at your local library, for sources relating to special needs or disability. Foundation centers located in major cities may also have information posted on their own Web sites. It is probably wise to start with local foundations before

trying to attract funds from national sources. For additional information, see the National Foundation Center Web site at www.fdncenter.org.

- **Service clubs:** Local civic organizations such as Kiwanis, Rotary, and Lions Clubs often contribute to the purchase of assistive devices. Since their funds are limited, it is best to request them in conjunction with another source that can provide matching funds.
- **Fund-raisers:** Church members, coworkers, professional organizations, and community groups often raise money for people in need. If you are affiliated with one of these groups, you might consider this source of funding.
- **Wish makers:** A handful of individuals and organizations that grant wishes to people with specific needs. Check local libraries and organizations to learn about resources in your area.
- **Public appeals:** If other sources of funding have been exhausted, a public appeal is an option. For example, you may appeal to a local retail store for equipment.



Additional Tips on Obtaining Funding for Assistive Technology

Here are some additional tips to help you in obtaining assistive technology:

- Know your rights under the law. Research, read, attend workshops, and talk to knowledgeable people.
 - Know your exact technology needs. Clearly describe in writing how a device meets a specific need. Experts can help you explore what technology is available. See the resources listed at the end of this section for help in finding experts.
 - Test out any device before purchasing it whenever possible. Sometimes you can borrow or rent a device for trial at home, school, or work. A trial run will help you make absolutely sure that it will meet your needs.
 - If one piece of equipment works better for you than another, document this by making notes, taking photos, or videotaping.
 - Make sure you can show how the device makes a difference. Document your functioning with and without the assistive device. You will need this evidence when seeking funding.
- Remember that it is possible, and sometimes preferable, to fund the purchase of an assistive device by receiving financial assistance from more than one source.
 - Be aware that the way in which a device is used often dictates the sources from which funding can be obtained. If a device is used by a K-12 student, it should be included in the written Individualized Education Plan (IEP) and paid for by the school system. If the device is necessary for work, then the state's vocational rehabilitation office should help. If the device is medically necessary, then it would be appropriate to get some funding from private insurance, Medicare, or Medicaid.
 - Every source of funding has its own requirements and eligibility rules. Be sure to learn the rules and follow them diligently. Simple procedural mistakes can cost you your funding. Seek out an experienced advocate affiliated with the funding source if you need help.
 - When submitting an application form or request, provide additional information, such as a brochure about the requested device, a video you have made, or photos you have taken. Be sure to turn in everything at the same time, and personally drop off the form or request if you can, rather than mailing it.



- Keep a journal of all contacts with the funding agency. Write down the date, the name of the person with whom you spoke, and what was discussed. Keep copies of all correspondence. If an appeal process becomes necessary, your records will be important.
- Call regularly to check on the progress of your application.
- Be persistent. If funding is denied, pleasantly request that the reason for denial be provided to you in writing. If the denial was based on a mistake, misunderstanding, or lack of information, clear it up and resubmit your application. If your request is still denied, determine what you must do to appeal the denial and then do it.
- Find an outside advocate, especially if you are new to the funding game. Many assistive technology manufacturers employ funding coordinators who can be quite helpful.
- If you feel a funding source is not giving you a fair hearing and that your rights are being violated, obtain legal counsel. If you cannot afford an attorney, contact your local Legal Aid Society. You need an advocate who knows the law relating to assistive technology funding.

D. Resources to Help Locate and Fund Assistive Technology

A variety of projects and agencies offer funding-related information. Some are national in scope, while others are state specific.

State Technology Assistance Projects

Each U.S. state and territory has a Technology Assistance Project with up-to-date information on assistive technology resources for its citizens. Some projects have compiled lists of local funding resources. For a complete listing of Technology Assistance Projects, see Appendix H.

State Protection and Advocacy Agencies and Client Assistance Programs

Most states also have a Protection and Advocacy Agency and a Client Assistance Program to help persons with disabilities access appropriate programs and services. For a complete list of Protection and Advocacy Agencies and Client Assistance Programs, see Appendix I.





ABLEDATA

8401 Colesville Road, Suite 200
Silver Spring, MD 20910
Telephone and TDD: 1-800-227-0216
Fax: (301) 608-8958
E-mail: belknap@macroint.com
Web site: www.abledata.com

This organization provides comprehensive information on assistive technology, including funding.

Alliance for Technology Access

2175 East Francisco Boulevard, Suite L
San Rafael, CA 94901
Telephone: (415) 455-4575
TTY: (415) 455-0491
E-mail: ATAinfo@ATAccess.org
Web site: www.ataccess.org

The Alliance for Technology Access (ATA) is a national network of community-based technology resource centers and 60 technology design and development companies. The ATA technology resource centers help children and adults with disabilities (as well as their parents, teachers, employers, and friends) investigate computer systems, adaptive devices, and software through hands-on exploration and consultation. The staff helps people find the best

solution for their needs, places to make purchases, and potential funding sources. The centers, which are in 27 states and the Virgin Islands, also provide information and referrals, publish newsletters, and organize special activities in response to local needs. Projects often focus on the inclusion of students with disabilities in typical classrooms, curriculum adaptation, the transition from school to work, and work site accommodations.

Some centers also support users' groups and professional development training for teachers, adult services providers, therapists, and others who wish to increase their knowledge of assistive technology. Many centers have drop-in times or lending library services for software or hardware, adapted toys, and videos.

The ATA has also published an award-winning book, *Computer Resources for People with Disabilities*, which combines up-to-date information about using hardware, software, and conventional, assistive, and information technologies with real-life stories about people of all ages and with all types of disabilities who are using technology successfully. You can order the book through the ATA.

Assistive Technology Funding and Systems Change Project

United Cerebral Palsy
1660 L Street NW, Suite 700
Washington, DC 20036
Telephone: 1-800-USA-5-UCP
TTY: (202) 973-7197
Fax: (202) 776-0414
E-mail: ucpnatl@ucpa.org
Web site: www.ucpa.org/html/innovative/atfsc/fat.html

This organization's Web site provides a variety of resources on funding for assistive technology.

Center on Information Technology Accommodation

U.S. General Services Administration
1800 F Street NW, Room 1234
Washington, DC 20405
Telephone: (202) 501-4906
TTY: (202) 501-2010
Fax: (202) 501-6269
E-mail: susan.turnbull@gsa.gov
Web site: www.gsa.gov/coca/cocamain.html

This organization focuses on government legislation and policy concerning access to information. It also offers lists of equipment vendors and public and

nonprofit resources and guidelines for technologies that enable access to information.

Edlaw

P.O. Box 81-7327
Hollywood, FL 33081-1327
Telephone: (954) 966-4489
Fax: (954) 966-8561
E-mail: edlaw@edlaw.net
Web site: access.digex.net/~edlawinc

This organization provides information on the individuals with Disabilities Education Act and Section 504 of the U.S. Rehabilitation Act. The Web site includes links to disability law resources on the Internet.

Family Center on Technology and Disability

Telephone: 1-800-USA-5UCP
TDD: (202) 973-7197
Web site: <http://www.ucpa.org/fctd/>

This center assists organizations and programs that serve families of children with disabilities by providing information and support on accessing and using assistive technology. It offers many resources related to assistive technology and its funding.

Federation for Children with Special Needs

1135 Tremont Street, Suite 420
Boston, MA 02120
Telephone: (617) 236-7210 or 1-800-331-0688
Fax: (617) 572-2094
E-mail: fcsninfo@fcsn.org
Web site: www.fcsn.org

This is a parent training and information center designed to help parents deal with schools. Call for the location of a center near you.

HEATH Resource Center

American Council on Education
One Dupont Circle NW, Suite 800
Washington, DC 20036
Telephone or TTY: 1-800-544-3284 or (202) 939-9320
E-mail: heath@ace.nche.edu
Web site: <http://www.acenet.edu/About/programs/Access&Equity/HEATH/home.html>

The HEATH Resource Center is a national clearing-house on postsecondary education for individuals with disabilities. HEATH gathers and provides information about educational support services, policies, procedures, adaptations, and opportunities at U.S. campuses, vocational-technical schools, and other postsecondary institutions.



Job Accommodation Network (JAN)

West Virginia University
P.O. Box 6080
Morgantown, WV 26506-6080
Telephone and TTY: 1-800-526-7234
Fax: (304) 293-5407
E-mail: jan@jan.icdi.wvu.edu
Web site: <http://janweb.icdi.wvu.edu>

JAN is an international, toll-free consulting service that provides information about job accommodations and the employability of people with disabilities. JAN also provides information regarding the ADA.

National Early Childhood Technical Assistance System

Frank Porter Graham Child Development Center
Room 500, NCNB Plaza
Chapel Hill, NC 25499
Telephone: (919) 962-2001
TDD: (919) 966-4041
E-mail: nectas@unc.edu
Web site: www.nectas.unc.edu

This organization provides information on early intervention programs and whom to contact in your state for more information.





**National Information Center for
Children and Youths with Handicaps**
P.O. Box 1492
Washington, DC 20013
Telephone and TTY: 1-800-695-0285 or
(202) 884-8200
Fax: (202) 884-8441
E-mail: nichcy@aed.org
Web site: www.nichcy.org

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This organization provides personal responses to specific questions, referrals to other sources of help, and technical assistance to parents and professionals.

National Rehabilitation Information Center (NARIC)
1010 Wayne Avenue, Suite 800
Silver Spring, MD 20910
Telephone: 1-800-346-2742 or (301) 562-2400
TTY: (301) 495-5626
Fax: (301) 562-2401
Web site: www.naric.com

NARIC provides information on disability and rehabilitation, including research, organizations, publications, journal articles, and Internet resources.

Neighborhood Legal Services
National Assistive Technology Project
495 Ellicott Square Building
295 Main Street
Buffalo, NY 14203
Telephone: (716) 847-0650
TTY: (716) 847-1322
Fax: (716) 847-0227
Web site: <http://www.nls.org/nlsbroch.htm>

This organization trains attorneys to deal with assistive technology issues and also provides technical assistance.

**Rehabilitation Engineering and Assistive Technology
Society of North America (RESNA)**
Technical Assistance Project
1700 North Moore Street, Suite 1540
Arlington, VA 22209-1903
Telephone: (703) 524-6686
TTY: (703) 524-6639
Fax: (703) 524-6630
E-mail: info@resna.org
Web site: www.resna.org

RESNA coordinates and provides information about the state Tech Act programs. Almost all states in the United States, the District of Columbia,





Guam, the Northern Mariana Islands, and American Samoa have a Tech Act program. Tech Act programs advise people with disabilities and their caregivers on all aspects of assistive technology, including funding. RESNA conducts an annual conference and regional assistive technology conferences.

Trace Research & Development Center

University of Wisconsin-Madison
5901 Research Park Boulevard
Madison, WI 53719
Telephone: (608) 262-6966
TTY: (608) 263-5408
Fax: (608) 262-8848
E-mail: web@trace.wisc.edu
Web site: <http://trace.wisc.edu/>

Trace is a research center at the University of Wisconsin-Madison that focuses on making off-the-shelf technologies and systems like computers, the Internet, and information kiosks more accessible for everyone through the process known as universal (or accessible) design. Trace has an excellent and comprehensive handbook on funding assistive technology at the following Web site: http://trace.wisc.edu/gofr_web/fintech.html.



