

Assistive Technology

Overview

“Assistive technology” is a term that describes electronic solutions that enable people with disabilities to live independently. The term “adaptive technology” is sometimes used in a similar way. People experiencing blindness can hear computer-screen text, for example, and people with visual impairments can enlarge text, in order to enable independent reading. People who have difficulty manipulating a mouse can enter data, and those who cannot physically hear a computer prompt can view prompts. There is also computer software that helps people with learning differences see and hear the information displayed on the screen.

Microsoft Windows comes with accessibility attributes that can help some people with moderate disabilities use computers. These accommodations can be found in the Microsoft Ease of Access Center, which includes programs such as Sound Sentry (which helps hearing-impaired people see audio computer cues), and Sticky Keys (which enables key-combination commands, such as Ctrl-Alt-Delete, to be entered as individual key entries. Sound Sentry can be useful for people who have limited dexterity. Moreover, patrons with visual impairments or learning disabilities may find programs such as the “Magnifier” and “Narrator” helpful.

Apple also incorporates accessibility in all of its products, and most experts consider Apple accessibility features to be superior to those of Microsoft. Although they are generally more expensive, Apple products offer a significant number of tools available that help people with learning, visual, hearing, and physical disabilities access information without any cost to the library.

In an ideal world, all budgets would allow library professionals to provide electronic access for patrons of all abilities. In reality, however, priorities must be made. Library professionals should develop plans that allow for the purchase of essential tools that will help the most people. It is also necessary to ensure that the staff is aware of available tools and that they are properly trained to use them.

Recommended Hardware and Software Solutions

- [ZoomText Xtra screen-magnification software](#)—this program allows patrons with low vision to access information by enlarging the computer screen display or tailoring the display to accommodate their disability.
- [JAWS screen reader](#)—this program enables individuals who are blind or visually impaired to access information on a computer screen through voice output.

- [Open Book text reader](#)—helps those with low or no vision. Scans printed text and verbalizes the text via synthetic speech.
- [Duxbury Braille Translating Software](#)—program that, like a word processor, allows users to type text, then translate it into Braille. A Braille embosser produces hardcopy.
- [Braille embosser](#)—similar to a printer, an embosser will print Grade II Braille on paper, enabling patrons to create hardcopies of documents. If hardcopy Braille is not available, it enables users to save documents to a USB flash drive.
- [Talking Typer software](#)—Talking Typer, from American Printing House (APH), is a specially designed typing-teacher program for those who are blind, have low vision, or learn at a different pace. The program provides audio instruction and tutorials.
- Other items include handheld magnifiers, signature guides, felt-tip pens, and large magnification devices such as [closed-circuit television magnifiers \(CCTV\)](#). This system employs a video camera lens to enlarge text from three to thirty times normal text size.

Tips for Assisting Patrons with Hearing Impairment or Deafness

Many computer users who are deaf or have hearing impairments will not have problems using the computer itself. Challenges may arise, however, from programs and websites that have audio cues. Other issues might ensue from the patron simply wanting to take computer classes and needing an interpreter. Both Microsoft and Apple install programs that will overcome some of the challenges presented by audio prompts.

- Sound Sentry—found in all Microsoft Windows programs as well as in Apple computers, this program enables the user who cannot hear the embedded warning chimes of Microsoft products to see them as flashes.
- Instant Messaging—this mainstream technology allows staff and patrons who cannot hear to “talk” with one another.

Tips for Assisting Patrons with Physical Disabilities

Persons with physical disabilities may need assistance in doing some tasks that are involved in using the computer. Persons using wheelchairs or scooters will need a sturdy, safe workstation. Table height and monitor position should be adjustable. The following items increase computer usability and safety:

- Special input devices such as trackballs, joysticks, switches, touch pads, and augmented keyboards (micro keyboards or oversize keyboards with enlarged keys).
- Madentec Tracker—users wear a tiny reflective dot on the forehead or glasses. A computer camera/tracker allows users to manipulate the cursor through head movement.
- Softype—a software utility that replaces the functionality of a standard keyboard with a full-featured, onscreen keyboard.

Resources

- [Apple Accessibility](#) Visitors can learn about Apple's built-in accessibility features as well as some basic information relating to assistive technology.
- [ASCLA "Think Accessible Before You Buy: Questions to Ask to Ensure the Products the Library Plans to Purchase are Accessible"](#) This website provides a basic understanding as to what makes electronic media accessible. It includes a glossary of terms and acronyms commonly used in the field of assistive technology.
- [Microsoft Accessibility: Technology for Everyone](#) In addition to providing a thorough overview of Microsoft's Accessibility Products, this website provides an overview of assistive technology products and useful articles on access.
- [Section 508.gov: Assistive Technology Showcase Devices](#) The U.S. government's official showcase of assistive technology and a listing of providers of the technology.