Overview

Assistive (also called adaptive) technologies are electronic solutions that enable people with disabilities to live independently. Blind persons can hear computer-screen text, and people with visual impairments can enlarge text, enabling independent reading. People who are unable to manipulate a mouse can enter data, and those who cannot physically hear a computer prompt can view prompts. There is also computer software that helps persons with learning differences see and hear the information displayed on the screen.

Staff should be aware that Microsoft's Windows packages and Vista programs do come with accessibility attributes that can help some persons with moderate disabilities use computers. These accommodations can be found in the Microsoft Ease of Access Center   include programs such as Sound Sentry which helps hearing-impaired people see audio computer cues while Sticky Keys enables key-combination commands, such as Ctrl-Alt-Delete, to be entered as individual key entries (useful for persons who have limited dexterity). Patrons with visual impairments or learning disabilities may find programs such as the "Magnifier" and "Narrator" helpful. There are many other programs that would be useful for a wide range of patrons with disabilities.

Libraries using Apple Mac computers should be aware that Apple also incorporates accessibility in all of their products. There is a wide range of tools available which will help people with learning, visual, hearing, and physical disabilities access information without any cost to the library.

Most libraries do not allow staff to access these programs. If a library does not have any assistive technologies, it may be necessary to allow access to these programs for staff and patrons.

In an ideal world all library budgets would allow the library to provide electronic access for all patrons with and without disabilities. However, since the world we work is reality based it does not allow us to purchase and or place everything. Therefore it is necessary to develop a plan that would allow the library to purchase the essential tools which will help the most people. It is also necessary to ensure that the staff is aware of available tools and trained to use them.

Tips for Assisting Patrons with Blindness or Visual Impairment

Specialized software programs and hardware for patrons who are blind or visually impaired enlarge displays on the monitor or read the material to the user through a speech synthesizer. They can also allow for speech input.

Some of the Most Common Hardware and Software Solutions

- <u>ZoomText Xtra screen-magnification software</u>—this program allows patrons with low vision to access computer information by enlarging the screen display or tailoring the display to accommodate their disability.

- <u>JAWS screen reader</u>—this program enables individuals who are blind or visually impaired to access the information on a computer screen through voice output.

- <u>Open Book text reader</u>—helps those with low or no vision. Scans printed text and verbalizes the text via synthetic speech.

- <u>Duxbury Braille Translating Software</u>—program that, like a word processor, allows users to type text, then translate it into Braille. A Braille embosser produces hardcopy.

- <u>Braille embosser</u>—similar to a printer, an embosser will print Grade II Braille on paper, enabling patrons to create hardcopies of documents. If hard-copy Braille is not available, it enables users to save documents to a USB flash drive.

- <u>Talking Typer software</u>—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.

- It is important not to forget basic items like handheld magnifiers, signature guides, felt-tip pens, and large magnification devices such as <u>closed-circuit television magnifiers (CCTV)</u>. 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. Problems will arise from programs and websites which 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 which will overcome some of the problems presented by audio prompts.

- Sound Sentry—found in all Microsoft Windows and Vista 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 Learning Differences

Specialized software programs and hardware for patrons who have learning differences will display print as well as provide auditory reading of the text.

- Kurzweil 3000 and WYNN Wizard—these programs increase reading speed and comprehension through simultaneous spoken word and highlighting of text.

- Read & Write Gold—a program that provides comprehensive and complete reading and writing support for those with literacy or learning difficulties.

Tips for Assisting Patrons with Physical Disabilities

Persons with physical disabilities may need assistance in doing some of the physical 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.

Always Think Accessible

It is prudent to note that some assistive technologies are only useful if the information is properly formulated. Library staff making both expensive and inexpensive electronic purchases should always be mindful that the information is useable by all patrons.

Resources

Apple Accessibility.
http://www.apple.com/education/special-education/
At this site 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"
www.ala.org/ala/mgrps/divs/ascla/asclaprotools/thinkaccessible/default.cfm
This website provides a basic understanding as to what makes electronic media accessible. It includes a glossary of terms and acronyms commonly used in disability fields.

Microsoft Accessibility: Technology for Everyone.
http://www.microsoft.com/enable/
In addition to providing a thorough overview of Microsoft's Accessibility Products the website provides an overview of assistive technology products and useful articles on access.

Section 508.gov: Assistive Technology Showcase Devices
www.section508.gov/index.cfm?fuseAction=AssistiveTechDevices
The U.S. government's official showcase of assistive technology and a listing of providers of the technology.