ED 102 Assignment 5

Although canes and other adaptive tools have been used for centuries, it was not until recently that assistive technology gained legal recognition. The phrase “auxiliary aids and services” is another term used to reference assistive technology in legal statutes.

The students who are disability or chronic health condition, assistive technology offers the potential to ameliorate problems associated with mobility, communication, and learning. Assistive technology encompasses the tools that are used to increase an individual’s functional capabilities and the services that assist with evaluation, selection, and use of technology by special populations. Students with disabilities in school are used assistive technology that promotes independence and allows them to participate more fully in the general education curriculum and access educational technology products along with their peers. A vast array of technology solutions exist, ranging from (1)high-tech devices ; a power wheelchair or talking computer to everyday, (2)low-tech products ; a cane or a large-print book.

Assessment of an individual’s need for assistive technology presents the challenge of matching the most appropriate technology devices and services with the user’s profile and the tasks or goals to be accomplished within a particular environment. Funding, training, availability of technical expertise, and strategies to reduce potential abandonment or failure to use a selected device are all critical to the effective provision and implementation of assistive technology.

Assistive technology plays a key role in allowing students with disabilities to interact with instructional technology products and bypass barriers associated with physical, sensory, or cognitive limitations. Educational technology can serve the dual purposes of assistive technology that increases, maintains, or improves functional capabilities for disability students.

Assistive Technology Devices

Thousands of assistive technology applications span across all disability types. Some generalizations can be drawn for specific groups based on characteristic functional limitations.

Vision impairment technically encompasses all degrees of vision loss, including total blindness. Technology that enhances access to print and other information sources has made the most significant impact on educational and career options for individuals who are blind or visually impaired. Some low-tech solutions for difficulties with glare, contrast, or size include use of a small tensor lamp to increase illumination, color transparencies, a magnifying glass or hand-held telescope, and reversed text (white on black). Braille documents or books and tape recorders are familiar items used by the blind.

In Our country, most are used Braille documents or books and tape. More convenient way for the blind individual to keep track of phone numbers, assignments, appointments, and other short pieces of information. Computer-based adaptations include screen readers with a speech synthesizer and headphone, screen magnification software, Braille or large print keyboard markers, and Braille printers. They can also use normal computer, they are trained by their expert teacher. Teacher trained them to press the keyboard by touching to type correctly. They can type correct to be a letter because they can play guitar and other musical instruments.

A hearing impairment is any type or degree of auditory impairment, whereas deafness is the inability to use hearing as a means of communication. Most assistive listening devices consist of a receiver and a transmitter. Signaling systems convert sound to visual, tactile, or vibrating signals and alert the hearing-impaired or deaf individual to smoke alarms, telephones, doorbells, and alarm clocks. Computer use has been particularly helpful in providing the deaf community with a text-based form of communication. Assistive technical device for hearing impairment are TV, computer, vibration device and sign language that are for teaching and learning communication.

Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities.

For individuals with learning and other cognitive disabilities, assistive technology offers strategies or compensatory tools that play to an individual’s strengths. In some instances, the tools that assist students with learning disabilities are the same devices used by other individuals with similar functional limitations. Like students with visual impairments, individuals with a specific learning disability affecting reading may use an OCR/speech synthesis system to input text and have it read back with screen-reading software.

Computer software programs with outlining and graphic organizer features support students with organizational difficulties. Written language disorders represent a common problem for students with learning disabilities. In addition to the use of a tape recorder as a backup for note-taking, various computer software applications provide a way to bypass the motor demands of writing and support written expression, spelling, and grammar usage.

In vocational education for disability is too difficult to teach or learn because we teach to apply many equipment that are not safe. Eg. Vision impairment can’t use saw, if they used it would cut them or other. But hearing impairment can teach vocational education, they learn from teacher, TV, computer and practice with their teacher instruction other assistive technology and device. Both vision impairment and hearing impairment can used computer as assistive device and teachers used assistive technology by using computer and audio tape.

Some orthopedic impairments are the result of a congenital condition such as cerebral palsy. Access and physical accommodations are the primary issue for students with orthopedic/mobility disabilities. Many of these individuals are no ambulatory and require power or manual wheelchairs or scooters with adapted seating. Assisted ambulation with canes, crutches, or walkers is adequate for mobilizing some students. Common dilemmas in assistive technology service delivery for this population involve orchestrating transportation to and from school, maintaining equipment, confirming compatibility with existing institutional resources, and ensuring that the student has appropriate positioning for accomplishing required tasks throughout the school day. Simple tools such as a universal cuff or splint can hold a pencil or typing stick in place for an individual with little or no hand function. A book holder or slanted writing surface with a clip for holding papers can help to position books and writing materials. Students with orthopedic impairments, like those with visual impairments, have benefited immensely from computer technology. Depending on the individual’s limitations and physical abilities, various devices positioned at the most functional body site can help to make input more efficient and accurate. Special keyboards or keyboard modifications, mouse alternatives such as a trackball, hands-free access achieved with a head-mounted device, speech recognition, or eye gaze, and switch interfaces with scanning or Morse code entry represent some of the possibilities.

An assistive technology device is any item, piece of equipment or product system whether acquired commercially or off the shelf, modified, or customized that is used to increase or improve functional capabilities of a child with a disability.

An assistive technology service is any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device. These services include:

1. The evaluation of the needs of the child with a disability including a functional evaluation

2. Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;

3. Selecting, designing, fitting, customizing, adapting, applying, retaining, repairing, or replacing of assistive technology devices;

4. Coordinating and using other therapies, interventions, or services with assistive technology devices such as those associated with existing education and rehabilitation plans and programs;

5. Training or technical assistance for a child with a disability and when appropriate, the child’s family, and;

Training or technical assistance for professionals, employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of a child with a disability.

We used assistive technology by guild system education. There are two types:Merchant guide and craft guide system. In vocational education we used modified craft guide system as assistive technology and modern device computer.