

## E- Resources for Inclusive Education

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### Abstract

Media technologies are terms used to describe devices that compensate for functional limitations, such as mobility, communication, environmental control, and can enhance and increase learning and independence. Audio Books which are help to our students, build organizational skill in reading. Each graphic organizer included an introduction. The teacher and students exchange pictures, send text messages and watch movie trailers on their cell phones. This paper describes the different websites, Ear Air model, Magnifier Software, Braille Displays, Braille keyboard devices, Speech and language skills software and online teaching for special education level. Thus, many forms of technology can help individuals with special needs, capitalize on their strengths and bypass, or compensate for their disabilities. Modern technology has enabled the non-speaking to speak, the non-hearing to hear and the non-seeing to see.

**KEYWORDS:** Special Education, e-Resources, Media, Braille

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Modern technology has enabled the non-speaking to speak, the non-hearing to hear and the non-seeing to see. Media technologies are terms used to describe devices that compensate for functional limitations, such as mobility, communication, environmental control, and can enhance and increase learning and independence. Such devices have enabled many individuals to literally communicate, enjoy recreation and social contact, and live more normal lives. The technological devices include large pencils, clothing, seats, powered mobility systems, augmentative communication devices, special switches, and other commercially available or adaptive items. The Tamilnadu English Language Lab Technique management helps with classroom management. Teachers can use audio books as a support tool for students to continue working independently on assignments. It helps to minimize the amount of one-on-one instructional time a teacher may have spent in the past reading textbooks to students.

### Reading Skill Utility

Audio Books which are help to our students, build organizational skill in reading. Each graphic organizer included an introduction. Once speech is captured in digital format, it can be transformed in multiple ways to support students' learning, without loss of the original representation. For Mentally retarded children they have to prepare KWL chart. All can Use the KWL chart for students to record: K- what they know about a concept; W- what they want to learn about a subject; L- what they have learned about a subject.

### **Listening Skill Utility**

The teacher and students exchange pictures, send text messages and watch movie trailers on their cell phones. They listen to music that they have selected, downloaded, and organized on their iPods.

They spend hours as active participants on the Internet, where they shop for clothes, "chat" with friends, contribute to blogs, create personal web pages to express themselves and get information about almost anything that interests them, including school assignments.

### **Websites for e-resources**

Information Center on Disabilities and Gifted Education is one of 16 federally funded clearinghouses in the ERIC system, a nationwide information network sponsored by the U.S. Department of Education, Office of Educational Research and Improvement (OERI), and administered by the National Library of Education (NLE).

Teaching Orientation and Mobility to Blind Children website for e-resources gives about what an orientation and mobility specialist is and does. Auditory-Verbal International, Inc website is a private non-profit international organization dedicated to promoting listening and speaking as a way of life for children who are deaf or hard of hearing. The Canadian National Society for the Deaf -Blind website helps the parents for resources for kids with hearing and visual impairment. Dyslexic.com is the web site aims at being a comprehensive resource of technology based tools to help dyslexic people. It is particularly strong on computers and speech, both dictation systems and speech feedback. Integra is a website and is an accredited Children's Mental Health Centre dedicated to helping children and adolescents who experience social, emotional, and behavioural problems related to their learning disabilities through Internet. LocuTour is Multimedia software that can be used by speech pathologists, educators, neuro psychologists, and parents to help both children and adults with ADD, Autism, Learning Disabilities, Traumatic Brain Injuries, Language Delay and related disorders.

### **Ear aid model e-resources**

Students with auditory deficits need more extensive accommodations. The aid has a microphone, battery, and amplifier attached to the clothing or worn in a harness and a thin wire connected to an ear mold. Ear-level aids are either attached to glasses, worn over the ear, or worn in the outer ear like a jewel. There are a variety of "Mouthsticks" controlled by tongue movement to operate computer input. Eyegaze permits control of the computer with eye-operated commands, similar to other options such as Eyebrow and Finger Flex switches which operate switches with muscle movements.

People who can move a finger, a muscle, or an eyelid can use word processing software and produce speech from a synthesizer. Persons with visual disabilities can scan printed text in papers and magazines and the computer will "read" it aloud. For example, the Screen Reader for IBM enables use of a computer through voice communication.

One example is the Expert Reader, a device that converts printed material in a variety of type styles and sizes into audible English. This enables persons with visual

impairments to read newsprint, books, and many other materials. Captioning systems provide news, weather, sports, and educational television programming for deaf-blind. Programs are translated into Grade 1 Braille and can be read from a computer print out. Telephone Devices for the Deaf (TDD) are special modems that can be attached to the computer via telephone lines. The deaf person can send and receive written messages.

A variety of voice/speech synthesizers are available that permit intelligible speech produced by computers and other output devices. By pushing particular icons or typing a keyboard, the person with a communication disorder may engage in conversation. Telecommunications link those with disabilities to others throughout the world for communication, learning, and hobbies. Eg. Artic SynPhonix. An alternative to the conventional mouse namely; NoMouse software that imitates a mouse with cursor keys from Abacus; Jouse, a Joystick for head/mouth; and HeadMouse for movements of the head control the computer. The FM Soundfield would be a good device for boosting the audio of the teacher's voice to all students in a classroom.

Major challenges which confront a person with locomotor disability include their mobility, transfers from one place to another and accessibilities to various public and private premises. The adoption and information and application of communication technology have greatly helped the persons in becoming independent. (Dharmendra. et al., 2005). The belief that persons with MR cannot benefit from CAI was disproved by the initial efforts of NIMH in 1993 where two software's were developed in functional literacy and numeracy skills.

With regard to the Computer Assisted Instruction (CAI), one of the most important advantage is once the software is found effective, it can be used by any teacher anywhere and any time for effective teaching especially children with special needs. The Department of Special Education at NIMH has developed software's for teaching literacy and numeracy skills to persons with mental retardation. Literacy software covers functional words in English and the second package covers forming sentences using the functional words. Numeracy software covers numbers upto 10 on the first package and numbers beyond 10, addition, subtraction and application in second package (Jyanthi. et al, 2003).

### **Magnifier e-resources**

Some of the large print word processor packages for partially sighted user are Big Mac (CENMAC supplier), Eye Relief (Cambridge adaptive Communications supplier), Flexiwrite1,2,3 (Flexible Software supplier), Write On (SPA supplier) and Wordwise Plus (Watford Electronics supplier). These are only able to enlarge the body text of the document. If Eye Relief is used on a desktop computer with a colour screen there is a wide range of choice for the text and background colours. Flexiwrite allows the user to view a text on the screen up to double height and double width. The softwares magnify only a portion on the screen at one time are Closeview, InLarge, Lunar 2.0, Magic, Visulex LP-DOS, Zoomitext, Zoomtext Plus, Super Vista.

Braille is a medium which allow a non-sighted person to read text by touch. The Braille code is physically presented as raised dots, usually arranged in "Cells" of up to 6 dots in a grouped manner. A blind student, who cannot read or write text by sight, uses speech and touch for communication and learning. Electronic Braille note takers provide word processing facilities which enable the learner to create and edit text in Braille.

### **Braille Displays**

Some of the stone-alone braille displays devices are; Alva ABT -20, ABT-40, ABT-80, Braillex-1B 40 CR, 1B 40/40, 2D, CombiBraille-25, -45, Rowerbraille. Each device prizes of 2,200 dollar to 9, 000 dollar rates. A very useful feature of the braille terminals (Dutch supplier) is, if any one touch a button above any braille cell and the cursor automatically goes to the location and their ability to speak prompt commands. Many blind people find that the combination of speech and braille line together enhances reading and comprehension.

### **Braille Keyboard e-resources**

Some of the Braille Keyboard devices are; ALVA Braille Carrier, Aria, Braille Lite, Braille-n-Print, Braillex Compact, Eureka A4 advanced, Notabrialle and Pionner. If any one type a text, the same one appears simultaneously on the braille display for a blind person. This multi-mode facility allows a sighted and a blind person to communicate with each other.

### **Translation e-resources for Braille**

The Braille translation software are; Braille Maker Transcript, BM Express, BM Professional, BM Network, BM 6.0, Ciphern Duxbury Braille Translation, CENTRE text to braille and MegaDots. The Vacuum forming machine forms an image of a 'master diagram' on plastic sheets. The inkless pen produces raised drawings on swell-paper and that image process which makes tactile drawings. The examples are; HotSpot Fuser, Picture Braille, Tactile Image Enhancer, Thermo Pen and Flexi-paper.

### **Speech & language skills e-resources**

Using Voice Recognition Software, (eg. Dragon Dictate) a child can activate the CD-Rom database. The child could say "Mummy", "Daddy", "DOG", or "My Bed" and the associated photographic image will be commanded to appear on the computer screen. Voice Recognition System technology allows a student to use his or her voice as an input device to a computer instead of typing. Each sound is interpreted by the computer and printed on the screen.

Students with speech, language, and learning disabilities can improve the speech and language skills with the SpeechViewer. It synchronizes audio playback with interactive graphic displays to give better feedback about speech sounds. Talking Calculators are calculators that read out inputs. Developed for the blind, they can be helpful to anyone. Visually impaired learners depend more upon their sense of hearing to communicate with the world than do their sighted peers. Some of the Screen readers are HAL5, JAWS, Outspoken, Protalk32, Vocal-Eyes, Windots, Winvision. The Speech Synthesizers packages are; Apollo2, Artic Transport, Covok and Juno-sp. For persons limited to the use of one hand, a Footmouse can control the computer.

### **Opening Electronic e-resources:**

Some of the schools are available for online teaching for visually impaired in the foreign countries are; BushNet Schools in Australia, Campus World, CyberKids, KidsWeb, RNIB in London, Schools Online in UK, ACE centre in Oxford, CENMAC in London, NCET in Coventry, RCEVH in Birmingham and VIS in Edinburg.

### **Conclusion:**

Thus, many forms of e-resources can help individuals with special needs, capitalize on their strengths and bypass, or compensate for their disabilities. Modern technology has enabled the non-speaking to speak, the non-hearing to hear and the non-seeing to see. It is evident that use of technology increases the effectiveness of education. It helps realize the learning outcomes by opening new avenues especially in science and technology. Western countries have already successfully harnessed educational technology to qualitative improvement in learning. In India also, the benefits of educational technology are now being made available into the field of special education.

One of the most significant features of the present scientific movement in education is the recognition of the great differences among children. Education is concerned with individual differences resulting from the differing degrees of maturity or growth and those that previous education and training have caused. My recommendations are, National and International level organizations like UGC, RCI, NCERT, NCTE, UNESCO etc, may sponsor projects dealing with developing software materials in challenged students in all levels of education. There must need a concessionary price for challenged people who are paying from their own funds for purchasing the e-resources and electronic equipments. This concession also applies to the local voluntary societies for the special education people and employers buying the essential electronic e-resources and equipments for their teaching-learning process.

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