# Technology Enhances the Employability of the Visually Impaired Persons

**Manjulata Panda,**

Research Scholar, PG Dept. of Political Science, Utkal University, Vani Vihar, Bhubaneswar, India

## Abstract

Technology plays an important role for employability Economic Progress and sustainable Development of VI Persons. Communication Technology is an important sector to create numerous Employment opportunities for them.

The Present article analyzes the impact of Modern technology which can enable the VI youth to be productive human resource of the country to reach in the higher altitude of their life. The article impress upon the appropriate State Government to identify posts for PWDS Considering the availability of Assistive Technology to carry out the particular job it focuses on affordability accessibility and availability of modern technology to all individual youth with and without vision impairment to enhance their employability and due discharge of duty without the loss of productivity.

Introduction:

Technology plays an important role in the generation of Employment opportunities for the Visually Impaired persons by making them more skilled, competent, and adaptive in multiple changing work environments. It has created a sense of identity, psychological comfort and Economic reward.

Today no work is impossible for a Visually Impaired person. With the use of Modern Advanced Technology they can perform many difficult works successfully. According to Kenath Gernigan a Veteran Social Activist of National Federation for the Blind, USA. “The blind can function as lawyer, artist, accountant, secretary, customer service representative, food service worker, factory worker, financial analyst, teacher, medical transcriptionist, day care worker, counselor, computer programmer, cook, salesperson, clerk, and more”.(1) Only a positive attitude and a congenial atmosphere is required to accommodate them in the work environment.

As a symbol of positive attitude the United States Government has introduced an amendment to their particular scheme to facilitate the people to provide information which can assist the disabled persons to make use of the information which is put on the website(2). In a similar way the NIC constituted by the Government of India can create enabling provisions so that these website can be used by the Visually Impaired people. The swearing in ceremony of Mr. David Peterson Who is a

message for the entire world and proved the efficiency of the Visually Impaired.(3)

In India, Mr. Haris Kotiyan is working as a Senior Officer in the Reserve Bank of India, Mr. Charudutta Jadab is working as a H.R. Manager in Tata Consultancy Services at Mumbai, and Mr. Atulranjan Sahaya is working as H.R. manager in MS

Tata Steel at Jamshedpur discharging their duty successfully with the help of Modern technology despite of their Vision Impairment.(4)

Description:

The Computer Technology, Screen Reading Software's, Smart phones with Talks software's and the Smart cane used for mobility purpose no doubt have increased the productivity of the visually impaired persons and have helped them to fulfil their Social And Economic Aspirations. People having vision impairment have a wider array of career possibilities than ever before in history it has become possible due to the available modern technologies.A wide range of technologies are available today to enhance the potentialities of the Visually Impaired Employees. It provides a choice to Visually Impaired persons in all stages of their lifes to understand accessibility for the visually impaired persons to information and communication technology it is important to understand there is little or no need for modification in hardware. What is needed is special software called screen reading software with speech engine. The specialized software, which with synthetic sound provides an alternative to monitor to gather information. The Screen Reading software is flexible as it provides all control to the Visually Impaired users to manoeuvre the information on monitor as per his requirement. By using this software one can read character by character, word by word, sentence by sentence, line by line, paragraph by paragraph or the whole document. It provides flexibility to gather information regarding front style, colour and other relevant information if desired by the Visually Impaired user.

Digital technology being utilized for Visually impaired persons to provide DAISY talking book on the compact disc. Besides the use of Computer and reading and writing tool as well as tools for empowering Visually Impaired persons in managing their job requirement the digital technology is playing very important role in making the world friendly to people with visual impairment. The availability of talking thermometer, Talking wrist watches, Talking automatic tailor machine in banks and similar other equipment are the direct gift of digital technology. Yet, another area where the digital devine is bringing revolutionary change in the facilities for Visually Challenged persons is the interruption of DAISY book. Till date the talking books were available on Audio Cassette tapes, which had certain limitations like a cassette could hold 60 minutes of recordings and the accessibility was serial. This posed major limitations to blind persons to refer material from time to time. With the Advant of digital technology the Talking books have been transferred into compact dis which can hold 5$^{th}$ hour of recording which allows accessing text section wise, page wise and chapter wise. The provision of Book mark makes readings more comfortable with easy referencing facilities.(5)

Some important softwares which has brought revolutionary changes in the lives of the Visually Impaired Persons are given below.

A screen Reader is a special kind of software that convert electronic text to speech. Screen Reader utilize an accessibility API Software "hook" to access a web browser or web content or a computer operating system which in turn communicate with certain computer software.

Screen Magnifier is software which interacts with the computer to present enlarged screen content.

Speech recognizer is software which allows people to operate their Computer and enter data by using voice rather a key board or Mouse.

Text to Speech software (TTS) converts written documents such as text files, PDFs , Web pages and E mail into audio files that can be played on a wide range of devices such as Computers, M.P- 3 players, I-pad and C.D. players etc.

Optical Character Recognition software (OCR) is used to take scanned documents to convert it into a electronic text file which can be saved and edited.

Large monitors make screen reading easier by providing more space on screen for people to manage in their operating systems for how certain elements are displayed.

Closed circuit Television (CC TV) are the stationary Stand alone devices that use cameras to magnify large format printed material and objects when inserted in a device which magnifies the images in the screen.

Hand held magnifier works in a similar way to CC TV, but smaller in size and are laid flat on objects to magnify smaller items or pieces of texts.

Dictation devices allow people to record meetings or take notes that can be transcribe from the recording made.

Scanner can convert images from the printed material to a computer file. The type of scanner used in the context of assistive technology is a flatbed scanner which can scan at high resolution and can be accessed by a wide range of other assistive devices.

The Stand Alone Reading Machines integrate a scanner, OCR, and speech software and can function without computer. Users place printed materials an object into the device which converts the materials into text and read out loudly.

Fusers and Swell Papers are used to produce tactile printed materials such as Diagrams maps on a specially designed Swell paper.

Refreshable Braille Displays is a device that can be connected into a computer to produce the text materials on the screen into Braille.

Braille note takers are the mobile device which can be used either Braille or QWERTY Keyboard for input or voice or refreshable Braille as output. It can also be connected in a verity of devices for the transformations of information's.

Braille Embossers are specialized printers that produce Braille embossed documents they use Braille translation software's to convert electronic document into Braille before printing.(6)

There are different aspects in the life of a Visually Impaired individual where technology can significantly increase the individual's independence, Educational potentials, and productivity. Aids for daily living, Mathematical and calculation aids, Tools and test, equipment, aids for writings and aids for modifications that allow access to Computers are available for making the lifes of such people less painstaking. Blind workers can also use many tactilely-adopted mechanical tools in their work environment [E.G.] Braille scale and rulers, Callipers, Carpenters level and squares. A Visually Impaired Mechanist can use an audible position indicated to measure depths or to align material in a lathe with extreme precision. This device measures position

or displacement from a preset reference position and generates different tones until it reaches the preset value. By making use of radily available speech synthesis modules, the blind individual can determine, the sign, numbers with a decimal point, unit of the measurement without touching any Braille mark.(7)So there are a number of software's which has upgraded the working standard of the Visually Impaired persons to fit themselves in the working environment.

But in the State of Odisha people face many difficulties due to lack of advanced technology.

The first problem is that, No Text to Speech software or the Optical character recognizer (OCR)software is available in Oriya language to read or scan the document printed in Oriya language,

No software has been developed by any company which can be used in the mobile phone to read the text written in Oriya language,

No Special IIT has been set up or functioning in the State of Odisha to make the Visually Impaired persons competent in Information and Communication Technology.

Not a good number of Computer training centre has been set up in the State to equip the Visually Impaired persons with Computer Technology. Only some NGOs like The Odisha Association for the Blind, The National Association for the Blind, and the Institute of Social Work and Research are providing Computer Training to the Educated Visually Impaired Persons.

Suggestions:

Softwares need to be designed in such a way that can be in compatible with the Screne Reading software such as Job Accessible with Speech (JAWS) and Non Visual Desktop Access (NVDA. As Some professional software's like oracle and tally are not designed to be supported by screen reading software.

All the websites need to be design according to the world web consortium Guideline so that the Visually Impaired Persons can access it easily.

The cost of the technology need to be reduced so that it can be affordable by the visually impaired persons.

Informations about the invention of new Technology need to be disseminated by the mass media to update the Visually Impaired persons about the modern technology.

Considering the invention of advanced technology the Government of India has made the technology as a prime indicator of job identification for the Visually Impaired. With the above spirit Section 32 of the Persons with Disabilities Act of 1995 laid down that, the appropriate Government in every level should identify posts for the disabled in every 3 Years taking into consideration the technological development. (8)

Conclusion:

Empowering Visually Challenge person with the help of information and communication technology is continuously gaining importance and needs grater attention of Educationist, Human Resource managers and policy makers. This world

ensure that, we are in a position to create equal opportunities, provide protection of rights and allows full participation of the Visually Impaired persons in the Mainstream Society.

Reference:-


1. Gernigan Keneth (1992): What you should know about the Blindness: National Federation for the Blind Johnson Street, Baltimore Marryland P 2.

2. Punani Bhusan (2004): Information Communication Technology in rehabilitation of Persons with Disabilities, name of the book, Summit of Mind: Name of the Publisher:-Kaniska Publishers and Distributors, New Delhi.

3. Chan Swell,David Patarson is sworn in as the New york's 55th Governor , New York times 17th March 2008.

4. Aneja Mukta : (2005) availities redefined Forty Life Stories Of Courage And Accomplishment. Published By All india Confederation for the Blind Rohini Delhi.
5. Agarwal Aswini : (2004), Information Communication Technology for the Visually Impaired Summit of Mind: Name of the Publisher:-Kaniska Publishers and Distributors, New Delhi.
6. Collected from the webside of Charisma Enterprises Mumbai at www.Braille world.org.
7. Dr. Singh J.P (2003), Technology for the Blind:Kaniska Publishers and Distributors, New Delhi.

8. **The Gazette of India** (1996): *Persons with Disabilities Act, 1995,* New Delhi: Ministry of Law, Justice and Company Affairs, P.