

Creating an Enabling Environment for Persons with Disabilities: Sensitizing the society on the use of assistive technology to facilitate information access for persons with disabilities

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Abstract— Access to information is one of the key requirements in today's modern life. We receive information through major sensory channels like ears (hearing), eyes (seeing or sight), touch (contact through skin or tactile), nose (smelling or olfactory). Often persons with disabilities (PwDs) are having impairment in one or more of these senses leading to sensory disability. They are unable to gather information from the surrounding environment through these gateways of knowledge (Maria Montessori, cited in Scherer, 2002). Hence it becomes imperative to have alternative means to gather information. Thus we see the blind using tactile means to gain information, those with hearing loss using sign language or visual mode of information and some like persons with deaf-blindness relying on both tactile as well as specialized techniques like Tadoma. Assistive Technology (AT) plays a major role in empowering individuals with disabilities to gain and use information just like anyone else. The Braille readers, refreshable Braille displays, Alternative and Augmentative Communication (AAC) devices are just some of the many supporting options available to the differently able for enabling them to become independent and productive members of the society. But, the lack of awareness regarding information access through these channels has to be tackled first, especially in a country like India, which is rapidly advancing and making tremendous progress and at the same time passing landmark legislations for empowering the PwDs. This paper attempts to understand some of these assistive devices and explores some of the possible ways to spread awareness among key stakeholders about the use of assistive Technology for information access for the disabled.

Keywords: information access, assistive technology, persons with disability, awareness.

I PURPOSE

An inclusive society is one which ensures that every individual regardless of gender, age, socio-economic

background or any disability can gain access to basic necessities like transportation, information, education and employment, which will help him/her to lead a dignified life in the mainstream society just like other regular peers (Cook & Polgar, 2014). Assistive technology is an umbrella term which includes both assistive devices and services which help persons with disabilities to achieve their highest potential. Information is defined as the knowledge you get about someone or something (according to the Meriam Webster Dictionary). There is an increasing need to create an enabling environment for PwDs by promoting the usage of ICTs and communication media in all languages at all levels- national, international, regional and global (UNESCO, 2015). It is imperative to raise awareness in disability issues, to counter negative attitude and strengthen the policy making. This concept note aims at creating awareness in the society through sensitization programs which will enable the stakeholders in the field of disability management such as educators, families, care givers of persons with disabilities and the disabled themselves to understand the importance and role of assistive technology in optimizing the functioning of persons with handicaps especially in the area of information access.



Figure 1: UNESCO- concept of knowledge societies

II BACKGROUND

The Rights of Persons with Disabilities and Equal Opportunities Act (PWD Act), 1995 was a comprehensive and breakthrough legislation which focused on the education and economic rehabilitation of persons with disabilities (PWDs). The WHO report of 2011 reports that nearly 15 % of the world's population is disabled and in India, the census 2011 report reveals a disabled population ranging from 40-80 million (Sathiya, 2016). New and better policies are being framed for such persons. The passage of the latest Rights of Persons with Disabilities Act (RPD Act), 2016 has earmarked the need for creating accessibility for PWDs. Access means to get, to be able to have an equal share of the resources and information which is freely available to everybody within an inclusive society, so that the society can be truly called inclusive. Access in the following areas is essential for successful inclusion of PWDs such as;

- Transportation
- Communication
- Information
- Education
- Employment

When access to all the above mentioned areas are granted we say it is a barrier free environment which is a major requirement under 'universal design' meant for **ALL** (Kelker & Holt, 1997). Information and communication technologies (ICT) have the potential for making significant improvements in the lives of these persons, allowing them to enhance their social and economic integration in communities by enlarging the scope of activities available to them.

III PROJECT PURPOSE

The current project aims at eradicating the various misconceptions and prejudices regarding the use of Assistive Technology (AT) by creating awareness regarding the need, importance and usage AT to promote information access for PWDs especially hearing impaired, sight impaired and under inclusive settings. Awareness creation plays a major role in raising awareness regarding disability issues, to counter negative attitude and prejudices, strengthen the policy environment and create an inclusive society (UNESCO, 2015). Information is of various types-

- information for survival and safety (natural and man-made disaster, safety measures)
- information for academic achievement (reading, writing, arithmetic)
- information at the workplace (notices, circulars)
- information for transportation (bus stop, bus numbers, destination names)

Many PWDs are not able to gain access to such types of information due to deficits in various senses (sensory-visual and hearing), cognitive, motor areas and various processing disorders.

❖ **Information access through AT for Persons with visual impairment (VI):** need assistive technology in form of screen readers to access computers, Braille books, refreshable Braille displays, and audio recordings, web accessibility, electronic and digital magnifiers

❖ **Information access through AT for Persons with hearing impairment (HI):** need hearing aids, loop induction systems and amplification systems for enabling the receivers with hearing impairment to receive the message and information, AAC

❖ **Information access through AT for Persons with intellectual disability (ID):** need assistive devices such as: clicker 6 software, highlighted text, simplified reading materials and resources, peer tutoring, ICT, animations and videos, AAC



Figure 2: Children with various disabilities- accessing information through ICT and AT



Figure 3: Various assistive devices and ICT for PwDs – information access



IV RESEARCH ACTIVITIES

The Research activities planned for the sensitization program includes the following:

- Workshops
- Exhibitions
- Organize lecture and discussion sessions involving all participants and stakeholders
- Spread the message of usage of AT by distributing pamphlets, leaflets, brochures, booklets
- Street play, Rally- car rally, cycle rally, auto rally, marathon
- Preparation of video clips
- Competitions at school level - essay, poem, story writing, poster designing

Beneficiaries: The beneficiaries include the stakeholders in the field of disability rehabilitation and management such as parents, educators, therapists, school children- non disabled peers, and the PwD in both rural and urban sectors.

- Parents: The parents of PWDs
- Educators: both general educators and special educators (working in inclusive and special school settings)
- Therapists: speech therapist, occupational therapist
- PWD: HI, ID and VI
- Community members: extended families, neighbors, other members in society, Gram/village panchayats.

Research activity	Beneficiary
Workshop	Educators, therapists, parents
Exhibitions	Educators, therapists, parents
Distribution of pamphlets, leaflets, brochures	Educators, therapists, parents
Street play, rally, marathon	Community members and parents
School level competitions	School going children, teachers, parents, school management

Benefits of this study: All the beneficiaries sensitized through the numerous research activities as part of this study will be able to contribute in the society in a larger way as explained below-

Sensitized parents can contribute in the following ways:

- Allow the PwD/ CwD to use a need based assistive device
- Positive attitude towards AT
- Encourage other parents to use AT
- Remove misconceptions regarding AT such as high cost, only for VI
- Advocacy

• Protection of rights of PwDs
Sensitized Educators and therapists can contribute in the following ways:

- Allow the usage of AT
- Prescribe some low cost and efficient devices

Sensitized person with disability can contribute in the following ways:

- Can learn the usage, handling and maintenance of the AT device by self
- Increase self esteem
- Learn independent adult living
- Learn management of house hold

Risks involved if any/assumptions: none

Abbreviations used in the paper:

AAC - Alternative and Augmentative Communication

AT - Assistive Technology

ICT - Information and Communication Technology

PwD - Persons with Disability

UDL - Universal Design for Learning

UNESCO - United Nations Educational, Scientific and Cultural Organization

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