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DIGITAL DIVIDE - CHALLENGES FOR THE DISABILITY SECTOR IN INDIA

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Abstract: According to the UNITED NATIONS, there are around 650 million people in the world living with disabilities. That is about 10% of the world's population. In India the National Sample Survey (NSS) puts the number at 100 million disabled Indians.

In India the disabled face a host of physical, social and other obstacles which prevent them from realising their full potential. Public places, transport facilities, private spaces, communication systems, education system, job markets and the healthcare network stop them from becoming economic contributors to the society through their expertise, skills and talents. The Department of Information Technology, Government of India and the Massachusetts Institute of Technology (MIT) Media Lab, USA have jointly conceived the Media Lab Asia. The objective being to address the challenges of poverty, literacy, education, health, employment and micro - entrepreneurship through the use of information and communication technologies on a large scale. Media Lab Asia is intended to be a distributed organization that works with industry, non government organizations (NGOs), government and most importantly, ordinary people to bring the benefits of innovations in information and communication technologies to communities across all of India. This paper critically studies the initiatives of Media Lab Asia and how they are driving to reduce the digital divide in India for the differently abled.

The Invisible Minority- India and the Disability Sector:

“The situation of disabled people provides a microcosm of the whole development debate and process.”- (Coleridge 1993, p 4). Some famous disabled people the world over include Albert Einstein, Alexander Graham Bell, Agatha Christie (all dyslexic) Ludwig Van Beethoven [hearing impaired] Bill Clinton [speech disabled] Stephen Hawking [Lou Gehrig's disease], Gordon Brown the new Prime Minister of Britain [low vision]. Clearly they have turned out to be great resources for their countries. The choice for every society with its disabled, therefore, is clear - to let them weigh us down or let them help us fly. The UN's first ever international convention for the disabled held recently was a major step towards changing the perception of disabled to ensure that societies recognised that all people be provided with opportunities to live life to the fullest potential. . That's about 10% of the world population. According to

research study 74% of physically disabled Indians and 94% Indians of intellectual disabilities are unemployed. The term disability is often used for how the person functions which includes his physical, sensory, cognitive, intellectual impairment or mental health issues. In India the main categories of the disability are Visually Handicapped, Orthopaedically Handicapped, Hearing-Impaired or Deaf and Dumb and the Mentally Retarded. In India there are total 21,906,769 disabled people out of that 12,605,635 are male, 9301 are female, 5518387 are from urban areas and 16,388,382 are from rural areas (Source: Government of India (2001)). The total number of disabled persons in [the life register of the Special Employment Exchanges](#) was (in thousand) 455.9 in 1999; 485.2 in 2000; 510.0 in 2001; 532.7 in 2002. The placements in the same period have been (in thousand) 4.2, 3.3, 3.5, and 3.4 respectively. The gap between the need and the provision of employment is very obvious. There has been consistent increase in the number of persons with disabilities on the Live Register. The number of disabled job-seekers placed in employment during 2002 was 3.4 thousand. Menka Gandhi, Minister of State for Social Justice and Empowerment at the inauguration of an international exhibition on assisting devices for people with disabilities stated that “In India services for people with disabilities is woefully inadequate in several parts of the country, especially in the rural areas”. The UN convention noted that disability is an evolving concept and results from an interaction between a person’s impairment and obstacles such as physical barriers and prevailing attitudes that prevent their participation in society. It covers key areas such as accessibility , personal mobility, health, education, employment, rehabilitation, equality, no discrimination and participation in political life. The Government of India’s decision to ratify the convention is a significant step in recognising the importance of the single largest minority. Employment plays a major role in rehabilitation and integration in the society. As a community, the non disabled population need to start recognising the fact that persons with disability can contribute a wide array of expertise, skills and talents.

Role of Technology in creating employment for the disabled:

Information, Communication and Technology has revolutionised the human's potential. It has reduced distance and enhanced the speed of operations in every sphere of our lives. Be it at home, office, factories, government, education or the social sector. The digital revolution is like a panacea for all issues in the world. Especially for Social Minority Group, the disabled being one of them, Digital Revolution has transformed their lives and work spaces. Whether one is visually impaired or physically challenged, technology can make them perform if not better, at least at par with the non disabled.

Digital divide:

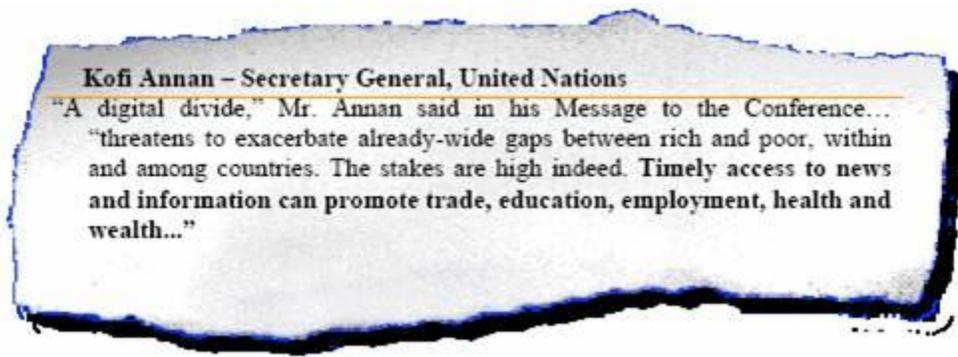


Figure 1. Mr. Kofi Annan on the Digital Divide [“The WiFi (Wireless Fidelity) Opportunity for Developing Nations”, The Wireless Internet Institute, 2003]

Digital divide term is used for the gap between those with access to the ICT (information and communication technology) and those without access. Digital divide is not only physical access to computer and connectivity but also the resources that allow the people to use new technologies. The information and communication technology not only includes internet but can act as catalyst between the many processes which reduces the information distribution between rich and poor, educated and uneducated, rural and urban, and men and women. Researchers confirm that education is the key factor for the digital divide and that economic and social growth within the country is the key factor. Also the delivery of telephone service, level of democracy and cosmopolitanism is the key factor for the digital

divide. In India more than 50% of the villages do not have telephone connectivity. 65% of the total population is illiterate and there are three telephones per 100 people in India . An average income of individual in India is US\$1 per day. Thus information and new technologies are not reaching more than half the population of India . Country is growing economically and globally but people in the villages or rural areas do not have access to the basic information and technologies. In India information technology is the fastest growing sector. Even in challenging and difficult times India has proved to be the best in this sector. Many ICT projects are running in urban and some villages of the states. The backward villages in Bihar , Orissa and some other parts of the country there are no such projects yet commenced. Education is the one of the important sector which still needs to be improved. Along with the central and the state government many private companies and NGOs have chipped in to create literate people. The main reason of the digital divide is poverty and illiteracy in India which can only be eliminated by education To improve the overall scenario special education needs to be given disabled children, their parents, general public and the teachers. The major problem disabled people face is lack of education, employment and their social integration. Several efforts are being made by many corporates, individuals and NGOs. Regulatory Authority of India (TRAI) stated that "in the Indian context, bridging the digital divide essentially means bridging the tele-density divide between rural and urban areas." [*Broadband India : Recommendations on Accelerating Growth of Internet and Broadband Penetration*”, TRAI Report 2004]. India has 0.4% Internet and 0.2% broadband connection penetration.

The Launch of Media Lab Asia as a solution for Digital Divide:

India, in order to overcome from the digital divide, the Department of Information Technology, Massachusetts Institute of Technology and of Government of India jointly started Media Lab Asia, a not-for-profit Company, in 2001.

Media Lab Asia's objective is for developing a sustainable and innovative technologies solution for daily lives. The main objective of the company is to give the benefits and increase the usability of ICT and its application like Healthcare, Education, livelihood, Empowerment of disabled and wireless connectivity among the masses keeping in mind the local language , tradition and culture by working with R&D laboratories, Industry, NGOs and Government. Media Lab Asia has taken about 60 projects, out of which some projects are on health care, agriculture, wireless connectivity, skill development and system for disabled. It has been appointed by the United Nations as its academic and industrial body for the region in the newly created UN ICT Task Force. Media Lab Asia has its administrative headquarters in Mumbai and research labs on the campuses of the Indian Institutes of Technology of Mumbai, Madras , Delhi , Kanpur and Kharagpur. The research of the Media Lab Asia focuses on four main ideas i.e.

- i)** Digital Village ,
- ii)** Low cost computer,
- iii)** Bits for everyone and
- iv)** Tomorrow's tool.

Media Lab Asia and initiatives for the disabled in India :

There has been a focused thrust by Media Lab Asia for the disabled in India . The key initiatives are:

1. Help line for Persons with disabilities

A National level (Covering All places in India) Telephonic help line for Persons with disabilities is under consideration. The help line will provide information about all disabilities, about various centers available for diagnosis, fitment of aids and appliances, training and employment as well as guidance .

The salient features of the system are:

- This Speech Enabled Interactive Voice response system (IVRS)
- Connectivity to Information database or CRM
- Fax on demand
- E-Mail Management
- Speech recognition and Text to Speech
- Mobile connectivity.

2. It is proposed to setup barrier free Information kiosks which can be easily accessible by persons with disabilities.

The Media Lab India has been awarded for its many projects like Sanyog, DST-Intel India Innovation Pioneers challenge 2006-07, eAQUA, Grampatra, Ashwini, Shrusti Dristi, eSagu etc. Sanyog is a multilingual communication system specially designed for the children with neuro-motor disorder. aAQUA is a online expert system for delivering information to the grass roots of the community. eSagu-u is a personalized agro-advisory system which helps farmers of 5000 farms in 35 villages to take the decision for the crops of cotton, chilies, castor, redgram, paddy, groundnut, fish etc. Ashwini is a project for directly connecting 32 villages and 115 villages indirectly among themselves and all over the world. Media Lab Asia working on the new research areas such as Health Care, Education, Rural Connectivity, Empowerment of disabled and Village livelihood generation. For health care the Media Lab Asia has set up a care group on ICT for Primary Health Care to identify the area and opportunities for addressing the issues of Primary Health Care using ICT.

Conclusion:

India has initiated a wonderful project through MIT Lab, USA by starting Media Lab Asia. The benefits have already started showing and the credibility of Indian educational institutes in this collaboration has given this initiative lot of support from all stake holders. It has been six years since its inception and working. It would be necessary to take stock of its various projects, and also do an environment scanning of the renewed needs and requirements of the disabled to take some corrective steps and deploy resources with a finite goal. One of the recommendations the author would like to present is to set up internet cyber café in the villages alongwith the kiosks proposed for educating the disabled students in ICT. These café's would have all the requisite hardware and software like JAWS for visually impaired, assistive devices like splints for the physically challenged to motivate them to learn and then seek employment. This will enable India to solve its major problem of digital divide amongst its huge population of the disabled. There must also be monitoring and reporting of all projects which will inspire other states and educational institutions to jointly collaborate and work out innovative solutions. Awareness about the Media Lab Asia in the media will enable more disabled people to access the various projects and initiatives thus covering a larger disabled population.

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Internet Resources

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4. www.ncpedp.org
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