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# Access to Information and Library Services for the Users with Disability

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# Marching Beyond Libraries

## Managerial Skills and Technological Competencies



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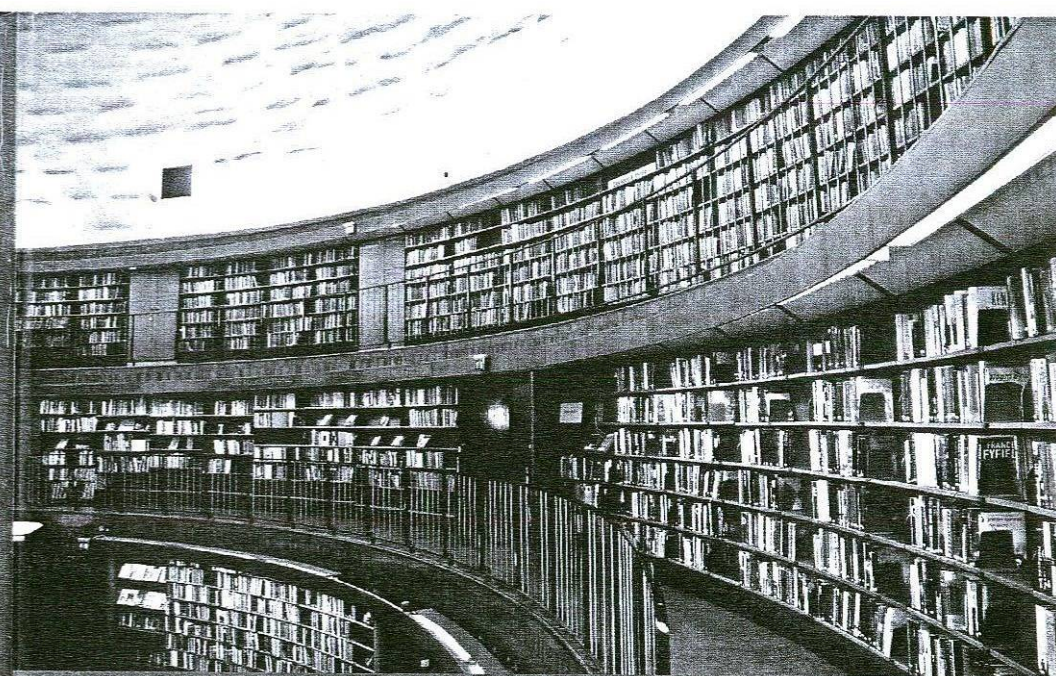
Price: INR 1999.00

ISBN 978-81-938797-7-1



Overseas Press India Pvt. Ltd  
Mahavir Street, Ansari Road  
Connaught Place, New Delhi - 110 002

Overseas  
Press



Rautaray  
Swain  
Swain

Marching Beyond Libraries  
Managerial Skills and Technological Competencies

# Marching Beyond Libraries

## Managerial Skills and Technological Competencies

*Editors*

**Bijayalaxmi Rautaray  
Dilip K Swain  
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Overseas Press India Pvt. Ltd.

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Articles published in this book are submitted to "International Conference on Marching Beyond Libraries: Managerial Skills and Technological Competencies", Organized by KIIT Deemed to be University, Bhubaneswar, during 16-17 November 2018.

All data, views, opinions, etc. Published in this book are the sole responsibilities of the concerned authors. Neither the publisher nor the editors are in any way responsible for them.

This book is published by KIIT Deemed to be University, Bhubaneswar in association with Overseas Press India Pvt. Ltd.

Regd Office :

Overseas Press India Private Limited  
7/28, Ansari Road, Daryaganj  
New Delhi - 110002  
Email: info@overseaspress.net  
Website: www.overseaspress.net

Sales Office :

Overseas Press India Private Limited  
2/4, Ansari Road, Daryaganj  
New Delhi - 110 002  
Email: orders@overseaspress.net  
Website: www.overseaspress.net

ISBN : 978-81-938797-7-1

Laser Typeset by Print Tech Offset, Bhubaneswar

Published by Narinder Kumar Lijhara for Overseas Press India Private Limited,  
7/28, Ansari Road, Daryaganj, New Delhi - 110002 and Printed in India.

## PREFACE

Modern Information Communication Technologies (ICT) has played the most significant role in the way library and information professionals acquire, share and communicate knowledge at a much faster pace than expected. Hence, it is the high time for the library and information professionals to serve their respective users most consciously and proactively by going beyond the physical resources available with the existing libraries. It is found that the number of foot falls to the physical library has been slowly declining and librarians have expressed the need to actively engage the community in the library's offerings by being technically competent in exploring all latest revelations of Information Communication Technology. Therefore, we thought of bringing out a book addressing the key issues of technological competencies and managerial practices.

It is a matter of pride for us to congratulate and convey our appreciation to all the contributors who have most cordially accepted our invitation and taken immense pain in writing their papers. We also express our thanks to the library professionals who have tried best to write and send their papers to us but unfortunately we could not accommodate their papers in this book.

This book is of great interest not only to librarians and information professionals, but also to the teachers and research community in the field of library and information science in general. Technological competencies and managerial skills is of paramount importance when we perceive of in interacting with the users' community, establishing relationships with them through fast and effective communication, and disseminating scholarly information easily and quickly.

This book deals with various key issues of librarianship concentrating on technological competencies, managerial skills, anger management, disaster management, open sources, use of electronic resources, application of social media and networking in library services, case studies and innovative practices that shape the future of new generation libraries and their effective management. It is expected that this book will provide immense help to teachers, students, research scholars of LIS and practicing librarians all over the world to equip them with latest trends on technological competencies and management trends in days ahead!

**Bijayalaxmi Rautaray**  
**Dillip K. Swain**  
**Chandrakant Swain**

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## ACCESS TO INFORMATION AND LIBRARY SERVICES FOR THE USERS WITH DISABILITY: A STUDY ON INDIAN PERSPECTIVES

–Niranjan Mohapatra

### INTRODUCTION

All over in the World, there is not a provision till yet or even expected to facilitate disability users to access libraries in many countries. To provide equal opportunities for all library users, it is necessary to look at the eyes of these user groups on the physical condition of library buildings and library services. To make library accessible, economic resources are essential. However, many improvements can be implemented at a lower cost or at no cost. Solutions can often be found through the change of staff approach. Changes happen slowly, but the main things focus on the most important issues. Remember that it is the responsibility of library professionals to make persons with disabilities feel welcome in the library. Followed by the second law of Library Science “every reader/user and his/her books”, all users should get the equal facilities to access the library resources and services. It is already established that access to information is one of the most important human rights which allows a person to develop himself and actively participate in a democratic society, who fully utilizes his rights and duties. An already informed community or one who restricts information to a specific group becomes a non-democratic society for a long time, in which ignorance and inequality of opportunities causes failure and distrust between citizens. All citizens should therefore have access to information that will enable them to be active and equal contributors and participants in society. The availability of adequate accessibility is the right of every individual, including the people with disability. All this time, the provision of accessibility for the people with disability was still limited in the library building. There is necessity of attention to the availability of access for users with disability not only for it is right for them, but also their number in India showed a tendency to increase every year.

### WHAT IS DISABILITY?

The term “disability” is an acronym derived from the English phrase “Different Ability”, which after absorption into disabled or people with disability. This term appears based on the reality that every human is created differently so they have different abilities. The word was change into “people with disability” to reduce negative impression and discrimination, and besides that, it is conformed that shows no defects but only a difference. Changing the label of people with disability into people with different ability not only changes the terms, but also alters the meaning of the recognition of the

capabilities of an individual who has a physical condition (body) different from the others. This change was made in order to gradually change the public opinion, that the disability is demand not to have benefits for life and just burden to the normal.

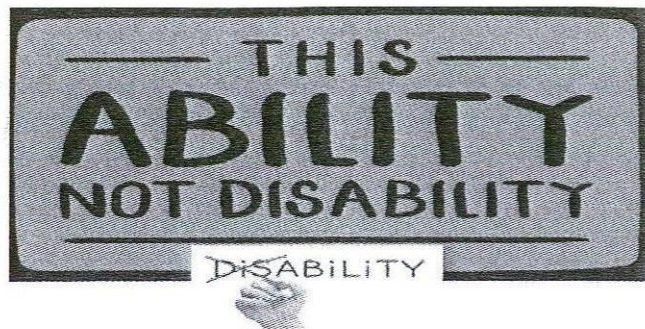


Figure 1: Disability and Ability

### DEFINITION

The World Health Organization (WHO), (2016) defines Disability as "Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Disability is thus not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives. Overcoming the difficulties faced by people with disabilities requires interventions to remove environmental and social barriers"

Disability Works Australia Ltd (DWA), (2004) describes as "A disability may be generally defined as a condition which may restrict a person's mental, sensory, or mobility functions to undertake or perform a task in the same way as a person who does not have a disability." The DDA (Disability Discrimination Act) of Australia defines and identifies disability as the following categories: <sup>6</sup>

- Physical - "affects a person's mobility or dexterity"
- Intellectual - "affects a person's abilities to learn"
- Psychiatric - "affects a person's thinking processes"
- Sensory - "affects a person's ability to hear or see"
- Neurological - "results in the loss of some bodily or mental functions"

Tanaka and Seals, (2003) define that "Disability is an impairment that may be cognitive, developmental, intellectual, mental, physical, sensory, or some combination of these. It substantially affects a person's life activities and may be present from birth or occur during a person's lifetime."

### TYPE OF DISABILITY

The Library staff may come across many disabilities in their work life. However disability of a few library users are not clear to their library staff; ask them how it affects their study and if they need

adjustments so they can study to the best of their ability. But remember don't ask the person how they got the disability. Some examples of common disabilities are:

- **Vision Impairment-** "Vision impairment refers to people who are blind or who have partial vision"
- **Deaf or Hard of Hearing-** "Hearing impairments can range from mild to profound. People who are hard of hearing may use a range of strategies and equipment including speech, lip-reading, writing notes, hearing aids or sign language interpreters"
- **Mental Health Conditions-** "Mental illness is a general term for a group of illnesses that affect the mind or brain. These illnesses, which include bipolar disorder, depression, schizophrenia, anxiety and personality disorders, affect the way a person thinks, feels and acts"
- **Intellectual Disability-** "A person with an intellectual disability may have significant limitations in the skills needed to live and work in the community, including difficulties with communication, self-care, social skills, safety and self-direction"
- **Acquired Brain Injury-** Acquired brain injury (ABI) refers to any type of brain damage that occurs after birth. The injury may occur because of infection, disease, lack of oxygen or a trauma to the head.
- **Autism Spectrum Disorder-** "Autism is an umbrella description which includes Autistic disorder, Asperger's syndrome and atypical autism. Autism affects the way information is taken in and stored in the brain. People with autism typically have difficulties in verbal and non-verbal communication, social interactions and other activities"
- **Physical Disability-** "The common characteristic in physical disability is that some aspect of a person's physical functioning, usually their mobility, dexterity, or stamina, is affected. People with physical disability are usually experts in their own needs, and will understand the impact of their disability"

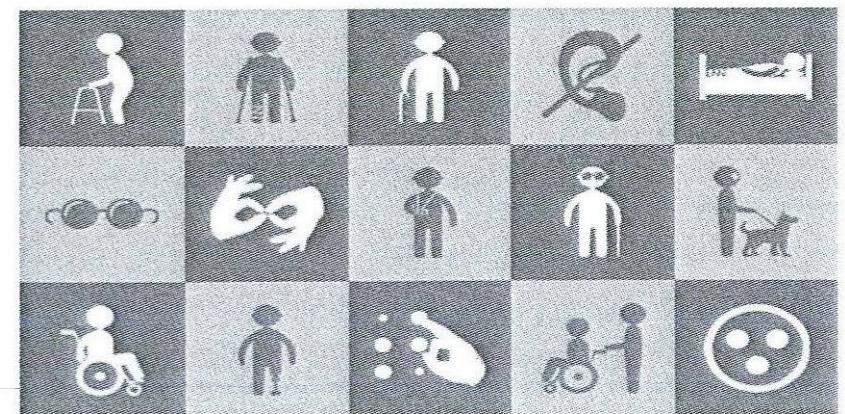


Figure 2. Type of Disability

### STATUS OF PERSONS WITH DISABILITY IN INDIA

Census of India, (2011) has mentioned more than 1 billion people in the world are disability in some form. It corresponds to almost 15% of the world's population. India is a home of 26,810,557 (26.8 millions) disabled persons which constitutes 2.22% of total population of the country.

Table 1. Disable Population Statistics

India Census: Disabled Population and Decade Growth 2001 to 2011						
Gender	India : 2011			India : 2001		
	Total Population	Disabled People	Disabled Percentage %	Previous Census Disabled People	Decade Growth	Growth Percentage %
Males	62,37,24,248	1,49,86,202	2.4	1,26,05,635	23,80,567	18.88
Females	58,64,69,174	1,18,24,355	2.02	93,01,134	25,23,221	27.13
Total	1,21,01,93,422	2,68,10,557	2.22	2,19,06,769	49,03,788	22.38

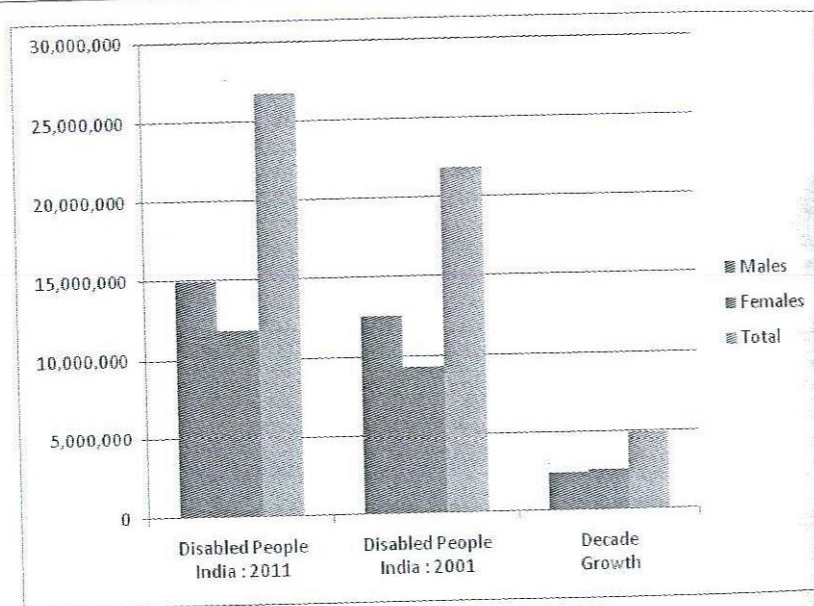


Figure 03. Disable Population & Growth

As per India Census 2011, total eight categories of disability have been studied. Out of total 100 disability persons the following number of persons are categorised in different type of disability in India. Persons disabled in movement, disabled in seeing, disabled in hearing are higher in number of disabled person in India.

Table 2. Type of Disability

India Census (2011) : Percentage of Disabled Population by Type of Disability			
Type of Disability	Total Persons (%)	Males (%)	Females (%)
In Seeing	18.8	17.6	20.2
In Hearing	18.9	17.9	20.2
In Speech	7.5	7.5	7.4
In Movement	20.3	22.5	17.5
Mental Retardation	5.6	5.8	5.4
Mental Illness	2.7	2.8	2.6
Any Other	18.4	18.2	18.6
Multiple Disability	7.9	7.8	8.1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

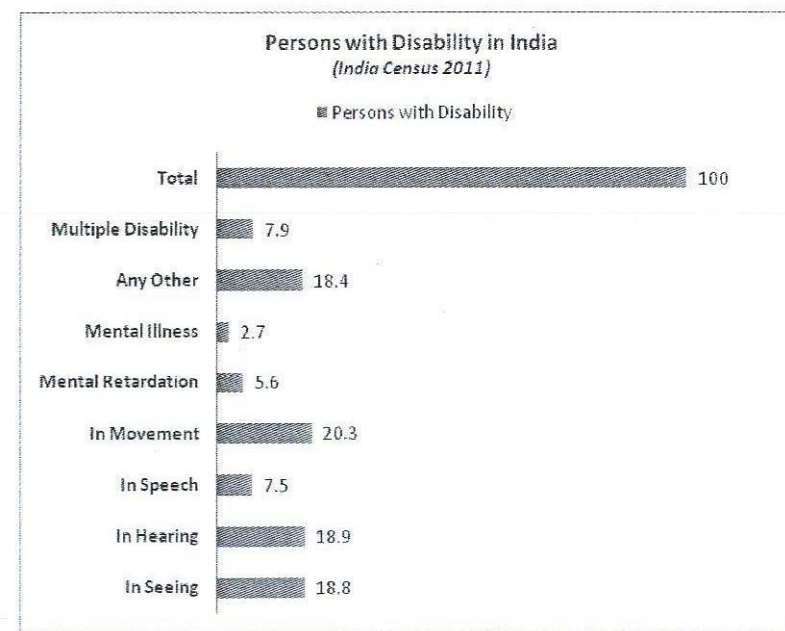


Figure 4. Status of Disability person in India



## RIGHTS AND FACILITIES FOR DISABILITY IN INDIA

According to the Ministry of Social Justice and Empowerment (2006), on the basis of increasing recognition of the capabilities of people with disabilities and their abilities, the emphasis is on emphasizing the mainstream in the society. The Government of India has enacted three legislations for persons with disabilities as follows:

- “Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, which provides for education, employment, creation of barrier free environment, social security, etc”.
- “National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disability Act, 1999 has provisions for legal guardianship of the four categories and creation of enabling environment for as much independent living as possible”.
- “Rehabilitation Council of India Act, 1992 deals with the development of manpower for providing rehabilitation services”.

In addition to the legal framework, comprehensive infrastructure has been developed. The following National Institutes (Divyangjan) are working for the development of the persons with Disabilities:

- Pandit Deendayal Upadhyaya Institute for Persons with Physical Disabilities, New Delhi
- National Institute for the Empowerment of Persons with Visual Disabilities, Dehradun
- National Institute for Locomotor Disabilities, Kolkata
- National Institute for the Empowerment of Persons with Intellectual Disabilities, Secunderabad.
- Ali Yavar Jung Institute For Hearing And Disabilities, Mumbai (AYJNIHH)
- Swami Vivekanand *National Institute of Rehabilitation Training and Research*, Cuttack.
- National Institute for Empowerment of Persons with Multiple Disabilities, Chennai
- Indian Spinal Injury Centre, New Delhi (Public-Private Partnership)

In addition, There are Eight Composite Regional Centres (CRCs) at Srinagar (J&K), Sundernagar (Himachal Pradesh), Lucknow (U.P.), Bhopal (M.P.), Guwahati (Assam), Patna (Bihar), Ahmedabad (Gujarat) and Kozhikode (Kerala) and many District Disability Rehabilitation Centres (DDRs) to provide various types of rehabilitation services to individuals. The Ministry of Social Justice and Empowerment, Government of India has established Indian Sign Language Research and Training Centre (ISLRTC) at New Delhi. In November 2006, IGNOU New Delhi has established the National Centre for Disability Studies with the mission “to provide quality education at the doorsteps of the learners including persons with disabilities”. The center’s specific mission is to strengthen the abilities of the disabled and to build their capabilities, which can help in their mainstream society.

Table 4. District Disability Rehabilitation Centres

Sl No	States/UTs	State-wise Number of District Disability Rehabilitation Centres (DDRCs) Approved/Setup in India (As on 30.11.2016)	
		DDRCs Approved	No. of DDRCs Setup As on 30.11.2016
1	Andaman and Nicobar Islands	2	2
2	Andhra Pradesh	12	11
3	Arunachal Pradesh	5	3
4	Assam	17	13
5	Bihar	27	22
6	Chhattisgarh	7	7
7	Dadra and Nagar Haveli	1	1
8	Daman and Diu	1	1
9	Goa	1	1
10	Gujarat	12	12
11	Haryana	5	5
12	Himachal Pradesh	4	4
13	Jammu and Kashmir	7	8
14	Jharkhand	6	6
15	Karnataka	8	8
16	Kerala	11	3
17	Lakshadweep	1	-
18	Madhya Pradesh	23	24
19	Maharashtra	17	11
20	Manipur	4	4
21	Meghalaya	5	5
22	Mizoram	3	3
23	Nagaland	3	1
24	Odisha	12	8
25	Puducherry	2	2
26	Punjab	9	8
27	Rajasthan	17	11
28	Sikkim	3	1
29	Tamil Nadu	7	7
30	Telangana	7	5
31	Tripura	4	4
32	Uttar Pradesh	46	40
33	Uttarakhand	5	5
34	West Bengal	16	12
<b>Total</b>	<b>India</b>	<b>310</b>	<b>258</b>

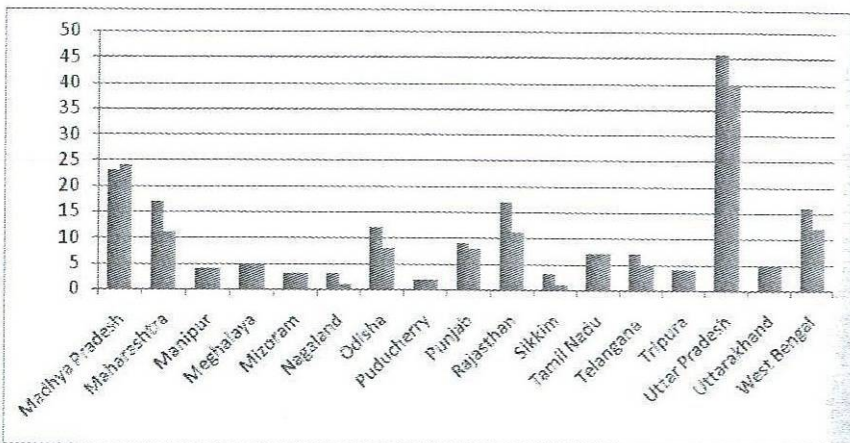
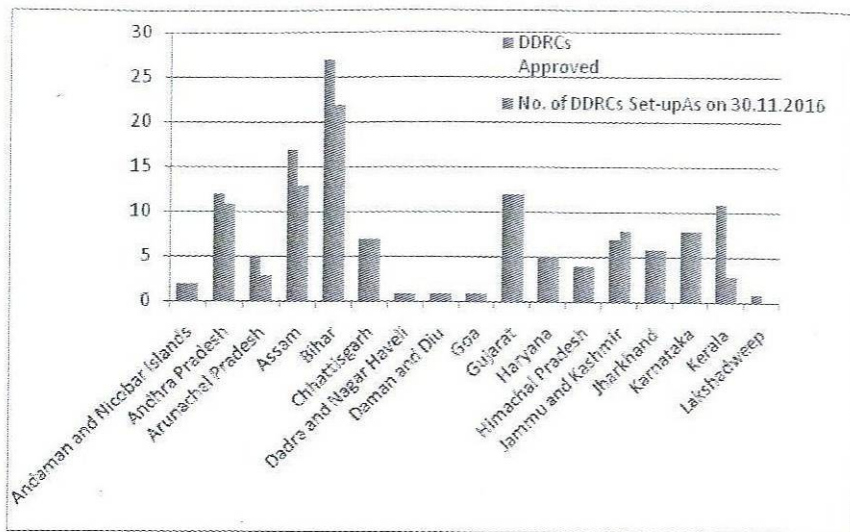


Figure 5. Status of District Disability Rehabilitation Centres (DDRCs) in India

For the disables, access to information is a major problem in India. However, today ICT has helped to reduce the digital divide between sighted and the blinds by providing information onto their desktop. Now days Digital Audio Information System (DAISY) is a digital talking book system which has been used by many libraries for the blinds. Many universities and for the disables in India i.e. Jawaharlal Nehru University, University of Delhi, Tata Institute of Social Sciences, St. Xavier College, Mumbai

and others have established their "Special Information Centre for the Visually Challenged Persons". Therefore, it is clear that, some universities and colleges across the country have already been successful in setting up centers or units for their visually impaired people, scholars and employees.

**Sugamya Pustakalaya** ([www.library.daisyindia.org](http://www.library.daisyindia.org)) is India's first and largest online Library for Blinds and Print Disabled. There is a collection of accessible books for the blinds, for people with low visions and for persons with any other print disability. It is an initiative of Tata Consultancy Services Limited (TCS) with a collaborative effort of DAISY Forum of India (DFI) to end the book famine faced by people with print disabilities. Here, anyone can access books in different languages from different libraries across India. It also partners with international agencies like Book Share and Accessible Books Consortium to provide accessible books from around the world. It is a collection of over 3, 28,900 books, where users can access and maintain their individual reading shelves online. They also download books in chosen formats. Publishers can also collaborate to publish their content in accessible formats. The **Books are contributed by DFI member organizations and Book-share**. DFI is a consortium of Not for Profit organizations from India who are involved in production of books and reading materials in accessible formats for persons who cannot read normal print. The DFI imagines a world where the people with print disabilities have got equal access to information and knowledge in their own language without delay or additional expen.

#### LIBRARY ACCESS FOR DISABILITY USERS

As per the checklist, developed by the IFLA Standing Committee of Libraries Serving Disadvantaged Persons (LSDP), the following points should be kept in mind for provide Library Services to the Disability Users of a library:

- **Outside of the library** – Disability people should be able to reach the site and reach the library building and also enter the building should be easily and safely. If the main entrance is unable to access, then must be provided a secondary access, automatic door openers, a ramp and a telephone should be equipped. Enough parking spaces near the library, well-lighted access path, smooth and non-slip surface (if necessary, a non-slip and a very fast ramp with the guardrail next to the stairs) entrance.

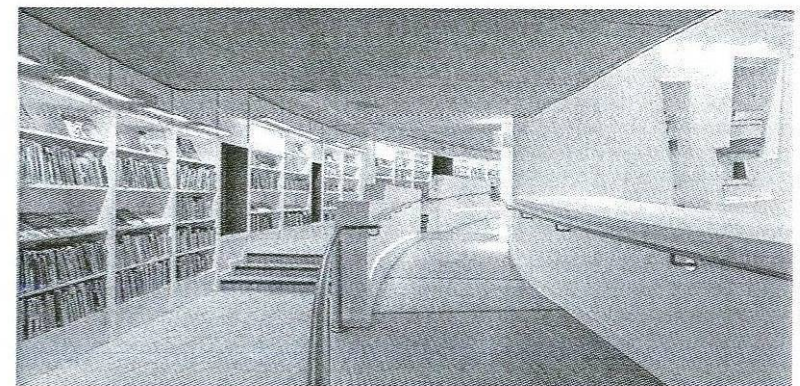
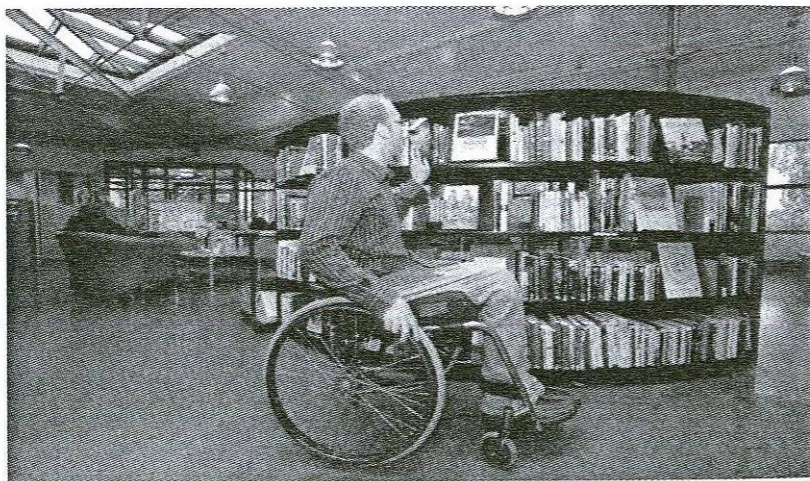


Figure 6. Ramp with railings

- **Entry into the library-** A person in a wheelchair or crush or walker should be able to enter through the door and go through the safety check points. However a blind person with a cane or a guide dog should be able to enter without facing obstacles.
- **Library Services and Access** - All parts of the library should be made accessible. Space should be arranged logically with clear signals and a floor plan deployed near entrance. The Service desks should be located close to the entrance. Wheelchairs should be able to move inside the entire library. If there is more than one level in the library then there should be a lift for a wheelchair or a ramp. There should be no door and all the doors should be automatic opener. A certain number of table and computer workstation should be customized for people in wheelchairs. At least one toilet should be designed for disabled persons.
  - Toilet for Disable Users
  - Hand reachable Book shelves from a wheelchair.
  - Adjustable Desk
  - Self-Service Circulation



**Figure 7. Hand reachable Book shelves from a wheelchair**

- **For the users with reading, hearing and other disabilities-** It should be easy to find materials produced specifically for persons with a reading disability. These materials can include talking books, readable books, Braille books and large print books.
  - Talking books Section
  - DAISY (Digital Audio Information System) player, Tape recorder, CD/DVD player and other equipment to complement the audiovisual collection
  - Electronic reader or closed-circuit television (CCTV), Magnifying glass, illuminated magnifier

- Screen adapter computers and designed software for persons with reading and cognitive disabilities.



**Figure 8 Talking Books**

- **Media formats for Users with disabilities-** All library materials should ideally be accessible for all users. There are various ways to achieve this goal. As per needs the Library staff should borrow such materials from other libraries. The following section lists material formats useful for persons with disabilities:
  - Talking books, talking periodicals, talking newspapers
  - Braille books
  - Large Format print books
  - Audio/Video DVD books with subtitles and/or sign language
  - Tactile picture books



**Figure 9. Braille Books**

**Computers Facility-** Computers must be accessible for easy use. For both computer and adaptive devices, reliable and technical support should be available. Library Staff must be trained to provide on-site support.

- Computer workstations should be customised for persons in wheelchairs
- Computers should be equipped with programs for screen reading, enlargement, and artificial speech.
- Adaptive keyboards or keyboard overlays for users with motor impairments.

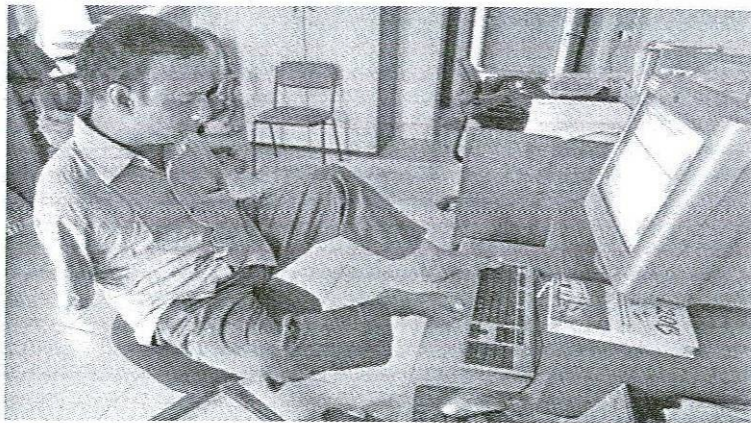


Figure 10. Adaptive keyboards in Computer PC

#### INFORMATION SERVICES FOR DISABILITY USERS

The library should offer guided tours of the library for both the disability users and the groups with special needs. Many of them may have difficulty in reading information about the library. Therefore, information about the accessibility, materials and services should be available in the alternative as follows:

##### For the users visually impaired

- Information in large print
- Information on audio tape, CD/DVD, or in DAISY format
- Information in Braille

##### For the users with hearing impaired or deaf -

- Information through videos in sign language
- Easy-to-read text for the born deaf or deaf before gaining language skills.
- Information through email and/or text telephones

##### For the users with reading difficulties (dyslexia or weak readers)-

- Written information in easy-to-read text
- Information in Daisy format or CD/DVD or audio/video tape

#### For the users with physical disabilities-

- Information in DAISY format or through CD/DVD or audio/video tape.
- Through accessible website of the Library

#### ASSISTIVE TECHNOLOGY FOR DISABILITIES

World Wide Web Consortium (W3C) defines assistive technology as “software or hardware that has been specifically designed to assist people with disabilities in carrying out daily activities.”

- JAWS Pro Talking Software- “Jaws Pro is used for converting a normal PC into a talking PC enabling visually-impaired users to operate computers independently including Internet Access.”
- Kurzweil 1000 OCR Reading Software- “The software supports to blind users for reading printed books. It is used in combination of a scanner and a PC.”
- Magic Magnification Software Pro- “The software is useful for enlarging the screen from 2x to 16x enabling users with low vision.”
- Talking Typing Teacher Pro- “Talking Typing Teacher Pro is specially designed for assisting blind in learning keyboarding skills and gaining typing speed in a systematic manner.”
- Braille Scanning Software- OBR (Optical Braille Recognition): “OBR is a Windows-based software program that allows users to ‘read’ single and double sided Braille documents on a standard A4 scanner.”
- Prisma Magnification Device for Low Vision- “It is a full colour video magnifier with a stylish, adjustable camera stand and integral table that allows a tremendous range of magnification in convenient sizes.”
- Zoom-Ex Instant Text Reader- “Zoom-Ex is a small portable device that uses the new generation motion sensor technology in combination with its proprietary Zoom Office software to make scanning and instant reading of text fast and easy.”
- Index Basic D Braille Embosser- “Index Basic D Braille Embosser is low-cost, high-speed, double-sided tractor feed continuous sheet, new generation technology Braille embosser.”
- Freedom Scientific’s SARA- “Freedom Scientific’s SARA is an affordable and easy-to-use solution for reading a wide variety of printed material including books, mail, newspapers, magazines, etc.”

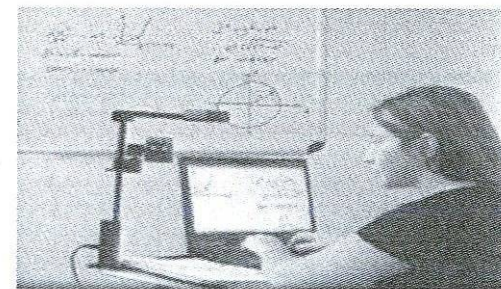


Figure 11. Book Reader Machine

## CONCLUSION

Many factors become barrier for users with disability access the facilities and services of the library. Generally, a technology is usually designed to fulfil the needs of a normal people. This has often led to the exclusion of people with disability in modern technology. Only Collection promotion with optional materials and supporting technology equipment is not enough. Adoption of laws, education of libraries, collaboration and development of guidelines is considered to be very important for disabled users to meet similar services. Following the Ranganathan's Second Law of Library Science "Every Reader his/her Book" which refer to a concept "Books for All", the Libraries should provide the equal library access and information services to the disabled users as provide to the others. It is paramount for an inclusive society on people with disabilities, their rights, their needs, their capacity, and their awareness of society about their contribution.

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## NOTES

1. <https://www.ifla.org/publications/ifla-professional-reports-89>
2. [www.who.int/topics/disabilities/en/](http://www.who.int/topics/disabilities/en/)
3. <http://www.dwa.org.au/whatisadisability.htm>
4. <https://services.anu.edu.au/human-resources/respect-inclusion/different-types-of-disabilities>
5. <https://www.indiastat.com/>