

Inclusive Libraries - A step towards making libraries disabled friendly

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The need to access libraries is not one that we need to contend. Libraries provide us with a vast resource of knowledge whereby a person can access books, periodicals, newspapers, journals, etc. Today with the advent of digital libraries, collections are stored in digital formats and accessible by computers, also.

Persons with disabilities should also have access to both that is physical libraries as well as digital libraries.

Libraries are also a point of access whereby resources can be pooled and used by a large cross-section of the society. Therefore, making libraries inclusive is important for the growth of India's population.

Libraries can be either public or private. In addition, libraries are also available in Schools, colleges, and universities. Thereby, through the libraries we can make a large impact on the education of persons with disabilities.

Who can this impact?

By making libraries accessible and inclusive, we will not only address the needs of the low vision to blind people, people faced with hearing challenges and physical challenges, but can also address the needs of people with cognitive disabilities. Another large audience that can benefit from an inclusive library is the elderly.

How can we make an Inclusive Library?

Most people think that making a library accessible is a herculean task. In simple terms, making a library accessible is a three-pronged approach.

1. Access to Resources of the Library
2. Physical Access to the Library
3. Service and Communication

Access to Resources

People who visit libraries often come to the library and refer to the resources or then might want to lend the resources for a period. Today libraries also have resources like CDs, DVDs, in addition, to newspapers, magazines, periodicals, journals, books, etc.

Also, in the last couple of years with the advent of the internet, some libraries provide internet access as well as access to digital libraries. So how can we make all of this accessible to persons with disabilities and the elderly?

- **Magnification** – A large number of people with low vision, learning disabilities as well as the elderly benefit from magnification support.

CCTV Magnifiers like the Optelec ClearViewⁱ can be a great advantage. Optelec ClearView allows magnification upto 60 times and provides various colour contrast options so that people find it easier to read.

- **Screen Reader and Screen Magnification Support** – If the library provides access to internet as well as to online library services, screen readers and screen magnification support must be provided such as Dolphin Supernovaⁱⁱ, which provides access to the visually impaired.

Dolphin Supernova is available with Indian English accent and Hindi support and therefore will be easy for the visually impaired users to use. In addition, there are also open source screen readers like NVDAⁱⁱⁱ that are available that can be used.

- **Alternate Input Devices** – In addition to the normal keyboards and mouse, it would be good to have an adaptive keyboard along with an adaptive mouse or switches, so that people faced with physical challenges can also access the services of the library.

Providing the choice to members of the library will be an added advantage that can benefit persons with disabilities.

- **Alternate Format Services** – People with disabilities might require books in different formats such as Braille, large print, digital talking book (Daisy format), etc. It is important that these books are provided in the requisite format on request by the student. In addition, some books based on the usage must also be readily available in these formats so that people can benefit from the same. For information on alternate formats please see the Section on ‘What are Alternate Formats?’.
- **Accessible Website and Digital Library** – Websites of the library or the digital library must conform to the Web Content Accessibility Guidelines (WCAG) 2.0^{iv} as outlined by the World Wide Web Consortium (W3C).

In India, we also have the Guidelines for Indian Government Website^v that emphasizes the need to ensure that websites must be accessible to all including persons with disabilities.

If resources are available in Indian Languages then it must be ensured that Unicode fonts are used so that assistive technology can recognize the font.

Physical Access

It is great to provide the books and resources in an accessible format, in a similar fashion it is important to ensure there is physical access to the library facilities. By physical access one would mean that any person irrespective of their physical, sensory or cognitive abilities is able to access and use all sections of the library independently, safely and comfortably.

While retrofitting physical access into a library, there are various components of the building that need to be looked at. Also unlike the common belief physical access not

only benefits people with physical impairment, but also enables people with sensory and cognitive disabilities.

Having just an accessible entrance will not make the service accessible. Considerations need to be given to simple aspects such as ensuring that people with vision impairments are able to negotiate within the library without hitting against obstacles, people with hearing impairments are able to receive all the information they need, people with cognitive disabilities are able to find their way between similar looking book stacks. Also as important as thinking of the accessible entrance to the facility is the accessible egress plan from the building in times of an emergency for people with disabilities.

Some basic components that may require consideration are:

- **Parking and Accessible Pathway** – Reserved parking may be designated and designed as per accessibility guidelines closest to the entrance of the library to enable people with mobility impairments to reach the library without having to walk much. Also an unobstructed pedestrian route may be identified from the main gate till the entrance of the library.
- **Entrance** – The entrance of the library must be easy to identify by people with vision and cognitive impairments. There must be a step free route leading to the library for the benefit of mobility impaired persons.
- **Internal Circulation** – Having a clear obstacle free circulation routes can be very beneficial for cognitive and visually impaired persons. All circulation routes need to be wide enough and step free to allow easy motion by mobility impaired persons. Also the layout of the library should be simple around the circulation path so that it's easy to find all sections.
- **Accessible Furniture** – Design and height of all tables whether they are used at the staff desks or for reading by patrons, are important to be looked at to ensure people with mobility impairments are able to use them as easily the others. Also important are the book stacks, their height and placement. It may be useful to have chairs of varying design and seating heights with a couple with armrests and some without to facilitate persons who may have problems standing from a sitting position.
- **Toilet** - Every library must have at least one toilet adapted for disabled persons. This toilet needs to be larger in area with a wider door entrance, to accommodate people using wheelchairs. The heights of sanitary fixtures may differ from the regular toilet facility also having handrails for support around the fixtures is important.
- **Circulation and Information Desks** – All staff desks available to facilitate the patrons must be easy to locate. The desks must be of adjustable heights or be at split levels to enable staff to address people using wheelchairs or short people. There may be a use of loop induction units to communicate effectively by people with hearing impairments. Also all informational material available for the patron must be available in alternate formats of Braille, Large print and audio.
- **Signage** – Appropriately designed signage and way finding system must be put from the main gate to all sections of the library. Good signage goes a long way in

making people independent in their interaction and use of various facilities within the premises. Good informational and directional signage can aid people with hearing impairments in finding their way around and using the library. Signage system must be so designed that even people with vision impairments can benefit from it.

- **Emergency evacuation** – While all libraries would already have evacuation systems and requirements already addressed, but a few additions to these such as have alarm systems that are both audible and visual, having refuge areas identified with wheelchair waiting spaces, having exit step free exit routes etc may be important to have to ensure safety of disabled patrons.

Services & Communication

As we sometimes say, service can help to bridge the gap which at times exists. It is therefore important to ensure that the services and communication that meet the needs of persons with disabilities and the elderly are made available.

- **Sensitizing training for the staff** - All staff should be given information about impairments and new staff should be informed as a part of their orientation. Short ‘disability sensitization trainings’ can be very useful in preparing the staff.
- **Special services to patrons with disabilities** - Special services may be offered to persons who are not able to come themselves to the library. This could mean a home delivery service, or postal service.
- **Providing information to patrons with disabilities** - The library may offer guided tours through the library for both individuals and groups of users with special needs at the time of their joining the library. Also information booklets with clear information on procedures followed by the library to assist disabled patrons may also be provided in alternate formats.

What are Alternate Formats?

Different impairments and disabilities have different needs. We must cater to their needs by providing library resources in alternate formats.

Braille

Braille is a tactile script by which visually impaired persons can read and write. Each Braille character or cell is made up of six dot positions, arranged in a rectangle containing two columns of three dots each.

Braille can be used for writing different languages including English, Hindi, Punjabi, etc.

Braille conversion software like Dolphin EasyConverter^{vi} and Winbraille are required for producing hard copy Braille books.

In addition, to print the Braille, Braille embossers such as products provided by Enabling Technologies are required.

Any text being displayed on a computer can also be converted on Braille in real time using a combination of Screen Reading Software such as Supernova along with a refreshable Braille displayer.

Large Print

Large Print formats are often used by people with low vision, learning disabilities and the elderly. Software's like Dolphin EasyConverter allows you to convert the files into large print in just a few clicks.

Digital Talking Book

Digital Talking books (DTBook) format or Daisy format has been developed by Daisy Consortium^{vii} and would benefit the print disabled^{viii}. DTBooks are available in 3 formats namely,

- **Audio with NCX:** DTB with structure - This type of DTB has a Navigation Control Center (NCX) which helps to navigate pages, headings, etc. in the book and audio.
- **Audio and Full-text:** DTB with structure and complete text and audio - This type of DTB is considered the best form as it offers the perfect setting for reading multimedia texts. The XML textual content file comprises of the whole structure and full text of the book. Here audio and text are completely synchronized.
- **Text and no audio:** DTB without audio - In this type of DTB, the text content contains the full structure and the complete text of the book but it does not have any audio file. It is generally accessed using Braille or synthetic speech.

To convert a book to DTBook, we can use open source tools like Save as Daisy by Microsoft^{ix}, DAISY pipeline, and obi by DAISY Consortium or tools like Dolphin EasyConverter or Dolphin Publisher^x.

These Digital Talking Books can be played using variety of software players on a computer. AMIS, Emerson from DAISY Consortium and Easy Reader from Dolphin are most popular software players. There are also dedicated hardware Digital Book Players such as Victor Reader Stream^{xi} and the Buddy Player^{xii}.

Conclusion

With the Right to Education Bill in India clearly mentioning persons with disabilities, why shouldn't our libraries be starting points to help our disabled people reach their goals.

About the Organizations Behind the White Paper

About BarrierBreak Technologies:

BarrierBreak Technologies (<http://www.barrierbreak.com>) is a leading accessibility firm in India providing end-to-end solutions for corporates to make their products and services accessible to persons with disabilities. BarrierBreak is also a leading assistive technology vendor in India and organizes Techshare India, India's premier Accessibility Conference and Exhibition (<http://techshare.barrierbreak.com>).

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About DAISY Forum of India: DAISY Forum of India is a network of more than 80 not for profit organizations from all parts of the country providing production and library services to persons with blindness and low vision. (<http://www.daisyindia.org>). DAISY Consortium is the International network of organizations. This network is developing basic standard and base technology for digital accessible books called the DAISY books. DAISY Consortium is also developing open source software for production and playback of digital books. (www.daisy.org)

About AccessAbility

AccessAbility (<http://www.accessability.co.in/access/>) is an Architectural Access and Universal Design Consultancy that provides design solutions to include persons with disabilities as clients and employees. With our motto 'Access = Ability', we strongly believe that an inclusive environment significantly contributes towards making a better tomorrow for all. Being India's most credible Access Consultancy we take pride in being pioneers of the country's accessibility movement and also for introducing AccessAbility as a professional service in the country, thereby bridging the knowledge gap in the indigenous construction and design industries.

"for most people, accessibility makes things easier, for people with disabilities, it makes things possible."

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ⁱ Optelec ClearView. <http://barrierbreak.com/products/?p=65>

ⁱⁱ Dolphin Supernova - <http://barrierbreak.com/products/?p=18>

ⁱⁱⁱ NVDA - www.nvda-project.org/

^{iv} Web Content Accessibility Guideline - www.w3.org/TR/WCAG20/

^v Guidelines for Indian Government Website – <http://web.guidelines.gov.in>

^{vi} Dolphin EasyConverter - <http://barrierbreak.com/products/?p=4>

^{vii} Daisy Consortium – <http://www.daisy.org>

^{viii} The term was coined by George Kerscher in 1989 to describe persons with disabilities who cannot read print. The definition is: A person who cannot effectively read print because of a visual, physical, perceptual, developmental, cognitive, or learning disability. <http://www.daisy.org/glossary>

^{ix} Microsoft Save as Daisy - <http://www.daisy.org/tools/579#t113>

^x Dolphin Publisher - <http://barrierbreak.com/products/?p=46>

^{xi} Victor Reader Stream - http://www.humanware.com/en-australia/products/blindness/dtb_players/compact_models/details/id_81/victorreader_stream_daisy_mp3.html

^{xii} Buddy Daisy Player – <http://www.saksham.org>