



Provisioning of Information Products and Services for Visually Impaired users: A Study

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ABSTRACT:

Visually impaired people in India are estimated at 62 million; of these, 54 million persons have low vision, and 8 million have completely no vision. Government of India has been giving a lot emphasis on the improvement of the education, discusses the need of Digital Library for blind users, policies so that the persons with disability (Divyangjans) can live their life in a privileged manner as any other citizen of India. In this study, an effort was made to analyse efforts made by University of Delhi in providing information services to the visually impaired users as well as to know about the constraints faced by visually impaired users in acquiring knowledge in academic libraries, The study aims to provide an insight to the academic libraries to improve information services to the visually impaired users and discusses the need of Digital Library for them. It will be helpful for promoting web based and digital services for special users.

Keywords: Information services, Visually Impaired Users, Information needs, Information products, Assistive Technology

1. Introduction:

Education plays an important role in development of values of life so it is very necessary to provide uncomplicated ways for students to acquire education.

It is visible through various studies that ICT and web based technologies are giving a new way to satisfy the needs of visually impaired users but there is a strong need of communications tools, assistive technology in University of Delhi libraries and both the staff needs to be trained as lack of ICT skills is identified as the major barrier in the users accessing information. Aim is to see, what efforts can be made by the library and information science professionals to fulfil their responsibility to provide right information to the right user at the right time. Libraries are also taking advantage of advances in ICTs to increase information access for visually impaired users.

1.1 Present Scenario in India

India is a vast country with an overall population of 133.92 crores. In the census of year 2017, the total number of disabled people came out as 2.21%. Visually impaired people in India are estimated at 62 million; of these, 54 million persons have low vision, and 8 million have completely no vision.

As we know that information today is power. Without accessing information one cannot be updated as required in this fast life. In the case of visually impaired persons, information is not easily accessible and because they have the same information needs as sighted people, there is strong need for the libraries to understand their information requirements and grant them access to it. Libraries in this technological age require helping visually impaired people read a newspaper, listen to a CD or download electronic information from the Internet, in their chosen accessible format. There are many roadblocks in providing uncomplicated access to information for the visually impaired users. To develop and maintain an efficient library services for visually impaired clientele is extremely important because there is very less available printed books in braille language commercially and it is not easily accessible to everyone when compared with the printed material available for the sighted persons.

1.2 About University of Delhi:

University of Delhi is one of the most popular institutions of higher education in India. It was founded in 1922 and there are 77 affiliated colleges and 5 other institutes with an enrolment of over 132,000 regular students.. It is also one of the first university in the country which implemented the Rights of Person with Disability Act, 2016 . It raised the quota of disability from 3 per cent to 5 per cent. This means, of the 56,000 seats available in University of Delhi university 60-odd colleges, 2,800 are reserved for the PwD category.⁸

2. Need of the study:

Today web based resources, products and services have opened up new areas of activities for people with disabilities that were not possible some few years back. Visually impaired people can now have access to computer programmes, web based products and digital resources using Braille displays and software, screen magnifying monitors, screen magnification tools, scanning software with OCR, screen readers and speech synthesis. They are now able to associate themselves with new technological changes happening in the society. One of the most important reason for this change is availability of the electronic aids provided to visually impaired users which are also known as Assistive or Adaptive Technology. International Federation of Library Associations and Institutions (IFLA) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the Public Library Manifesto (1994) emphasize that; every library must provide proper services for those who do not have easy access to them, such as the mentally and physically disabled or ill(9). In a developing country like India it is very difficult to provide technological facilities to each and every person. With a central university like University of Delhi, it is expected to deliver information successfully to the visually impaired users.

3. Review of Literature:

Previous studies shows that visually impaired people who are able to use the Internet feel a sense of empowerment (Berry, 1999)¹. Bhardwaj² conducted a study on Information access mechanism for Visually Impaired Students in Higher Educational Institutions and feels that low confidence is the major cause for visually impaired students in getting socialized and seeing value in the social environment so there is strong need to it is difficult for visually impaired students to conduct study and research with existing ICT infrastructure. It was stated that higher educational institutions in Delhi do not have the infrastructure suited to the needs of visually impaired students to facilitate efficient services.

Deines-Jones⁴ in 2007 suggested that libraries should have equipment in place that facilitates both easy mobility and easier intellectual access for those who are challenged by visual impairments.

According to Edward and Lewis (1998) "access the printed word has long been recognised as a significant barrier of integration of visually impaired individuals into school and work environments"

Government of India, Ministry of Human Resource Development, Department of Education (2005) in its 'Action Plan for Inclusive Education of Children and Youth with Disabilities' has mentioned its goal as "Recognizing Education for All children as a fundamental right, to ensure the inclusion of children and youth with disabilities in all available mainstream educational settings, by providing them with learning environment that is available, accessible, affordable and appropriate to help develop their learning and abilities."⁵

Rayini(2017)⁹ feels that information is essential to all human beings and every library's aim is to provide the right information at the right time and in the right format to its users regardless of race, religion, age, sex, nationality and language.

4. Objectives of the study:

Present study is conducted with the aim to find out the following -

- ✚ To find out the present status of library services to visually impaired users in the University of Delhi.
- ✚ To find out availability of ICT/web based technology and its usefulness in supporting visually impaired users' interactions with digital libraries.
- ✚ To find out the ways to improve the services for visually impaired users
- ✚ to improve services with the help of web based technology
- ✚ To find out ways to improve/ increase visually impaired users satisfaction in digital library use.

5. Information services for visually impaired users in University of Delhi libraries

Educational institutes and libraries associated to them have the responsibilities to serve all educational levels, undergraduates, graduates, faculty members and researchers. There is not a significant amount of information in the form of text books for visually impaired users. So it naturally becomes the responsibility of the institutional libraries to fulfil their information requirements and provide them with the desired information in the timely manner. Resource sharing in between these academic libraries can play a vital role to complete their demands that is why inter library loan and resource sharing should be encouraged between academic institutions and their libraries To provide the web based library facility to visually impaired users, the sufficient work stations computer terminals should be installed with appropriate adaptive technology. The visually impaired users should also be guidance for the use of web based information resources, associated peripherals, adaptive technologies and use of portals and web products. Academic library professionals should develop the collection in a suitable format and accordingly provide the services to visually impaired users as per their specialized need and formats.

1. **Inclusive Print Access Project** : University of Delhi has initiated the inclusive print access project in sixty four colleges. In this Project, a special technology is used that can scan books and transcribe to speech in libraries. The technology is a combination of software which has

been imported from countries abroad. In this technology a high speed camera is included which is known as 'LEXAIR' Other than this, it requires a flat-bed scanner which scans the books to speech.

2. **Provision of Angel players and Daisy players:** - An excellent useful tool for the blind students that helps them to read and record the notes and lectures. The devices enable them to read chapter by chapter, page by page, sentence by sentence etc.
3. **Screen Reading software JAWS :** JAWS (Job Access with Speech) allows users to read the screen with a text-to-speech output or through a refreshable braille display. The JAWS is an application software which supports Windows operating system. The condition is the OS should be released after Windows Vista. It can systematically work and read multiple types of HTML pages, web-based applications and websites.
4. **Braille space Software:** It is assisting software for visually impaired user. With the help of this software, visually impaired users can record their assignments and notes and convert them into written text.
5. **Availability of NVDA software** in University of Delhi colleges: As we know that visually impaired users need a screen reader to use a computer which reads the text on the screen in a mechanised voice and with a braille display. NVDA (NonVisual Desktop Access) software can be used with computers running on Windows. NVDA is a software with open source which means the code is accessible to anyone. It helps the users in reading newspapers and browsing Internet.
6. **Providing laptops and notebook with assistive software:** Most of the University of Delhi Libraries are providing /issuing visually impaired students with laptops fitted with Non Visual Desktop Access (NVDA) software semester wise and on annual basis. It is a very cooperative step for convenience of visually impaired students.

Suggestions to provide Information Services for Visually Impaired Users

Visually impaired users should be provided extensive reference service and sufficiently working devices from library staff

1. Library professionals should be courteous and supportive while dealing with visually impaired users and help them using new information retrieval tools and techniques.
2. There should be improved communication ways with the visually impaired users for example, users can be contacted and communicated via personal calls.
3. Braille books if available, should be arranged in convenient way to be browsed with the help of screen reader by visually impaired users
4. Personalized services like SDI and document delivery services should be provided to Visually impaired users
5. The library should acknowledge and follow up on each complaint and suggestions given by visually impaired users

6. Suggestions from the study:

Library and information centres should play a fundamental role in imparting information to the visually impaired users by facilitating their information needs in the best possible ways. Libraries should be careful while designing library policy, resources and services as they should meet the needs of all people and they must not discriminate against divyangjans and should ensure that they have equal and uninhibited access to all library resources whether they are in print form or in digital form. To ensure such access, libraries may provide visually impaired users with disabilities with services such as volunteers for assistance in the library, screen reader software, personalized services, books by mail, reference services by email and telephonic calls for information, document delivery service, remote access to the OPAC, remote electronic access to library resources.

7. Conclusion:

Libraries and information centres should play a fundamental role in imparting information to the visually impaired users by facilitating their information needs in the best possible ways.. Analysis shows that there are many efforts libraries are trying to provide still, they are not enough as the no. of users are more than the no. of equipment's available in the libraries. Libraries should be careful while designing library policy, resources and services as they should meet the needs of all people and they must not discriminate against divyangjans and should ensure that they have equal and uninhibited access to all library resources whether they are in print form or in digital form. To ensure such access, libraries may provide visually impaired users with disabilities with services such as volunteers for assistance in the library, screen reader software's, personalized services, books by mail, reference services by email and telephonic calls for information, document delivery service, remote access to the OPAC, remote electronic access to library resources

References

1. Berry, J. (1999). Apart or a part? Access to the internet by visually impaired and blind people, with particular emphasis on assistive enabling technology and user perceptions. *Information Technology and Disabilities*, 6(3)
- 2.. Ministry of Social Justice and Empowerment (2009). National Policy for Persons with Disabilities. Ministry of Social Justice and Empowerment Retrieved from

<http://www.socialjustice.nic.in/nppde.php>.

2. Babalola, Y. T. & Haliso, Y. (2011). Library and Information Services to the Visually Impaired-The Role of Academic Libraries. *Canadian Social Science*. 7(1), 140-147.
2. Xie, I., Babu, R., Lee, T. H., Castillo, M. D., You, S., & Hanlon, A. M. (2019). Enhancing usability of digital libraries: Designing help features to support blind and visually impaired users. *Information Processing & Management*, 102110. doi:10.1016/j.ipm.2019.102110
3. Chan, A. (2002). Providing Library and Information Services for the Visually Impaired: The Experience of the Open University of Hong Kong Library. Paper presented at the AAOU Pre-Conference Seminar on "Outreach Library Services for Distance Learners," February 20, New Delhi, India. Available: <http://www.ignou.ac.in/aaou-pre/Chan.htm>
4. Deines-Jones, C. (Ed.) (2007). *Improving library services to people with disabilities*. Oxford: Chandos Publishing.
5. IFLA. (2005) *Libraries for the Blind in the Information Age – Guidelines for development*. Retrieved from <http://www.ifla.org/publications/ifla-professional-reports86>
6. <https://www.nfb.org/images/nfb/publications/fr/fr04/issue2/f040202.html> accessed 29.11.2019
7. <https://digitalllearning.eletsonline.com/2014/11/du-to-bring-special-technology-for-blind-students-in-libraries/accessed> 19.12.2019
8. http://eoc.du.ac.in/web/uploads/06072015_reservationforPwD.pdf. Accessed 23.12.2019
9. Rayini, Junaid, "LIBRARY AND INFORMATION SERVICES TO THE VISUALLY IMPAIRED PERSONS" (2017). *Library Philosophy and Practice* (e-journal). 1510.
<http://digitalcommons.unl.edu/libphilprac/1510>
10. *Libraries for the Blind in the Information Age: Guidelines for Development* Edited by Rosemary Kavanagh and Beatrice Christensen Sköld 2005 ISBN-13 978 – 90-77897-01-1
11. Kyunghye Yoon, Rachel Dols, Laura Hulscher, Tara Newberry (2016) "An exploratory study of library website accessibility for visually impaired users". *Library & Information Science Research* Volume 38, Issue 3, July 2016, Pages 250-258 <https://doi.org/10.1016/j.lisr.2016.08.006>
12. Gerstenberger, Duane " LIBRARY SERVICES FOR THE BLIND A BRIEF REVIEW AND OVERVIEW" (1985) April/May/June 1985, Vol. 4 No. 2.