Advances in Computer Science and Information Technology (ACSIT)
Print ISSN: 2393-9907; Online ISSN: 2393-9915; Volume 2, Number 4; April-June, 2015 pp. 379-382

http://www.krishisanskriti.org/acsit.html

Use of Electronic Information Services to Learning Resources Visually Impaired Libraries

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Abstract—*In this paper the view and concern about achieving the goal use of electronic information services to visually impaired libraries. The Libraries need to be committed to ensure full access of their range of services and facilities to their user community. Visually impaired have limited opportunities to access information especially those available in print. The Visually impaired library in India depend on two basic sources for their information one is Braille books and other is Talking book services. This study also Libraries /centers on meeting the reading needs of person with visually impaired through various assistive technology devices which include Braille Printer, Low Vision aid, Screen Reader to help them to achieve their education. Information Technology is an important tool in the inclusion process and can promote independence and autonomy of students with visually impaired Libraries.*

Keywords: *Electronic Information, Assistive, Braille, Visually impaired, Screen reader, scanner, software.*

1. INTRODUCTION

Libraries are the lighthouse of information dissemination, an important component of any educational institution, and hub of learning activities where students, researchers, and teachers can explore the vast amount of information resources. The present age is regarded as the "age of information" and information has become the commodity in today's context of information explosion where we are living in the information society. Information has become an essential requirement for every one's life. Each one of us requires information for our day to day activities. In this context, Library and Information centers (LICs) are playing an important role in extending the required latest information services quickly to their users. In the 1960s and 1970s, Librarians were using electronic databases as a part of Library Services. In the 1980s, Libraries started using CD-ROM versions of electronic databases .In 1990s and from2000 onwards, Internet access and Consortia approach of journals subscriptions diversified the availability of electronic information. Presently many libraries in India have provision to access the same electronic information in multiple ways for Visually Impaired people. It is a general term use to describe people who are partially-sighted or completely blind. The term will be use in similar sense throughout used for blind. According to "world health organization" (WHO) (2009) statistics there are about 314 millions visually impaired people globally with 45 million totally blind. 87% of the visually impaired live 50 year of age at higher risk. Although visually impaired people cannot read the conventional print they have the right to information and the right to read information in formats that are accessible to them. The librarian to make information available in alternative formats like audio Braille, or large prints that can be easily accessed by the visually impaired. The only materials that were available were a few audio books. Libraries have been produced online sources of information for people. Who are visually impaired living in the Durham region. The list is based on employment related needs and is meant to educate people with visually impairment in the services that are available specifically to them. There are number of libraries are available in India like National Institute for the Visually Handicapped(NIVH) Library, deradun.etc.

2. INFORMATION

Information is the product of human brain in action . It may be abstract or concrete. When an individual begins to think, a variety of images and sensations flash across his mind. This makes some information to accumulate in his mind and his memory retains some pieces of knowledge. Information is indispensable for socio-economic development. It is essential for decision making, lessons uncertainly, can be shared with others and retained at the same time. Information is critical in decision making, and knowledge in problem solving. But the quality decision making and sustainable problem solving, one need to be a critical thinker and independent learner. Learning is a lifelong process and it must be supported by information skills for learning. Today there is a trend towards learning or project-based learning. That is not possible without adopting the concept and practice of information literacy. Information literacy means that students, teachers, and library professionals know how to make use of information resources and services to support teaching and learning. Students must be able to identify their information needs, explore the information available, select relevant information, organize the selected information, create information by customization and personalization, present that information in the proper format, assess the quality of information, and finally apply that information for decision making, problem solving, and

lifelong learning. Information has been observed as knowledge communicated to the recipient. Information may also be seen as a processed data into a meaningful form that is understood by the user. Information service can be viewed as messages opinions facts, ideas, symbols, signals, images and processed data that are capable of increasing the knowledge. Popoola (2007) defined information as that which reduces the user's level of uncertainty in a particular decision-making. Thus there is often the need for individual to obtain timely and relevant information. Information organized and distributes all expression of knowledge and free information service is the foundation of democracy, citizenship, economic and social development, scholarship and education in a progressive society.

3. DEFINITION OF ELECTRONIC INFORMATION SERVICES

Electronic means - In libraries, this usually describes a database that can be accessed with a computer. Online databases are electronic. On the other hand, Electronic means of or relating to electronics; concerned with or using devices that operate on principles governing the behavior of electrons; "electronic devices".

Electronic Information Service - means a database that can be accessed by computers. An electronic information service is any library system whose primary purpose is to provide access to, reference from, or otherwise utilize information from one or more databases stored electronically on online data storage media such as magnetic disk or optical disc. Examples of other electronic services providing indirect or internal services include acquiring or creating information in electronic databases, organization and preserving electronic information, and providing information and services to library management and staff as well as to external governing authorities and agencies. There is a commonly of competencies that are, or will be required in providing any of these electronic information services.

4. ELECTRONIC INFORMATION SERVICES IN VISUALLY IMPAIRD LIBRARIES

Apart from reading material available in Digital form, Visually impaired libraries possess enormous information in electronic form. In fact in a subject like Literature(English, Hindi, Urdu Language),History, science, etc. the electronic information is growing more rapidly. The change in the format of information has totally changed the shape of Visually Impaired libraries. Electronic Information Service for the production of alternative formats by the services for Visually Impaired, the important or common point that can found in electronic information services are as follow;

1. CD-ROM SERVICES: CD-ROM (Compact Disc Read Only Memory) has become the computer industry's preferred medium for publication and became increasingly popular in 1990s. It has added new dimensions as an economic medium of publishing. It is cheaper and capable of containing enormous quantity of information. Most of the Indian libraries are using this medium to fulfill their user's requirements in an economic way. CD-ROM technology has been found to be very useful for the sources, which are under very frequent and heavy use, such as indexing/abstracting periodicals, encyclopedias, dictionaries and directories, etc.

2. E-DATABASE SERVICES: With the emergence of computers and communication technologies, the strength of information in the development of modern database has taken new shape. The information originating form a database has become a large segment of electronic publishing that provides a base or foundation for procedures, such as retrieving information, drawing conclusions, and making decisions. The holdings of the library database, consisting of books, periodicals, reports and theses, can be converted into electronic form that allows access to Visually Impaired public use through digital networks. ERIC (Educational Resource Information Center) is the largest educational database in the world that contains more than 8,00,000 records with the addition of 30,000 new records per year. It is available in CD-ROM format as well as on the net free of charge[6]. A list of useful e-databases is given as: National Institute for Visually Handicapped, Dehradun ,and different associations, Organizations.

3. ONLINE DATABASE SERVICES: Online Database is a searchable, electronic database of either full text documents or citations and abstracts. Although an online database is accessible through the Internet, the documents retrieved have been reviewed, unlike many of those found when searching the Internet using a search engine[7]. These are some of the online databases which are as following: JAWS software**.**

4. E-DOCUMENT DELIVERY SERVICES: The transfer of information traditionally recorded in a physical medium (print, videotape, sound recording, etc.) to the user electronically, usually via e-mail or the World Wide Web. Libraries employ digital technology to deliver the information contained in documents and files placed on reserve and requested via interlibrary loan[8]. Number of Visually Impaired Libraries are inter connected to each other and Document share to students demands.

5. WEB SERVICES: Web Services are increasingly gaining attention. Standardization efforts have improved their stability and range of applications. Composition and coordination techniques for Web Services enabling application integration effort beyond loosely coupled systems. This is also computer bases network of information recourses that combines text and multimedia. It is used to access information.

6. E-MAIL SERVICES: An abbreviation of *electronic mail,* an Internet protocol that allows computer users to exchange messages and data files in real time with other users, locally and across networks. E-mail requires a *messaging*

system to allow users to store and forward messages and a *mail program* with an interface for sending and receiving. Users can send messages to a single recipient at a specific e-mail address or multicast to a distribution list or mailing list without creating a paper copy until hard copy is desired. Faster and more reliable than the postal service, e-mail can also be more convenient than telephone communication, but it has raised issues of security and privacy. E-Mail Services are provided by many Visually Impaired libraries for document delivery purposes as National Institute for Visually Handicapped Library, Dehradun ,Shaksham, New Delhi and Mulana Azad Libraries.

7. Fax (facsimile transmission): It is a system of communication by which electrical transmission of printed and written materials or drawing known as fax is achieved by radio, Telephone, which meets the educational needs of visual impaired.

8. E-CAS and SDI:A service or publication designed to alert scholars, researchers, readers, customers, or employees to recently published literature in their field(s) of specialization, usually available in special libraries serving companies, organizations, and institutions in which access to current information is essential. Such services can be tailored to fit the interest profile of a specific individual or group. Some online catalogs and bibliographic databases include a "preferred searches" option that allows the library user to archive search statements and re-execute them as needed.

5. LEARNING RESOURCES FOR VISUALLY IMPAIRED IN LIBRARIES

1. Jaws(Job Access with speech) talking Software: It is conversion of a normal PC into talking PC to enable the blind internet Access and also to train blind persons on using the computer.

2. Magic Magnification software: useful for enlarging the screen from2xto16x enabling low vision students to view the monitor screen as well as use the add-on support tools for enhancing visible.

3. Talking Typing Teacher Pro: Talking Typing tutorials specially designed for the blind complete guidance and practice lessons for learning keyboarding skills and developing typing speed in a systematic manner. Since the program also has a complete display of all lessons, even the low vision students can read and learn to type.

4. Braille Scanning software –OBR (Optical Braille Recognition): It is a windows software program that allows you to read single and double sided and double sided Braille documents on a standard A 4.Scanner. It scans the Braille document, analyses the dot pattern, and translates it into normal text that it presents on the computer screen.

5. Index Basic Braille Embosser: It is not costly, high speed, Double sided Tractor feed continuous sheet, new generation technology Braille Embosser. There are some important features are: it produce 2pages i.e., front and back at the same time ;uses Tractor feed paper which can be spiral bound using plastic wire making it very economical; does not require any special binding equipment; supplies with an acoustic cabnit.It also enables collection of the paper in an orderly manner.

6. Kurzwell Reading machine: It is a major reading devices for the visually impaired .This machine produces direct speech output from printed texts using electronic device. It enable the blind to have direct access to materials in print. The Latest discovery of this includes larger memory automatic construction, multilingual capabilities of texts in several language and communication interface. It can also produce the recorder version of the text which can be transcribed into Braille material.

7. Zoom-Ex Instant Text Reader : It is a small portable 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. Place a book under the highly sensitive camera and start reading or listening instantly and that too with an Indian accent voice and with every turn of a page automatically. It then converts these photographic images to readable text. A book of 200pages is read in 8minutes,Now read it at your own pace for long hours.

8. Freedom Scientifics SARA(Scanning and Reading appliances): SARA is the next-generation self-contained scanning and reading appliance for people who are blind or have low vision. SARA is simple to use, and quickly converts printed text to spoken text. No computer experience is needed. Read your documents without the need for sighted assistance. Easy to learn, easy to use - no computer experience needed. Convert printed text to human-like speech in your choice of voices and languages..

6. CONCLUSION

Visually Impaired Libraries have complicated nature of knowledge per se and its management, it is often difficult to estimate or demonstrate the value of knowledge. The teaching ,learning, research, other academic advancement of the visually impaired students in India today has become very necessary and should be regarded as an integral part of the national development process. It is therefore important that learning materials like Books, Journals, database and other relevant information sources should be made readily available for use them. ICT has brought about conversion of most information available in print to speech, through voice activation device, printer character have also been converted to Braille characters, which can be read. Despite the benefits of ICT, its successful application still has to contend with challenges of users technical know-how.

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