Information Technology in Library Studies: An Overview

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Abstract:

Information is the main factor of any kind of research and development as air is essential for the survival of all living organisms on earth. India is a developing country, we Indians are always trying to improve the technology for making country more developed. Currently, libraries are equipped to achieve the Information Technology based services as information technology is playing significant role for development of library. In this paper, an effort has been made to study and understand the importance of information technology in library services and Library consortia. Consortia is group of two or more individuals, companies, organizations or governments with an aim of sharing information for attaining a joint goal and library consortia is the platform for sharing the information among the library users. A discussion has been done in this paper about the advantages, disadvantages, model of library consortia. The purpose of this paper is to provide brief overview available on library consortia.

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Introduction

In today's day to day life information technology is playing very significant role for instance use of mobile phone, using computer, watching television etc. Information technology is provided very advance facilities, whose can be easily seen in different areas life Medical, Agriculture, Robotics, etc. Information technology has also changed the structure of libraries. Earlier library management were time consuming but now a days libraries are using Online Public Access Catalogue (OPAC) for finding out the exact location of reading materials (Modi, 2015).

Information Technology

Information is universal and known to all individuals, there might be no term to describe exactly the term 'information.' According to Shannon and Weaver information is defined as *"any stimulus that reduces uncertainty."* Ching- Chin Chen and Peter Hernon also defined information as *"all knowledge, ideas, facts, data and imaginative works of mind which are communicated formally and or informally in any format".* Maurice B. Line has defined information need as, *"what an individual ought to have for his work, his research, his edification, his recreation etc."*

According to the British Department of Industry, information technology is defined as *"The acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by microelectronics based combination of computing and telecommunication".* Information technology is a common term used for a group of technologies. In terms of modern library and information system following are the major components of information technologies:

- Data
- Information
- Computers
- Networking
- Mass
- Software (Vijayakumar and Vijayan, 2011)

Libraries are basically collection of books, journals and other sources, which includes catalogues, directories that can provide accurate information and help users. But in last few years libraries has took the initiative of providing information in electronic formats (Mayega, 1997). Library information technology helps in development and management of digital collections, development on server-based technologies for library services, maintain library management systems; and the delivery and storage of information resources (https://www.lib.umich.edu).

According to the Consortium of Academic and Research Libraries in Illinois (CARLI) Information Technology Librarian maintains, supports, and enhance technologies to provide distinctive library services. Following are the few main responsibilities mentioned by CARLI:

- Actively contribute in the ongoing valuation and enhancement of present technology.

- Provide assistance in management and support of the libraries.

- Provide support for a various of library systems

- Pursue ongoing professional development for aiding the profession (https://www.carli.illinois.edu).

Marimuthu and Paraman put the highlights on the use of application of information technology academic environment of Kuwait and also discussed the co-relation between quality in libraries and use of IT. In their study they found that the information technologies plays a significant role in establishment of academic environment.

Singh and Nazim (2008), discussed in their paper that today India is moving towards information technology and trying to become an information society with the support of government. In this modernized information society libraries have new role in filling the gap between rich and poor, fight against poverty, give an opportunity to enhance their knowledge. Pareek and Gangrade (2016), also discussed about the role of libraries as information resources in globalization and put the highlights on the issues faced by the Library & Information Service (LIS) sector in India.

Advantages of Information Technology in Library

Fagbe *et al.* (2015), discussed about the advantage of information technology in library as follows:

- Capture, manipulate, store, and distribute information.
- Develop the capabilities of users.
- Easily access library catalogues databases of different libraries through library networks.
- Universal integration of library services.
- Have access to a numerous number of national and international journals.
- Help research scholar for their literature review.

- Improve the cost effectiveness of library operations.
- Improve the efficiency of library functions.
- Information is preserved and conserved for long period without any degradation in quality.
- Occupies little space but large storage capacity.
- Retrieve the information in user-defined format.
- To have large number of databases in CDs.
- To provide search services to the users.

Application of Information Technology in Libraries

Vijayakumar and Vijayan discussed in their paper entitled "Application of Information Technology in Libraries: An Overview" about the application of information technology in library. According to their paper, following are the areas in libraries where information can be very useful:

a) **Audio-Video Technology –** includes photography, microfilms, microfiches, audio and tapes, printing, optical disk etc.
b) **Library Automation –** In library automation, reduce the human intervention, so that any user can obtain the relevant info with the maximum ease and even at the lowest cost.
c) **Library Management –** In Library management, activities like Classification, Cataloguing, Indexing, Database creation, Database Indexing can be very easily geared up with the help of information technology.
d) **Library Networking** – Group of Libraries and information centres are interconnected for exchange of information and communication.
e) **Technical Communication** – Consisting of technical writing, editing, publishing, DTP systems etc.

Library Consortia

Now a days Library Consortia is being internationally known because of its digital form of information. In 19th century, consortia term is derived from Latin word which means 'coming together of separate groups for a common purpose'. Basically, consortium term is originated from the field of economics referring to the grouping of individual companies to bring the information under governing body for combined presentation. Slowly the idea became more popular and relevant in the field of libraries and commonly termed as library consortia (Pal, 2016).

Library consortia basically refers to the co-ordination and collaboration of libraries for sharing information resources. It is mainly required for libraries just because of information explosion, variety of user needs, financial crisis and impossibility of self-reliance. Singh and Rao (2016), discussed about the features of library consortia that it provides every individual organizations and institutions with the capability to share their information without losing their individuality, consortium libraries empower each individual member of library to support scholarly research, staff development and interaction with quality of service, expand inter library searching at feasible cost, reduced the cost of purchase consortia, handle all the related legal issues.

Ghosh (2002) reported on library consortia and included reference to the following libraries ThaiLIS in Thailand, China Academic Library and Information System (CALIS) in China, Consortium of Academic Libraries of Catalonia (CBUC), Gauteng and Environs Library Consortium (GAELIC) in South Africa, Regional University and Science Library Advanced Network (RUSLANet) in North-West of Russia.

In India, the National Information System for Science & Technology (NISSAT), Department of Scientific & Industrial Research (DSIR) initially took initiatives for the development of library networks during 1985. Currently there are INFLIBNET, ERNET, DELNET, CALIBNET, PUNENET, with the objective discussed below:

- INFLIBNET stands for Information & Library Networks with an objective to bring modernizing in university libraries in India
- DELNET stands for Developing Library Network with an objective to promote information sharing among the libraries
- CALIBNET stands for Calcutta Library Network with an aim to provide cost-effective solutions to their information problems.
- PUNENET stands for Pune Library Network with an objective of connecting the libraries and other information centers in Pune.
- MYLIBNET stands for Mysore Library Network with an objective of providing faster communication to all the libraries with in the city via E- mail.
- ADINET stands for Ahmadabad Library Network with an objective of promoting information sharing and distributing electronic information among member of libraries.
- MANLIBNET stands for Management library network with an objective of achieving high standards in management and business librarianship and information services in India.

Advantages of Library Consortia

- Shared access to large number of electronic resources at significantly lower cost
- Best use of funds

- Facilities to build up digital libraries
- Provide better library services
- Cost Sharing for Technical and training support
- Digital form demand neither space nor costs and even they can't be stolen
- Available 24 x 7
- Global impact
- Ability to attract foreign investment
- Brings economy and equality in information availability

Disadvantages of Library Consortia

- Copyright issue
- Reduced purchasing power
- For getting licenses consortia requires high investment initially
- Dispersal of financial resources
- Dispersal of human resources
- Untrustworthy telecommunication links and inadequate bandwidth
- Always require staff training for handling electronic documents etc.
- Unavailability of earlier files.

Models of Library Consortia

Pal (2016) discussed about the numerous proposed and observed consortia models (shown in table 1), in all of them few are functional in India also.

Table 1: Models of Library Consortia

CONSORTIA MODEL		
Proposed	**Observed**	**India-Specific**
Sinclair	By Sector	Open-ended
Allen-Hirshon	By Funding	Closed-group
O'Connor	By Governance	Shared-budget
Helmer	By Interest	Centrally-funded
Haavisto	By Integrity	Publisher-initiated
Miller-Zhou	By Location	Introductory
Gorman-Cullen	By Obligation	National-venture
Rusch-Feja	By Licensing	Headquarter-executed
Giordano	By Association	

*(Source: Pal 2016)

Pal after studying the different model of consortia concluded the there is no single best model for a library consortium but consortia can develop better collective agenda to encourage collaborative librarianship.

Conclusion

In India, there are numerous number of research libraries having their own network within their own zone which can be expanded to share the information globally. Consortia is one of the medium used for sharing information but it's still at its budding stage. In current scenario, universities and research institutes are taking initiatives for digital library but unable to develop complete the formation of proper consortia, due to financial issues and least participation of the peoples for making decision. Conclusively, it could be said that information technology can be used at right time in the right place for relevant information at feasible cost and provide better services to the users.

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