Information Technology in Library Studies: An Overview

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Abstract:

Information is the main feature of any kind of research and development as air is vital for the existence of all living creatures on Earth. India is a developing country, we Indians are always trying to improve the technology for making country more developed. Currently, libraries are prepared to achieve the Information Technology centered services as the technology of information is playing significant role for development of library. In this paper, an effort has been made to study and understand the prominence of information technology in library services and Library consortia. Consortia is defined as a group of two or more people, firms, establishments 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 drive of this paper is to offer brief synopsis 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 an 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 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 very common term used for a group of technologies. In terms of modern library and information system listed-below are the primary constituents 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 presentation of information technology abstract environment of Kuwait and also discussed the co-relation between worth 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 roleplay of libraries as information resources in globalization and put the highlights on the issues challenged 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 higher number of databases in CDs.
- To provide search services to the users.

Usage and Utility 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 – i**ncludes microfilms, photography, microfiches, optical disk, printing, audio and tapes etc.
b) **Library Automation –** In library automation, reduce the human intervention, so that any operator or user can obtain the relevant info with supreme ease 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** – A group of Libraries and various Information centres are interconnected for interchange of info and communication.
e) **Technical Communication** – It consists of technical editing, writing, publishing, DTP systems etc. are included under this topic.

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 denotes to the co-ordination and association of libraries for partaking information means. It is mainly required for libraries because of immense information explosion, variety of user requirements, financial emergency and unfeasibility of self-reliance. Singh and Rao (2016), discussed about the structures of library consortia that it delivers every individual association and foundation with the capability to share and deliver their information without even losing their originality, consortium libraries empower every individual associate of library to support scholarly research, staff progress and collaboration with value of facility, 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 encompassed locus to the following libraries China Academic Library and Information System (CALIS) in China, ThaiLIS in Thailand, Gauteng and Environs Library Consortium (GAELIC) in South Africa, Consortium of Academic Libraries of Catalonia (CBUC), Regional University and Science Library Advanced Network (RUSLANet) in North-West of Russia.

In India, Department of Scientific & Industrial Research (DSIR), National Information System for Science & Technology (NISSAT) initially took steps for the expansion 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 quicker communication to all the libraries within 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 extraordinary values in business and management librarianship and information services in India.

Advantages of Library Consortia

- Shared admittance to large number of electronic means at significantly cheaper cost
- Best use of capitals
- Amenities to make up digital libraries
- Offer better library services
- Rate Sharing for training and technical support
- Digital form mandate neither space nor costs and even they cannot be taken or 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 that there is not a single most appropriate 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 private network connectivity within their own zone which can be extended to share the material 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 the appropriate time in the accurate place for relevant information at feasible price and provide better services to the users.

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