

IMPLICATION OF INFORMATION TECHNOLOGY IN ACADEMIC LIBRARY

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ABSTRACT

Our research project investigated how academic users search for information on their real-life research tasks. This article presents the findings of the first of two studies. This paper demonstrates that effective news of information technology (IT) will enhance the current operation of academic library and assets the library use of the carry out their various activities in the library. In the real world in library service librarians have to keep up change by answering specific question the need training because the technology, the corrector of population and local economics or are changing. Today libraries equipped to accomplish the newly information technology based services. Information technology enabled services fulfill the information needs of the users at the right time in the right place in the right person.

Keywords: Information Technology, Academic library, Trained IT Manpower

INTRODUCTION

The users are predict more from the information centre in the vying world as quick as services from unseen data to known information. The Information and intelligence technology has been changed many activities of the academic libraries from the digital contents providers than hard copies. Naturally, technology helped the material professionals changed contents in the digital mode and made it available through networked environment. In this web cloud computing are more helpful for the

easy storage and access in the global. So more advanced education institutions are started developing the digital library in the locally or globally.

- The stream ICT climate required the libraries to focus on the technological changes, new innovations, technical expertise, social and legal issues, cost, risk and also skills of the staff and technology.
- Libraries are covering the transition of technology every movement.
- Library and information expert have to support the changes taking place in their service to users.
- Experts working in the libraries are acquired new technologies and skills to improve the services of the information centre.

Library expert in the present generation have to act as specialist in the information managing and organizing the library in the digital environment. The concept of librarianship has extremely changed for its practices especially in the services to the end users. The advanced information processing, storage and retrieval are made simple using the cloud computing technology.

Academic libraries are facing a stimulating situation and unplanned challenges in this age of information technology. They are feeling under pressure to manage their responsibility of meeting the diverse information needs of their team member. The early operationalization of information technology in all areas of life, including libraries, has directed to discuss about how information technology change the nature and status of work. What is the footprint of information cybernetics on simplifying the service functions? Library and industrial computerization research have shown that the footprint of robotics depends on how and why it is used, rather than on the technology itself. Library organization systems are regularly used in all educational related institutes. Many commercial products are available hear, many institutions but not be able to manage the cost of using mercantile products or may not get contentment in modify facilities available. Alternatively, the institution itself can take a decision to develop its library organization system software using its own ability. Library organization system is a modern change that is look for to help in the circulation registration of processed books and register users. Information seeking is an essential part of a scholar's work. Scholars need to find proper information, assess the quality of the information, and use information in the research process.

Information is the important consideration of any kind of analysis and progress. An academic library is a library that is connecting to a tertiary school and university provide to concerned intention to support the modules and to support the research of the faculty and student. Modern academic library also contribute approach

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to voltaic assets. For students they serve as educational support providing study areas text book supplemental reading and research material for papers etc, for faculty the library major support for research. The library spends enormous resources to maintain journals and monograph for literature reviews and research projects. Libraries subscribe to datasets for researchers and librarians provide support to trained researchers in use of these datasets. The mission of academic librarians is to provide equal access to a curretted collection of high-quality information and a safe environment in which people learn to effectively access and assess that information. The academic library is essential because it provides access to high quality information which becomes a form of personal capital and

because it does so for everyone regardless of means and class.

Information technology and the virtual revolt have changed the way people fit and use information both for superior and for inferior. We got information from newspapers, television, books, teachers, and other sources. We got it in tiny individual segment and not surely when we wanted scheme which is important for presence in today's competitive and excited world. In line with to kemp" Information is appraised as the fifth need of man arrange after air, water, food and shelter". Now, in the 21st century, with the emergence of ICT & Web 2.0 technologies libraries have a new more dynamic role in knowledge society and as the individual is affected by ICT in the same way the discrete can also impact the automation (Bradley, 2010). Libraries began to allow the attending of the web adventure and make use of such a favors towards to create a new environment for libraries users where cooperation take part in

a basic role. Exchange means that technology communicate with popular with gains and trust.

DEFINITION OF INFORMATION TECHNOLOGY (IT)

Information Technology has been variously researched by many scholars. Thus Information Technology is observed in the library to be worried with accessing, administering, repository and dissemination of information-word based numeral graphic and choral. It is considered as a broad-based term comprising the gathering, organization and storage and retrieval of information. According to Marshall, "IT is the coming together of computing and telecommunications for the motive of control information; the application of technologies to information handling; including generation, storage, processing, retrieval and dissemination. The use of computer and telecommunications devices in information conduct consisting of essentially three basic components which are: Electronic processing using the computer Transmission of information using telecommunication equipment; and Dissemination of information multimedia. From the above information it becomes explicit that IT in libraries comprises all the electronic infrastructure and facilities employed by libraries to improve and provide efficient services. Such aptitude in broad term consist of hardware, software and communication links between the service outlets of different libraries to facilitate the sharing of common resources; especially the library networks. In that day library should not mostly store documents and preserve them it must also devise means by which the contents of such documents can be rapidly and effectively transmitted for use. Emails, telephonic, television, radio, ebooks, newspapers and periodicals are the traditional ways users send and receive information. Anyhow data communications system computer system also transfers data over communication lines such as telephonic lines since the mid year 1960. Internet use has today revolutionized access to information for the business world, libraries, education and individuals. All these computerized devices are assessing as central to the idea of liberalization. The virtual and its automation continued to have profound effects on the promotion of information sharing; especially in the academic world, making possible rapid transactions among businesses and supporting global collaboration among individuals and organizations. These technologies have the potentials to develop "digital campuses" and "digital libraries" thus, increasing students' approach and particle. Naturally as libraries in which computer and

information technologies make approach to all around of information resources possible. Today the concept is mention to popularly as “digital library”, “electronic library”, “community network”, or simply “library without walls”,

OBJECTIVES OF THE STUDY

- To explore how librarians and library users connect with digital material, electronic resources, online services and review their attention towards their benefits and challenges in academic libraries.
- To explore the use and impact of information technology in Academic Libraries services and operations in India.
- Conservation and preservation knowledge
- Inflation of ideas and diffusion of knowledge with the help of interpretation, research and publication and dissemination of knowledge through teaching and extension services.

ACADEMIC LIBRARIES ROLE IN RESEARCH

A survey of the expert in literature on the role of digital libraries in research reveals three often interconnected themes:

- The information needs and information-seeking behavior of researchers often reports of surveys of researchers use of libraries.
- Summary of library roles and services in the support of research some accompanied by surveys of users of these services.

AVAILABILITY OF INFORMATION TECHNOLOGY IN ACADEMIC LIBRARIES

Academic libraries have different times planned to robotize their activities but had to drop the plans halfway due to certain inadequacies which Madu (2002) enumerated to including: Economical Manpower problem Political volatility Capital Geographical solitude Social cultural and Exposure. Therefore libraries especially those of triennial institutions have had crisis in their attempts at achieving full application of IT in the conduct of their operations thereby failing to benefit maximally from such adoption. The confirmation of this study thus lies in the central and cavallies role that IT plays in education generally and library operations in particular as attested to by (Nwizu, 2008). The need of audiovisual and electronic resources has collapsed the barriers of time, distance, and locates which slow growth of formal education just as (Adeyemi, 2004) emphasizes that students use these

resources to complete major assignments. He added stressed that Audiovisual and electronic resources have the conceivable for enhancing student learning. The role of these effects in teaching and learning is one of the most important and widely discussed issues in contemporary education policy". Some institutions have an indusial website but the library has no presence there. A library homepage should be a factor of an institutions website. Librarians must upload their bibliographic records to become part of global resources and should also be able to download information. As such of the institution's libraries have a web presence; they do not lie in the virtual environment. (Etebu, 2010) declare that without vast form of Internet facilities librarians will not be helpful to their clientele. It is unique when they are adept in the use of the Internet that they can teach other library users to navigate the World Wide Web.

CHANGES IN ACADEMIC LIBRARIES

BUDGET CHALLENGES

Libraries are covering in the reduction of control and elements budgets every year that leads to the prudential pressure for allotting the cost for the new challenges.

CHANGES IN HIGHER EDUCATION

Due to the scientific upgrading in the information handling the library professionals are affected to get training in the advancement technological changes in the profession so additional refresher courses and workshops must be present by the library professionals to acquire technology.

DIGITIZATION OF UNIQUE LIBRARY RESOURCES

Digitization of printed and unpublished documents made available to the researchers as well as worldwide through digital library projects "erratic collections are a link where cybernation content the meeting to boost learning in amazing new ways". Therefore, the virtual is the challenging task for the library professionals.

GROWTH OF MOBILE DEVICES AND APPLICATIONS

Information Technology brings everything in the mobile phone. The mobile function are increasing day by day in all the fields so the library is using them also by way of giving information in text messaging through SMS to the user mobile phone as in the services of OPAC, communication modernize such as extend documents etc.

LIBRARY WILL EXPAND THE ROLE TO INSTITUTIONS

Information literacy direction is to be integrated with the modules in the main stream of the education. Librarians do provide services to the scholars on virtual research environment and digital repositories-learning must be spread for convenient attachment to the local digital collections. Using open access software- cluster is to be evolved and according through web with general public.

TO DEVELOP SCHOLARLY COMMUNICATION AND INTELLECTUAL PROPERTY SERVICES

Every institute must develop their thought contents locally as Institutional collections so that it basis others to gain importance to publishing academic communications. Institutional collections are predict the institute fame to others. The possible of academic are highly think highly through IRs.

REVOLUTION TAKE PURSUE TO CHANGE UTILITY AND ESSENTIAL ABILITY

The academic libraries are fronting many mechanization changes to impart informatics. The new automation tools such as facebook, twitter, release, airframe, amazon, anything as-a-service are few of them for providing library services to the end users. Usually the library Proficient do not know how to perform and how many tools use for these motive, the same information has to be served in a different tools and mode with standard format. So all these modern tools must be combined for as long as services to users.

LIBRARY WILL CHANGE AS TANGIBLE AREA IS REMODEL AND ESSENTIAL SPACE STRECH TO PROVIDE

These days, the academic libraries are extended information resources to users than every day. The number of hard copies is decreasing naturally. The initials of expression of journals are withdrawn in many libraries and go for online journals. To approach these, the libraries are as long as computer facilities to the users rather of hard copies.

Changes in Libraries: A Paradigm Shift

To become information professionals ever before and to provide information services through online, must be acquired new skills such as advanced technological training for accessing, storing, retrieving information from networked environment. So the vision of the future academic library professional must be to create a World Class Networked Global Library and Information Centre to impart suitable technology

persuade quality information processing to the user in time in the digital age . The 21st century changed the traditional library professionals into modern and technological library professionals by way of using information technology in the library. Library experts must go through lot of changes in the venture for information processing and control them. The technological improvement forced to change and enhance their knowledge and achieve new competencies skills. Transitions of activities of library from traditional way to ICT way are given below:

(Dhanavandan and Tamizhchelvan, 2014)

Sl. No.	Libraries	Networks
1	Custodian of Books	Service oriented Information Providers
2	Print	Digital
3	Ownership	Access
4	Order in Libraries	chaos on the web
5	One Medium	Multimedia
6	Media	Hypermedia
7	Copyright	copy left
8	Own Collection	Library without walls
9	Homogeneity	Diversity (heterogeneity)
10	In Good time	Just in Time
11	Top Down System	Bottom down system
12	Real	Virtual
13	Tangible	Intangible
14	Monopoly	Equity
15	Library	Web Library
16	Intra-action	Inter-action
17	Teaching	Learning
18	Local reach	Global each
19	We go to the Library	Library comes to you
20	Book preservation	Bit preservation

CHANGES IN ELECTRONIC LIBRARIES

Information technology realized the importance of electronic libraries, some of the factors is to be considered and listed below:

- Provide interactive access to the collections
- Instant access to multimedia based information
- Fully automated indexing & intelligent retrieval
- Users are more hungry to do R&D remotely
- Storage of large volume of data
- Access @anytime @anyplace by anyone
- Faster addition & gap reduction
- Effective tool for bridging the information gap
- Distributed learning environment
- Promote paperless office environment;
- Promotes e-learning.

THE SKILL OF LIBRARY STAFF

In the system to manage the developing library environment, the library employee will need to be trained in the application of basic tools in their work environment. The modernized storage media like, CD-ROM, micro-text, microfilms, optical laser disc, floppy discs, magnetic tapes and discs etc. play a vital role in the ever-growing information world-daily routines and functions of the library have been impacted and influenced very much by the modern communication medias like satellite communication ,e-mail, telex, e-journal, fax, telecommunications, online network communication etc. So it is very necessary to provide almost training to the library personnel.

In earlier mount the librarian as a protector and caretaker of books. But today's librarians are having new technologies handling skills like physical form of books and journals is replaced by Electronic media such as CD-ROMs, DVD, and Floppy Disc etc. So, the librarians and library professionals are automatically undergoing a change due to the necessity of information literacy.

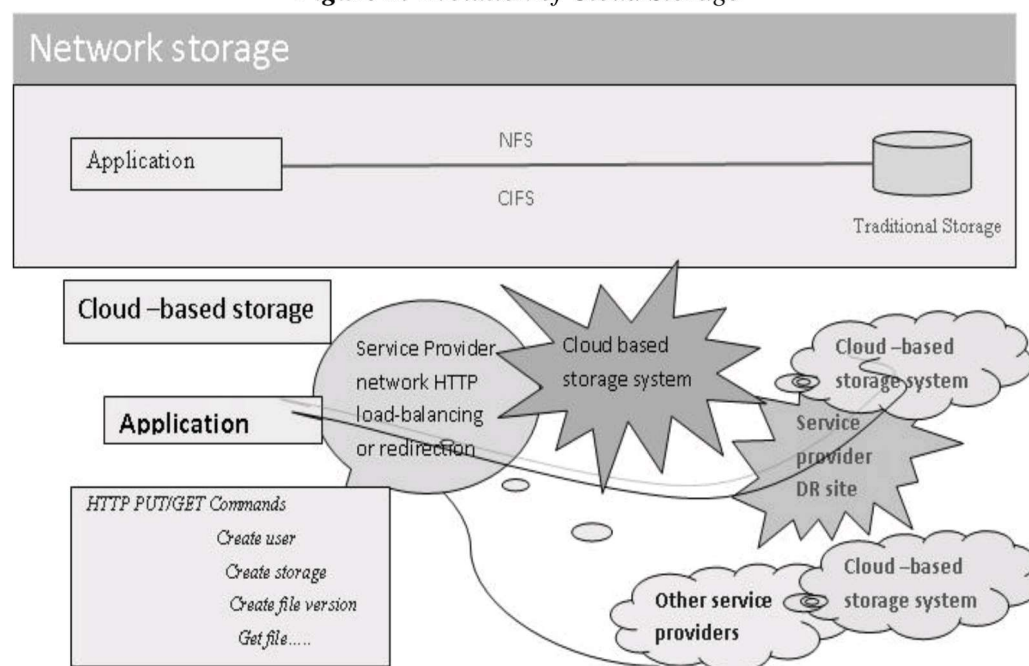
PERSONAL COMPUTING TO CLOUD COMPUTING

At the end of the 20th century the computer technology established its legs into all the fields in the world. The new advanced technology is used the internet and remote servers to maintain data and functions. Cloud computing is a virtualized pool of computing resources. Cloud computing allows consumers like library, businesses, consumers to use data and applications without installation and access their personal files at any computer with internet access. In cloud computing services provide

common business applications online that can be accessed using a web browser while storing software and data on the servers. IOSR Journal of Computer Engineering (IOSRJCE) ISSN: 2278-0661 Volume 1, Issue 1 (May-June 2012), PP 38-45

Network Computing Technology	Cloud Computing Technology
Client Server and other paradigms	Service Paradigms (e.g. Platform as a Service)
Remote Procedure Call	Processor Virtualization
Overview on Java RMI, CORBA and other infrastructures	Virtual Network Interfaces and Virtual Networks
Emerging Web Technologies	Virtualized and Network Storage
Web Services and Service-oriented Computing	Web Service Interface
	Authorization and Security

Figure 1: Evolution of Cloud Storage



ADVANTAGES OF IT IN LIBRARY SERVICES

The Introduction of Information Technology in library science has enormous advantages. According to (Igbeka, 2008), and (Adeleke, 2015), they enumerated the benefits of IT to library services as follows:

- Help researchers for effective literature analysis search needs.
- To introduce and produce new services revitalize the actual services by providing faster access to the resources by overcoming the space and time barriers.
- Online Public Access Catalogue is the computer form of subsidiary library users to catalogue library materials.
- To have large scale number of databases in CDs.
- Utilize staff for providing better information services.
- Retrieve & disseminate the information in user-defined format.
- Upgrade the abilities of professionals
- Information is preserved conserved over a long period of time without image or quality degradation.
- Encourage networking & resource sharing at local level.
- The documents for preservation & for space saving.
- Capture, store, manipulate, & distribute information.
- Improve the efficiency of library functions.
- Helps in the process of the serial control, preparing union list of serials and circulating via e-mail to the branch libraries at different locations.
- Improve the cost effectiveness of library operations.
- Global integration of library services.
- Change in the viewpoint of the library from being a physical structure housing books to a database for universal access of information.
- Information technology has decreased the services/organization of the library by storing, retrieving and discrimination of information in real time.

There are also three modern networks, DELNET, CALIBNET, and BONET optimally utilizing and preserving knowledge. They are instrumental in changing an unequal society into an equalitarian, reformist knowledge-based society. The impression of Information technology in the collection of development is very prominent in library. There is serious lack of cooperation among the libraries of

different organizations and which cause the lack of union catalogues at national level. The national library failed even to do this prodigious task. One of the major problems faced by Library and Information Services sector in India is lack of bibliographic control at national level which causes duplication in research. A library is a vacuum number of data resources of data formatting & similar resources selected by experts & made accessible to a defined community for reference or borrowing, often in a quiet environment conducive to study. To summarize, the most constraints faced by the libraries which militate against effective dispersal and use of information are:

- ◆ A considerable amount percentage of the population is illiterate or functionally literate making libraries of minimal use to them.
- ◆ Poor resource parceling for infrastructure improvement and collection development for public libraries.
- ◆ A critical department of national policy that is put under pressure by maturation is harmony and welfare. Can social safety nets remain parliamentary determined at the national level under the pressure of global competition
- ◆ Lack of adequate trained manpower in the use of information technology.
- ◆ Lack of funds for getting necessary hardware and software facilities.
- ◆ Resistance on the part of library staff to change from their traditional practices to the use of information technology.

Library and Information Services sector in India has got remarkable achievements. Efforts had been made to set up networks at local, regional and national level to propagate information and communication technologies and to build electronic information sources. Academic library is organized for use and maintained by a public body, a corporation, an institution, or a private individual. Special & institutional collections and services may be intended for use by people who choose not or cannot afford to purchase an extensive collection themselves, who need material no beard can moderately be expected to have or who require professional encouragement with their research. A number of educational institutions are members of such networks in academic library. Indonet, Necnet, Inflibnet and Delnet these are networks especially haunted in compiling union catalogs, providing training to library staff, online facilities, reference service, assistance in retrospective conversion etc. To overcome the problem of financial compaction and the rising costs of journals, librarians have formed consortia to subscribe all the required journals and databases.

Some special libraries and research organizations have established consortia known as Forum for Resource Sharing in Astronomy to share electronic access to journal literature. The quality of library and information services through the organized acquisition, organization and dissemination of knowledge various library associations have been set up at national and state level. They annually organized conferences, seminars and training programs to trained and update library professionals with latest development in Library and Information Services. Recently libraries and research organizations understand the importance of digital libraries and they started the work of digitization of important documents.

The Indian Institute of Science was the first in the country to startup and interoperable institutional archive. The archive now has more than seven thousand records, with over ninety percent having full text. Presently there are twenty five institutional archives in India which are registered in the registry of open access repositories. An open access reservation is likely to be ready by this year. The National Knowledge Commission has submitted its report to the government on how to define the information services sector. The report of Knowledge Commission on library sector proposes that every state should launch a registry and archives of knowledge based digital resources which should be made accessible to all.(Sen & Chakerborty, 2014)

IMPACT OF INFORMATION TECHNOLOGY (IT)

On Academic Library Functions the 21st century is the age of information science and technology. Many academic and research institutions and leading universities in the world edit their own homepages to demonstrate their educational goals, academic activities, excellent training programmers and the innovative and important research results. Therefore the functioning of academic libraries changes from time to time to be suitable to the ever-changing information environment. The change is at slow pace in school and college libraries, however, university libraries, with the support of INFLIBNET, an Inter University Centre of University Grants Commission have made steady development in the application of IT in their housekeeping and information retrieval activities. University libraries now days are planning great efforts to build up their information infrastructure in order to provide a fast and efficient information highway to help their users in sharing and utilizing the information all over the world because providing a fast efficient and easy way to

access and search for the information through the web pages and the resources linking with other websites, users can easily access new information fresh knowledge & solutions to their problems. This innovation has changed the activity of university libraries in India. The new activity includes Providing Internet facility to all users to access global information in their specific discipline. Creating and maintaining library website. Manage OPAC of their library to give access to its selection not only to its users through campus networks but also to users' world over. In case that access to wide variety of information resources including reference sources, indexes, full text articles and complete journals.

CONCLUSIONS

This study noticed eleven academic users information searching behavior within research-task searching scenarios in the online environment. The results provide new ability of academic users perceptions about research based tasks and raise our understanding of real-life information searching and user behavior in a research environment. But the study reduces its findings to user's interactions with IR systems.

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