TO STUDY ON LIBRARY INFORMATION SYSTEM WITH RESPECT TO INFORMATION AND COMMUNICATION TECHNOLOGY

Sapam Suranjit Singh, Research Scholar, Dept of Library Science, Himalayan Garhwal University

Dr. Dharma Das Dutta, Assistant Professor, Dept of Library Science, Himalayan Garhwal University

ABSTRACT

The majority of professionals say they are reasonably confident in their ability to use ICT in libraries, but they are less confident in their ability to use cloud computing technology. However, the biggest issue impeding the adoption of ICT in libraries is a lack of sufficient training. The study's recommendations are still valid and useful in the current scenario. Professionals require ongoing in-house training in areas such as web 2.0/cloud computing technologies, e-publishing, content management systems, webpage design, and so on. Libraries have always been thought of as information management systems, and even if the format of the material changes, the library will remain the ideal place to keep track of it. In libraries, a new form of meeting place and cultural center is emerging, with librarians playing an active part in making the library a "happening place." New skills and knowledge will lead librarians to new directions and career opportunities in the coming centuries, and neither librarians nor libraries will become obsolete. Because the future is uncertain, it is impossible to foresee the advancement of technology available in libraries, but it is possible to adapt to changes in the evolution process. Technology may not be a solution in and of itself, but it does provide access to solutions that were previously unavailable.

KEY WORDS: **Library Information System, Information and Communication Technology.**

INTRODUCTION

The modern economy brought about a flood of information and, subsequently, a rising interest for information. Because of the blast, the 'data society' was conceived, and Information and Communication Technology (ICT) turned into a main impetus for progress. The data society and the improvement of data and correspondence innovations (ICT) carried many changes and hardships to the data world. Since the 1960s, the data area has been

changed by the presentation of PCs and the web. Therefore, there was a worldwide trade of information, which was important for the globalization peculiarities. Experts in the field of data are at the front of the ICT climate that is pushing the data society ahead (Sangma, 2013). News and thoughts are ceaselessly partaken in this data age, between people as well as among PCs and information handling hardware.

In advanced education, new leap forwards in ICT, especially web-innovation, can be utilized to work on quality and cultivate greatness. Specialists would have the option to construct new information and team up with peers all the more actually involving information vaults in various districts of the world. As a matter of fact, as per Karisiddappa (2004), "for a country's reasonable turn of events, today ICT has become significant mastery for each country, especially for agricultural countries." This plainly shows that ICTs are presently the foundation of society development in its structures in general. In spite of the fact that there are various web search tools accessible on the web, it tends to be hard to recognize data that are applicable to a given task.

The 'data blast' and the 'artistic blast,' for instance, have clear ramifications for college library administrations. The aggregate of human information is developing at an impressively speedier rate than some other time in mankind's set of experiences (Srivastava &Verma, 1980). The cutting edge advanced world is connected to the creation, circulation, and utilization of computerized data since the objective of current library administrations is to give the fitting data to the perfect individual at the right second. Libraries have advanced quickly with regards to information protection and transmission, and the present libraries are alluded to as computerized libraries. Web mining, or the recovery of data from a huge number of sources all through the Internet, has turned into a test for administrators. Information laborers should be more connected with, cooperative, and dynamic in the advancing data climate so data might be made accessible to everyone. To satisfy their expert obligations, the present curators are expected to be capable in the utilization of PCs, organizations, and the web. Custodians should be directors and coordinators of computerized content in the present ICT world.

Components of ICT in Libraries

ICT is a wide expression that alludes to an assortment of innovations that are used in the age, assortment, handling, capacity, recovery, correspondence, and conveyance of information. PC innovation, correspondence innovation, and miniature electronic based methods are the parts of data innovation that are generally utilized in libraries and data focuses.

PC innovation: Mainframe PCs, supercomputers, minicomputers, PCs, CPU innovation, man-made consciousness, programming innovation, and CD-ROM innovation are generally instances of current PC innovation progressions.

Correspondence innovation: is one of the main parts of data innovation. Correspondence or media transmission advancements utilize electrical or electromagnetic medium as sign transporters to send data as signs between distant areas. Sound innovation, general media innovation, movies, TV, video message, phone, portable innovation, fax, email, voice message, remotely coordinating, satellite innovation, Internet, and organization innovation are largely significant leap forwards in correspondence advancements

Micrographic Technology: Micrographic innovation is the part of data innovation that arrangements with the use of microforms. It incorporates optical media for high-thickness optically encoded information recording and stockpiling.

Correspondence through remote innovation: To interface between workstations, document servers, and centers, remote organizations utilize high-recurrence radio transmissions, infrared light shafts, or lasers. PCs distant PCs can associate with this type of organization, which is invaluable. One more kind of correspondence is remotely coordinating, in which at least two people in at least two areas impart over an electronic medium.

Since its creation, the web has developed to turn into the world's biggest repository of information and data, with billions of archives accessible free of charge. Internet providers can now be utilized to convey online effectively. Email, texting, visit, web gatherings/conversation gatherings (LIS-discussion), interpersonal interaction locales, and Voice over Internet Protocol (VoIP), which is one of the freshest specialized instruments that permits making phones converse with others utilizing a PC for a minimal price, are a portion of the web-based specialized devices of the twenty-first 100 years.

Numerous libraries are zeroing in on ICT for the accompanying reasons:

- ICT empowered the making of computerized
- ICT empowered web-based admittance and record m
- ICT empowered data systems administration and shar
- ICT empowered the exchange of advanced data from remote destinations
- ICT empowered library capacities, office work, and in-house data set creation

Through library organizing, CD-ROM, the web, and multi-media, propels in ICT are being taken advantage of for library and data exercises. A PC network is an information correspondence framework that associates at least two PCs or helper gadgets (Prabhakar, 2012). Archives can be handily traded utilizing a Local Area Network (LAN). In library administrations like as SDI, interlibrary loaning, reference administrations, and online data recovery, phones and different gadgets assume a significant part. ISDN helped information transmission transfer speed, permitting new administrations, for example, email and fax to be presented (Santha and Sheeja, 2008). PC capacity and pressure innovations have empowered immense measures of information and data to be put away on minimized advanced and optical media, forestalling the requirement for a lot of extra room for printed sources. It's likewise speedier and more straightforward to keep electronic sources current.

ICT Skills

In Delhi, administrators work in an assortment of settings, including scholastic, unique, public, exploration, and improvement libraries. Their expert prerequisites and it are particular to work conditions. Due to the assorted idea of work and climate, the abilities expected by library experts for effective execution of their obligations vary by library type. Showing staff, scientists, and understudies are the clients of a scholarly library. A scholastic custodian should have traits and gifts that empower them to offer better types of assistance to their customers. To work on proficient capability, a library expert ought to have the option to recognize client needs, channel significant data, combine it, and repackage it using ICT apparatuses.

Library in the Digital Era :

Computerized libraries currently incorporate pictures, films, talks, and photographs because of the ascent of Compact Disk. They additionally have clamors, text, and different highlights. Later on, sight and sound and man-made consciousness will assume an undeniably significant part. Advanced curators will turn out to be more urgent in finding and scattering proficient and financially savvy computerized data framework structures (DIS). The computerized bookkeeper's job is turning out to be progressively significant because of the assortment of difficulties and amazing open doors he faces.

Library and Information Science [LIS] Education :

In India, library and data science [LIS] training has 100 years of history. It has advanced into a novel field because of the extending extent of library administrations and society's evolving necessities. Library preparing programs are given in an assortment of areas; the first expert librarianship instructional class in Quite a while started in Baroda in 1911.

The rise and development of libraries reflect cultural social and instructive settings. They may be viewed as a social organ with social obligations. Staff working in libraries ought to have the option to really utilize and carry out library strategies to address the issues of clients, remembering the capacity to teach clients for how to get fundamental data and stay up with the latest on the most proficient method to manage consistently changing data needs.

ICT Applications in University Libraries

Notwithstanding the way that ongoing ICTs give tremendous guarantee to fruitful library and data administrations, libraries are lingering behind in completely carrying out and utilizing these innovations, especially the latest web advances. Clients miss the mark on data education capacities to utilize data assets, especially those that are accessible and open in advanced design. With regards to current ICT applications, the library the executives interaction, including the HR the board framework, should be totally reconstructed (Francis, 2012). The in-house activities of libraries have been considerably adjusted because of ICTs. Procurement, handling, conservation, administrations, and different tasks have all changed decisively. For their course method, stock checking, and report following, numerous libraries have executed standardized identification or RFID advances.

RESEARCH METHODOLOGY

Research methodology is a branch of methodology that entails a step-by-step process that takes the researcher from the initial identification of an issue to its conclusion. The purpose of methodology is to ensure that research is conducted in a scientific and reliable manner. The purpose of this study is to determine the level of information and communication technology (ICT) capabilities possessed by library professionals at various Delhi universities. To begin, a thorough evaluation of the literature was conducted to determine the research deficit in the field of study. This chapter discusses the study's methodology, which includes the study's population, variables, data gathering tools, statistical techniques employed, data collection protocol, and data analysis.

RESEARCH DESIGN

The research design is the conceptual framework for conducting research. The term "research design" refers to the planning ahead of time of the methods to be utilised for collecting relevant data and the techniques to be employed in their analysis, keeping in mind the research's goal as well as the availability of personnel, time, and money (Kothari, 2009). The design aids the researcher in effectively organising ideas in order to detect flows and shortcomings. This study is carried out using the survey method, and data is collected using a questionnaire. The most popular research approach for gathering data from a large number of people at once is the survey. In descriptive research, survey methods are typically used to characterise the features of a certain group. The surveys are concerned with the current state of affairs, as well as the attitudes and trends that are emerging.

POPULATION OF THE STUDY

The universe of this research is Delhi's university libraries. The participants in the study are library professionals who work at Delhi's university libraries. In Delhi, seven universities were formed by an act of the legislative assembly in the previous century, each with its own university library. In Delhi, nine new universities were established in the twenty-first century, including one central university and two universities that were granted deemed university status under UGC criteria.

RESULTS AND DISCUSSION

ICT BASED LIBRARY SERVICES

Table-1 lists the ICT-based services available at the five university libraries. The chart shows that most of the ICT-based services listed in the table are available in all university libraries.

TABLE-1 ICT BASED LIBRARY SERVICES

Types of services	UoK	UoC	CUSAT	KAU	MGU
Web OPAC	Yes	Yes	Yes	Yes	Yes
E-books	Yes	Yes	Yes	Yes	Yes
E- journals	Yes	Yes	Yes	Yes	Yes
ETD	No	Yes	Yes	No	Yes
Online databases	Yes	Yes	No	Yes	Yes
Subject gateways	Yes	No	Yes	Yes	No
Federated search	Yes	Yes	Yes	No	Yes
Internet service & Multimedia service	Yes	Yes	Yes	Yes	Yes
Current awareness service	Yes	Yes	Yes	Yes	Yes
SDI service	No	No	Yes	No	No
Circulation of new additionlist	Yes	Yes	No	Yes	Yes
Inter library loan through network	Yes	Yes	Yes	Yes	Yes
CD/DVD bases service	Yes	Yes	Yes	Yes	Yes
Document scanning/ printing	Yes	Yes	Yes	Yes	Yes
Electronic document delivery	Yes	No	Yes	Yes	No
Institutional repository	Yes	Yes	Yes	No	Yes
Digital library service	Yes	Yes	Yes	Yes	Yes
digital reference service	Yes	No	No	No	yes
Audio and video conferencing	No	No	No	No	No

In terms of e-resources, all universities have a diverse collection of e-resources in many disciplines, such as e-books, e-journals, online databases, topic gateways, e-theses and dissertations, and so on. A new ICT section has just been established at UoC to oversee and coordinate the library's automation and ICT-related activities. The Shodhganga, the UGC-INFLIBNET Centre's national digital repository project, has begun digitizing Ph.D theses. Except for the KAU library, all university libraries offer a federated search function. CUSAT, UoK, and UoC provide JCCC @ INFONET, EBSCO discovery service as a federated search tool, while MGU provides JCCC@ INFONET.

Only CUSAT library provides SDI service, which is one of the conventional computer-based reference services in libraries, as shown in the table. Interlibrary Loan (ILL) and Document Delivery Services (DDS), two of DELNET's most popular services, are available at all university libraries. DELNET databases in three university libraries, CUSAT, KAU, and MGU, are used to obtain books and journal articles that are not available in the library or under UGC-INFONET. Except for KAU, all libraries have an institutional repository. The University of Kent has an institutional archive of UN and World Bank publications that can be accessed online through the 'World Bank e-Library.' In their libraries, all universities have a digital library with digitized documents.

None of the libraries offer audio/video conferencing or online indexing and abstracting services. Digital reference services are likewise not given the attention they need in any of the state's libraries. It is past time to invest in these areas in order to supply information through software-based special referencing services. The fact is that the university libraries' resources are underutilized by their patrons. More computer terminals are needed in the library to access e-resources. Organizing orientation programs and user awareness initiatives in ICT should also motivate library users.

The University of Calicut was designated as Delhi's first digital university in December 2013. In the Uok and UoC, facilities are provided for visually and physically impaired students. Users with disabilities are given special attention at the UoC library, which has a 'ICT Centre for Visually Challenged' that has been operational since 2010. DAISY (Digital Accessible Information System) books are used to deliver study materials to visually impaired pupils in an auditory manner. The University of Kent also has a DAISY book collection, and plans are in the works to provide facilities and services for the physically challenged and visually impaired.

ICT SKILLS OF LIBRARY PROFESSIONALS

Because of the widespread usage of ICT, it is unavoidable for professionals to have abilities in handling technology-enhanced library services. An examination of skills in ICT gadgets/services, ICT application/services, utilizing Library Management Software, using Digital Library Software, managing E-resources, and ICT based library services is undertaken in order to measure the competencies.

SKILLS IN USING ICT GADGETS/ SERVICES

On a 5-point Likert scale, respondents were asked to rate their competence level in using the various types of ICT gadgets/services listed. Table-2 summarizes the findings of the study.

TABLE-2: SKILLS IN USING ICT GADGETS/SERVICE

ICTGadget/ services	Extremely poor	Below average	Average	Above average	Excellent	Mean Score	Rank
Computer networking	50 (20.3%)	64 (25.6%)	106 (43.1%)	25 (10.2%)	3 (0.8%)	2.5	6
Projector	29 (11.4%)	58 (23.6%)	125 (50.8%)	32 (13%)	4 (1.2%)	2.7	5
Laser printer	10 (4.1%)	29 (11.8%)	134 (54.5%)	62 (25.2%)	12 (4.5%)	3.1	2
LCD/ Multimedia	20 (8.1%)	59 (24%)	118 (48%)	39 (15.9%)	10 (4.1%)	2.8	4
E-book reader	96 (38.6%)	57 (23.2%)	56 (22.8%)	28 (11.4%)	10 (4.1%)	2.2	7
Internet	5 (1.6%)	7 (2.8%)	111 (45.1%)	95 (38.6%)	30 (11.8%)	3.6	1
Wireless internet	20 (8.1%)	50 (20.3%)	109 (44.3%)	51 (20.7%)	17 (6.8%)	3.0	3

Table-2 shows that the majority of respondents (45.1%) have average abilities in using the internet (mean score=3.6) and 134 respondents (54.5%) have average skills in using laser printers (mean score=3.1). It's also worth noting that 95 percent of professionals (38.6%) have poor abilities with an e-book reader (mean score=2.2). This finding could be due to the fact that experts working at Delhi's university libraries are unfamiliar with the use of e-book readers. It is past time to provide e-book training because this new technology is a blessing that may be used to provide information services to senior citizens and differently abled library users.

CONCLUSION

In the field of library and information science (LIS), studies on the use and usage of information and communication technology (ICT) have recently garnered a lot of traction. These studies are helpful in identifying developing areas of ICT applications in libraries, evaluating the performance of library professionals, reforming policies, and taking the required steps to fulfill the new requirements of libraries in the changing digital environment. The study's main goal is to measure ICT capabilities among library workers in Delhi's universities. The survey included the libraries of the University of Delhi, University of Calicut, Cochin University of Science and Technology, Delhi Agricultural University, and Mahatma Gandhi University, all of which are located in the state. This research summarizes the study's conclusions based on data analysis, stressing the infrastructural pathways of university libraries and the critical ICT skills acquired by library personnel. The study's data were used to examine the tenability of hypotheses framed. Finally, a few ideas for improving the university library system in terms of ICT are given, as well as proposals for future research fields.

University libraries can play an important role in bridging the gap between those who have access to information and those who do not. The growing of this chasm poses a serious threat to society's progress. In university libraries, ICT solutions that can expand the library's capabilities beyond what it could do with traditional resources have been introduced. The study looks into the ICT skills of library workers in Delhi's universities. Library personnel must learn new perceptions, attitudes, and desire to work hard in the new digital world, as well as evaluative skills. The study gives a broad picture of librarians' knowledge, abilities, and attitudes about ICT-based library activities in Delhi's university libraries.

The majority of library professionals have average abilities in various ICT applications such as Windows, MS Office package, Linux, and others, and they frequently utilize the internet and social media applications. The open source software Koha and the digital library software DSpace are recognizable to library professionals working in state university libraries. Professionals have demonstrated a high level of proficiency in the use of electronic resources, such as OPAC/Web OPAC, library websites, online journals, and online searching. The findings revealed that library professionals in the state's university libraries are more interested in employing technology-enhanced resources. As a result, libraries should take use of these technologies by launching a variety of ICT-based library activities in order to provide improved services and fulfill the growing demands of customers.

The study's findings found that all university librarians are familiar with web 2.0 technologies such as e-mail, wikis, social networking sites, chat rooms, and blogging. The majority of professionals utilize e-mail, a widely used web service. It's worth noting that web 2.0 technologies like social bookmarking, RSS feeds, reference management systems, and content management, which can be useful in the library and information science sector, aren't widely used by professionals. Libraries in India are attempting to deliver cloud-based services, but they are failing due to a lack of reputable service providers and LIS personnel with technological expertise. Librarians still lack general knowledge, particularly in Delhi. These concerns prompt the researcher to look into the usage of cloud computing technologies by information professionals in Delhi.

REFERENCES

❖ Aharony, N. (2020). Cloud computing: information professionals' and educational technology experts' perspectives. Library Hi Tech, 32(4), 645-666.

❖ Aharony, N. (2020). An exploratory study on factors affecting the adoption of cloud computing by information professionals. The Electronic Library, 33(2), 308-323.

❖ Ahmed, S., & Rehman, A. (2020). Perceptions and level of ICT competencies: a survey of librarians at public sector universities in Khyber Pakhtunkhwa, Pakistan. Pakistan Journal of Information Management & Libraries, 18(1), 1-12.

❖ Aina, A.J., Adigun, J.O., Taiwo & Ogundipe, T.C. (2020). Information and communication technology resource support availability, utilization and proficiency skills among university libraries: the Lagos State university experience. Asian Journal of Information Technology, 9(4), 248-253.

❖ Ajegbomogun, F. O., & Busayo, I. O. (2020). Information and communication technology (ICT) literacy among the staff of the libraries of Kenneth Dike and Nimbe Adedipe universities, Nigeria: a comparative study. Information Studies, 17(2), 89-98.

❖ Alhemdi, F. A., & Khaparde, V. (2020). Collaboration in the cloud computing among students of library and information science department of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. International Journal of Advanced Library and Information Science, 2(12), 82-92.

❖ Al-Kharousi, R., Jabur, N. H., Bouazza, A., & Al-Harrasi, N. (2020). Factors affecting the implementation of Web 2.0 applications in Omani academic libraries. The Electronic Library, 34(2), 332-351.

❖ American Psychological Association. (2020). Publication manuals of the American Psychological Association (6th ed.). Washington, DC: American Psychological Association.

❖ Anasi, S. N. I., Akpan, I. J., & Adedoku, T. (2020). Information and communication technologies and knowledge sharing among academic librarians in south-west Nigeria: implications for professional development. Library Review, 63(4/5), 352-369.

❖ Anunobi, C. V., & Ukwoma, S. (2020). Information literacy in Nigerian universities trends, challenges and opportunities. New Library World, 117(5/6), 343-359.

❖ Aqil, M., Ahmad, P., & Siddique, M. A. (2020). Web 2.0 and libraries: facts or myths.

DESIDOC Journal of Library & Information Technology, 31(5), 395-400.

❖ Arokyamary, R. J., & Ramasesh, C. P. (2019). ICT skills and competencies of engineering college LIS professionals in Karnataka: a perspective. SRELS Journal of Information Management, 50(2), 209-218.

❖ Arokyamary, R. J., & Ramesh, C.P. (2019). IT infrastructure facilities in engineering college libraries of Karnataka. Pearl-A Journal of Library and Information Science, 8(4), 245-254.