



---

**INFORMATION COMMUNICATION TECHNOLOGY (ICT)  
IN LIBRARY & INFORMATION SERVICES AND ITS  
IMPACT ON LIBRARY PROFESSIONALS- A CASE STUDY  
OF STATE UNIVERSITIES IN MAHARASHTRA**

---

**Mr. Rahul Ramrao Kamble**

(Librarian)

MSS Arts College Tirthpuri, Dist. Jalna. (MS) India

---

**Abstract:** *Information and Communication Technologies have greatly impacted the general operations of a library. Technological revolution in the library has also had a pronounced impact on librarianship as a profession. This transformation calls for ICT competent librarians who can handle ICT related duties in the library today. This study sought to find out the ICT proficiency of LIS professionals working in selected Universities Library in Maharashtra. The qualitative research design was adopted in the study. The case study method was used to carry out the research. A census sampling technique was done. Data was collected using a structured interview. The present study is based on primary as well as secondary sources of data. Researcher has selected ten state universities as samples and used the entire population (professionals) as a sample from those selected ten universities' library. A total of 103 respondents were selected in this study but responses given by only 79 library professionals. The study is descriptive nature which describes the ICT and its impact on Library professionals. It provides **current trends in library and information services.***

**Keywords:** *library automation software, Digitization, ICT and library professionals*

## **I. Introduction:**

The explosion of computer and communication technologies, which are referred to as information communication technology (ICT) has affected almost all aspects of human life including the library. Libraries have been looking forward to better technologies even before the onset on the computers. Ranganathan's five laws of the Library Science stipulate that the documents of the library should have maximum numbers of users, with the application of Information Communication Technology (ICT) in the areas of Libraries /

Libraries and Information Centers. There has been a tremendous improvement in the library services offered by the library to the users. Now in the information era, in order to avoid obsolescence of information, library professionals are applying advanced technologies to enable its user community to get the right information at the right time. In order to achieve this objective, libraries are automating their services. Many Libraries mainly concentrated on the circulation; reference etc. in some OPAC's Web OPAC's, CD-ROM Networks, Automation etc.

ICT enables libraries to locate, retrieve, and transmit information. ICT tools like CD-ROM, e-mail are used in the library for dissemination of information. In addition, digitization of information resources, including the conversion of print resources into electronic form, is also done using ICT.<sup>1</sup> Researcher asked this question to know how many computers available in KRCs.

Reynard C. Swank defines a library network as a “concept that includes the development of cooperative systems of libraries on geographical, subject or other lines, each with some kind of centre that not only coordinates the internal activities of the system but also serves as the system's outlet to and inlet from the centres of other systems”. Libraries and information networks have the potential to improve library services in many ways. This reduces the cost of information products and services in the network environment in shared mode. This enables libraries to cater to the needs of end users and eliminate size, distance, and language barriers between them. Due to the evolution of library networks, emphasis has been placed on the resources available through the network. These network-accessible resources include a database of library holdings, journal articles, electronic text, images, video and audio files, scientific and technical data, and more.

The Library services / facilities include Circulation Service, Reference Service, Online reservation of books, Recommendation of library material, Current Awareness Service, Inter Library Loan Service, Photocopying / Printing Service, Orientation and Information Sessions, Selective Dissemination of Information, Audio Visual Service and Multimedia Section. Services provided to their users by the library. This may include instructions on how to use and use library materials. Library Services / Facilities include Circulation Services, Reference Services, Online Book Reservation, Library Content Recommendation, Current Awareness Services, Inter-Library Loan Services, Photocopy / Printing Services, Orientation and Information Sessions, Selective Dissemination of Information, Audiovisual Services, Web OPAC and Multimedia services. The library holdings are accessed by a computerized Online Public Access Catalog (OPAC). It allows searches for materials by key-words, or through several access points like author, title, subject and call number of publication. Our user-friendly OPAC enables searches to be conducted with ease and speed. Researcher asked

this to know about which types of ICT Based Services Provided by the KRCs to their users

## II. Review of literature

*Devi (2014)*<sup>2</sup> examined that borrowing, document delivery and inter-library participation has long been a tradition in the UNISWA Library. This document provided an overview of the ILL and recording of UNISWA libraries; special ideas, the impact of e resources, digital content on ILL; and how UNISWA is trying to cope with this crisis. *Eells and Jaguszewski (2005)*<sup>3</sup> conducted study on a study by a team of University of Minnesota libraries forming a list of basic information skills (IT) that can be expected of all 300 employees including technical services, monitoring services and stack storage. *Hoskins (2005)*<sup>4</sup> findings of the study showed that librarians generally did not have the knowledge to evaluate and use the technical opportunities being developed, and did not have the ability or ability to perform the above-mentioned applications and functions. By pointing out the problems faced by librarians in the use of ICT, it is clear from the fact that most of these problems were due to a lack of understanding, knowledge, skills and lack of training. The author suggests that Library schools should provide a balanced curriculum to provide education in traditional libraries and ICT knowledge. *Kavulya (2007)*<sup>5</sup> explores the types of skills, knowledge and values needed by LIS specialists in Kenya to meet the current knowledge needs of society. The study collected data on respondents' views on the state of the LIS labor market in Kenya, the adequacy of current courses and training resources at local LIS training centers, training facilities and ICT skills that are critical to information professionals. Respondents were of the view that unless steps were taken to improve the quality of LIS training in Kenya, people from other technical fields would be better placed to perform other information tasks than LIS professionals.

## III. Statement of problem

The present study will help the authorities of the academic libraries to include courses in ICT skills in the academic/professional curriculum which would help the working LIS professionals to become competent in various ICT skills. The present study also focus to learn and update their ICT skills in digital environment by LIS professionals for efficient delivery of library services for the betterment of the library as a whole

## IV. Objectives of the Study

1. To study of ICT and its **current trends in library and information service.**
2. **To know** ICT and its mostly applicable areas in KRC (library )
3. To know the impact of ICT on LIS Professionals.

## V. Research Methodology

The present study is based on primary as well as secondary sources of data. Researcher has selected ten state universities as samples and used the entire population (professionals) as a sample from those selected ten universities'

*Mr. Rahul Ramrao Kamble*

library. A total of 103 respondents were selected in this study but responses given by only 79 library professionals. The study is descriptive nature which describes the ICT and its impact on Library professionals. It provides **current trends in library and information services.**

## VI. Results and Discussions

### 6.1 ICT and Its Mostly Applicable Areas in KRC

ICT has wider connotations for librarians that include in addition technologies like repro-micrographic technology, technical communication technologies and database creation and use. Information and communication technology has affected operations of various areas in the library sections which are given below:

**6.1.1 Library Management:** Under this, classification, cataloguing, indexing, database creation, CAS, & SDI works are affected by the ICT.

**6.1.2 Library Automation:** Under this, organizing databases, automating library, and various house-keeping operations are coming which are affected by the ICT.

**6.1.3 Library Networking:** Under this, resource sharing and information dissemination are coming which have been affected by ICT.

**6.1.4 Technical Communication:** Under this, technical writing, editing, and desktop publishing works are included which are affected by ICT.

**6.1.5 Digitization:** A digital library is a type of information retrieval system. It is a combined use of digital computing, storage, and communications machinery together with the contents like multimedia database, information mining, information warehouse, information retrieval, on-line information repositories, electronic library, imaging database, World Wide Web (WWW), and Wide Area Information Services (WAIS).

Table -1, ICT and its Mostly Applicable Areas in KRC

Area of KRC	Yes	To some extent	No	Total
Data maintenance	77 (97.47)	1 (1.27)	1 (1.27)	79 (100.00)
Development ICT Infrastructure in KRC	74 (93.67)	2 (2.53)	3 (3.80)	79 (100.00)
Digitization	72 (91.14)	5 (6.33)	2 (2.53)	79 (100.00)
ICT Based management in KRC	71 (89.87)	5 (6.33)	3 (3.80)	79 (100.00)
ICT based security	55 (69.62)	11 (13.92)	13 (16.46)	79 (100.00)
Induction of special ICT personal in staffing pattern of KRC	59 (74.68)	12 (15.19)	8 (10.13)	79 (100.00)

Networking	67 (84.81)	11 (13.92)	1 (1.27)	79 (100.00)
Software Development	68 (86.08)	7 (8.86)	4 (5.06)	79 (100.00)
Website Development	71 (89.87)	5 (6.33)	3 (3.80)	79 (100.00)

*Source: Field Survey – 2020 -21*

*Note: Figures in parentheses indicates percentage to row total*

The ICT and its mostly applicable areas in KRC, it was described in the table-1 that 97.47 per cent majority of respondents opinion that the data maintenance is mostly applicable areas in KRC, while only 1.27 per cent respondents opinion that the data maintenance is not mostly applicable areas in KRC; Followed by 93.67 per cent of respondents' opinion that the development ICT infrastructure in KRC is mostly applicable areas in KRC, while 3.80 per cent of respondents opinion that the d development ICT infrastructure in KRC is not mostly applicable areas in KRC; 91.14 per cent of respondents opinion that the digitalization is mostly applicable areas in KRC, while 2.53 per cent respondents opinion that the digitalization is not mostly applicable areas in KRC; 89.87 per cent of respondents opinion that the website development and ICT based management in KRC is mostly applicable areas in KRC, while 3.80 per cent respondents opinion that it is not mostly applicable areas in KRC; 86.08 per cent of respondents opinion that the software development is mostly applicable areas in KRC, while 5.08 per cent respondents opinion that it is not mostly applicable areas in KRC; 84.81 per cent of respondents opinion that the networking is mostly applicable areas in KRC, while 1.27 per cent respondents opinion that it is not mostly applicable areas in KRC; 74.68 per cent of respondents opinion that the induction of special ICT personal in staffing pattern of KRC is mostly applicable areas in KRC, while 10.13 per cent respondents opinion that it is not mostly applicable areas in KRC; 69.62 per cent of respondents' opinion that the ICT based security is mostly applicable areas in KRC, while 16.46 per cent respondents opinion that it is not mostly applicable areas in KRC.

## **6.2 Web Tools and Services**

Internet has become an important tool to transfer information and offers a variety of services to create, browse, access, search, communicate and views information. Internet also plays an important role to enhance library services in providing better information service. The information services based on Internet are: e-journal, e-book, library catalogue, technical reports, online databases, Web OPAC, e-mail based information services, online reference services, content page of journal, online bibliographic databases, etc. All these services provide useful information that can be accessed through online tools available over Internet.

The frequency of use of some of the important Web based services, tools by the library professionals are analysed, and the results are presented in the Table 2

Table- 2  
KRC Professionals use web tools/ services

Web tools / Services	Frequentl y	Not Frequentl y	Never	Total
Website	69 (87.34)	6 (7.59)	4 (5.06)	79 (100.00)
Audio/ Video sharing	79 (100.00)	0 (0.00)	0 (0.00)	79 (100.00)
E-mail	76 (96.20)	2 (2.53)	1 (1.27)	79 (100.00)
Searches engines	61 (77.22)	13 (16.46)	5 (6.33)	79 (100.00)
Wikipedia	16 (20.25)	34 (43.04)	29 (36.71)	79 (100.00)
Social Networking (Facebook, Whatsapp Twitter, blog, Inst. etc.)	77 (97.47)	0 (0.00)	2 (2.53)	79 (100.00)

Source: Field Survey – 2020 -21

Note: Figures in parentheses indicates percentage to row total

It can be observed that audio/video sharing tools was often 100.00%, used by professionals; Social networking sites was used regularly by 97.47% professionals and never used by 2.53%; Email was frequently used by 96.20% of professionals, 2.53 % of professionals not frequently used and a few 1.27% has never by professionals; website was frequently used by 87.34 % of professional, 7.59% of professionals less frequently used and never used by 5.06% Professionals. It was also found that Searches engines frequently used by 77.22% and 16.46% of professionals not frequently used and never used by 6.33% of professionals; also noticed that less frequently used wikipedia 20.25%, less commonly used by majority of 43.25% and never used by library professionals 36.71%. It is evident that the wikipedia is not fully utilized by most of the professionals in the University libraries. (Figure 4.42)

### 6.3 The Impact of ICT on Library Professionals

In the era of ICTs the libraries have changed in their shape, size, structure and most important in their services. Recently endeavours are being made to establish digital/electronic library in all over the world. By apply recent emerging ICTs and many virtual libraries have been established to facilitate the users to access the knowledge on a mouse click. Therefore, the foundation of

librarian works lies in pursuit of his duties in accordance with the known society in general and needs of users in particulars. Now libraries and librarians by their interventions direct the speed and direction of the society and the condensational role does not apply any more. Therefore library professionals have to learn new area of ICTs, intellectual property right and new subject areas to sustain their identity because now their role is not only information providers but they are a catalyst for development.

Table- 3

Respondents Opinion Regarding the impact of ICT on library Professionals

Impact of ICT	No. of Respondents		
	Agree	Disagree	Total
ICT application help to data access very speedily	74 (93.67)	5 (6.33)	79 (100.00)
ICT application help to user to search documents	72 (91.14)	7 (8.86)	79 (100.00)
ICT application helps in KRC managing smoothly	75 (94.94)	4 (5.06)	79 (100.00)
ICT application improve quality of KRC services	77 (97.47)	2 (2.53)	79 (100.00)
ICT application increases knowledge regarding job	76 (96.20)	3 (3.80)	79 (100.00)
ICT application reduce workload of KRC professional	55 (69.62)	24 (30.38)	79 (100.00)
ICT application save the time of users and professionals	75 (94.94)	4 (5.06)	79 (100.00)
ICT improve work of KRC professionals	73 (92.41)	6 (7.59)	79 (100.00)

Source: Field Survey – 2020 -21

Note: Figures in parentheses indicates percentage to row total

The table-3 shows that 97.47 per cent most of the library professionals agree with the ICT application improve quality of KRC services. 96.20 per cent of the library professionals agreed that ICT application increases knowledge regarding job, 94.94 per cent of professionals also agreed that ICT application helps in KRC managing smoothly and ICT application save the time of users and professionals; 93.67 per cent of professionals agreed that ICT application help to data access very speedily; 92.41 per cent of professionals agreed that ICT improve work of KRC professionals; 91.14 per cent of professionals agreed that ICT application help to user to search documents and lower no. of professionals has agree that ICT application reduce workload of KRC professional 69.62 per cent. It is conclude that library professionals have a highly positive attitude towards the application of information communication technology services and

Mr. Rahul Ramrao Kamble

its applications. It was suggested that prepared to accept modern technology in library activities, which helped to improve the efficiency of library services.

## VII. Conclusion

With the above discussion it was conclude that Information and Communication Technology (ICT) has transformed library services globally. Most current information are recorded in electronic format, ICT has also contributed immensely to the performance of librarians in the discharge of their duties such as in cataloguing, reference services, circulation management, serials control etc. The widespread use of ICT facilities increased better application of computer network, rapid growth of Internet and it causes great explosion of information quantitatively and qualitatively that forced library to adopt new method of storing, retrieving, preserving, conserving and disseminating of information.

## VIII. References

1. Mukhopadhyay and Parthasarathi. (2008). Library Automation through Koha. Prova Prakshan. pp168.
2. Devi, S. (2014). Concept, Issues and Importance of Interlibrary Loan Service in UNISWA Libraries, An International Journal of Humanities and Social Sciences. 1(2), Pp 341-357.
3. Eells, L. L., & Jaguszewski, J. M. (2008). IT competence for all: propel your staff to new heights. *Technical Services Quarterly* , 25 (4), Pp17-35.
4. Hoskins, R. (2005). Information and communication technology (ICT) knowledge and skills of subject librarians at the university libraries of KwaZulu-Natal. *South African Journal of Libraries and Information Science* , 71 (2), Pp151-163.
5. Kavulya, J. M. (2007) Training of library and information science (LIS) professionals in Kenya: A needs assessment. *Library Review*, 56 (3), Pp 208-223.
6. Hussain, A. (2013). *ICT based library and information services*. New Delhi: Ess Ess Publications.
7. Dhanavandan, S., Esmail, D. S. M. and Mani, D. V. (2008). A Study of the use of Information and Communication Technology (ICT) tools by Librarians. Retrieved from <http://digitalcommons.unl.edu/libphilprac/200/>
8. Altman, Micah (2001). Open Source Software for Libraries: from Greenstone to the Virtual Data Center and Beyond. *IASSIST Quarterly*, Winter 2001, 5-11. Retrieved January 17, 2008,
9. Trambo, S., Shafi, S. M., Gul, S., & others. (2012). A study on the open source digital library software's: special reference to DSpace, EPrints and Greenstone. *arXiv Preprint arXiv:1212.4935*.
10. Ukachi, N. B., Nwachukwu, V. N., & Onuoha, U. D. (2014). Library Automation and Use of Open Source Software to Maximize Library Effectiveness. *Information and Knowledge Management*, 3(4), 74–82.
11. Gupta S.P, (2006). "Statistical Methods". Sultan Chand and Sons, New Delhi