

ICT Based Library Resources, Facilities in Research and Development Libraries in Tamil Nadu: A Study

N. Murugesan

Librarian, Angel College of Engineering and Technology, Tirupur 641 665, Tamil Nadu, India
E-Mail: angellibrarian@gmail.com

Abstract - The advancement of Information and Communication Technology (ICT) has made a tremendous improvement and change almost in all walks of life. Especially the magnetic word information technology has been changed in all corners of the global areas. Present paper presents the results of a research study conducted to survey the use of ICT in R & D libraries. It describes about library resources, availability of facilities, classification & cataloguing method followed status of digital library, and barriers in use of ICT in R & D libraries. From this study it confirms that most of the research and development libraries have good resource collection of their libraries and mostly automated

Keywords: Information Communication Technology, Library Automation, R&D Library, Tamil Nadu

I. INTRODUCTION

The shift from print to digital information has a high impact on all components of the academic library system in India especially the users, services and the staff. Though information is considered as an important resource, the use of ICT tools to collect and disseminate information has been in a slow pace in majority of the Research and development libraries. This may be due to various factors like insufficient funds, inadequate staff trained in handling computers and software packages, administrative concerns etc.

The world is undergoing a transition from a paper to a digital economy. It is essential for libraries in countries in the developing world to take part in this changing scene. Developing countries are being encouraged to invest in their national information infrastructure so that they can participate in knowledge-based development. Advances have brought many changes in libraries. Information and communication technology (ICT) has provided libraries with new opportunities to improve their resources and services.

In Tamilnadu, automation has been initiated in almost all R&D libraries using library automation software and is under different stages of completion. There are not much studies conducted about the application of information communication technology in research and development libraries of Tamilnadu. It is important to evaluate whether progress in ICT has had any impact on the scientists in these highest R&D institutions

Today a librarian and other library professionals in all the educational and research organization must have the knowledge of digitization and automation of library. ICTs

have been the basis for human existence from time immemorial and this has driven man to continuously seek ways to improve the processing of information and communicating such information to one another irrespective of distance and on a real-time basis (Ndukwe, 2002).

A. Information Communication Technologies (ICT) in Libraries

The application of ICT has brought a phenomenal change in the information collection, preservation, and dissemination scenario of the world. It becomes the blessings in disguise for the library professionals. So the library professionals of every educational and research institutions must think to redesign their day to day library activities and services with the help of information and communication technologies.

The application of ICT has caused significant changes in automated cataloguing, circulation system, online information system, electronic document delivery, and CD-ROM databases. The advent of the internet, digitization, and the ability to access library and research materials from remote locations has created dramatic changes by the end of the twentieth century.

The expert systems, wireless networks, virtual reference services, and personal web portals have brought significant changes in the library and information science environment. There is a significant and fast change occurring in librarianship, where digital and electronic libraries are being established to complement, and in some cases to completely replace, the traditional libraries.

II. NEED FOR THE STUDY

At present, in the age of information explosion, application of ICT services is therefore, an imperative for efficient and effective working of the library system. In India, the University Grants Commission (UGC), through the library automated programme, initiated augmentation of automation activities in all Indian universities and college libraries in phase-wise programme. But the progress has been very slow due to resource crunch and other inadequacies. Even to complete library automation at the university level, it may require decades..

III. STATEMENT OF THE PROBLEM

Libraries have undergone considerable changes in the past two decades. With increasing use of technology to organize and disseminate information, computer has become an important tool for accessing information. Libraries not only have to provide the technology necessary for user access to scholarly ICT resources but also provide a growing number of electronic databases. The physical space in libraries has been modified to accommodate the additional technology necessary to provide user with the tools to use library resources successfully and to meet their information needs. The libraries and librarian's role have changed rapidly in recent years, in response to new forms of information and new methods of learning and research.

IV. OBJECTIVES OF THE STUDY

The main objective of the study is to explore the use and application of ICT in Research and Development libraries of Tamilnadu. In order to fulfill this aim, the following specific objectives were identified.

1. To know the organizational structure of the Research and development libraries;
2. To know the various areas of applications of information communication technologies in Research and development libraries.
3. To understand the use of modern information communication technologies in Research and development libraries.
4. To assess the current state-of-the-art ICT Infrastructure and physical facilities within the research and development libraries in Tamilnadu.
5. To collect suggestion from the research institution for further development of library

V. RESEARCH METHODOLOGY

The present study aims to evaluate the extent to which information communication technology resources and information are available in the libraries of research and development institutes of Tamilnadu. The strength and validity of a research depends on the systematic method of collecting data and analyzing the same in a sequential order. In the present study, an extensive use of both primary and secondary data was used.

VI. SCOPE OF THE STUDY

This study is limited to the ICT applications of research and development institutional libraries of Tamilnadu. However, research libraries (Major research area of institutions, User of major research area and designation) generally suffer from financial crunch, because of the escalation of prices of e-both books and e- journals and the decline of rupee value against the major foreign currencies. The use of internet and its influence on users even at the research and development level emphasizes the need for introduction of ICT application in libraries, immediately. Therefore, it is the need of the hour for

research and development libraries to join the mainstream of global library network.

VII. LIMITATIONS OF THE STUDY

1. The study is confined to research and development institutional Libraries of Tamilnadu only. The results arrived at from the study may or may not be applicable to other states.
2. This study pays special attention only to the research outputs.
3. There may be response bias.
4. Time and other resource constraints have restricted the selection of libraries of other states.

From the above table it has been inferred that 100% of science research and development institutions have library facility in stack area, reference section, periodical section, back volume section, drinking water, telephone/intercom, reprography and fire extinguisher

100% of science institutions are not having conference / seminar hall facility. 100% of engineering research and development institutions have library facility in stack area, reference section, periodical section, back volume section, digital library section, general reading hall, discussion hall, telephone / intercom, reprography, fire extinguisher and suggestion box facilities. 100% of agriculture research and development institutions have library facility in stack area, reference section, periodical section, back volume section, general reading hall, drinking water, telephone / intercom and suggestion box facilities. 100% of agriculture research and development institutions are not having conference/seminar hall, video conference and discussion hall facilities in their libraries.

100% of medicine research and development institutions have library facility in stack area, reference section, periodical section, back volume section and telephone/intercom facilities. 66.67% of medicine institutions are having digital library section, general reading hall, discussion hall, video conference, reprography and fire extinguisher facilities. 33.33% of medicine institutions are having conference/seminar hall and suggestion box facilities in their libraries.

100% of science & engineering research and development institutions have library facility in stack area, reference section, periodical section, back volume section, drinking water, telephone/intercom, reprography and fire extinguisher facilities. 100% of science & agriculture research and development institutions have library facility in stack area, reference section, periodical section, back volume section, discussion hall, drinking water, telephone / intercom, and reprography. 66.67% of science & agriculture institutions are having fire extinguisher facilities whereas 33.33% of science & agriculture institutions are having video conference and suggestion box facilities in their libraries. 100% of science & medicine research and development institutions have library facility in stack area, reference section, periodical section, back volume section, telephone / intercom, reprography and suggestion box.

TABLE 1 MAJOR RESEARCH AREA WISE LIBRARY BASIC FACILITIES IN RESEARCH AND DEVELOPMENT INSTITUTIONS

Library Basic Facilities	Science		Engineering		Agriculture		Medicine	
	Yes	No	Yes	No	Yes	No	Yes	No
Stack Area	3 (100)	0	1(100)	0	4(100)	0	3(100)	0
Reference Section	3(100)	0	1(100)	0	4(100)	0	3(100)	0
Periodical Section	3(100)	0	1(100)	0	4(100)	0	3(100)	0
Back Volume Section	3(100)	0	1(100)	0	4(100)	0	3(100)	0
Digital Library Section	1 (33.33)	2 (66.67)	1(100)	0	1(33.33)	3(66.67)	2 (66.67)	1(33.33)
General Reading Hall	2(66.67)	1(33.33)	1(100)	0	4(100)	0	2 (66.67)	1(33.33)
Conference / Seminar Hall	0	3(100)	0	1(100)	0	4(100)	1 (33.33)	2(66.67)
Discussion Hall	1(33.33)	2(66.67)	1(100)	0	0	4(100)	2 (66.67)	1(33.33)
Video Conference Facility	0	3(100)	0	1(100)	0	4(100)	2 (66.67)	1(33.33)
Drinking Water	3(100)	0	0	1(100)	4(100)	0	2 (66.67)	1(33.33)
Telephone / Intercom	3(100)	0	1(100)	0	4(100)	0	3 (100)	0
Reprography	3(100)	0	1(100)	0	3(66.67)	1(33.33)	2 (66.67)	1(33.33)
Fire extinguisher	3(100)	0	1(100)	0	1(33.33)	3(66.67)	2 (66.67)	1(33.33)
Suggestion Box	0	3(100)	1(100)	0	4(100)	0	1(33.33)	2(66.67)

Figures in parentheses denote percentage.

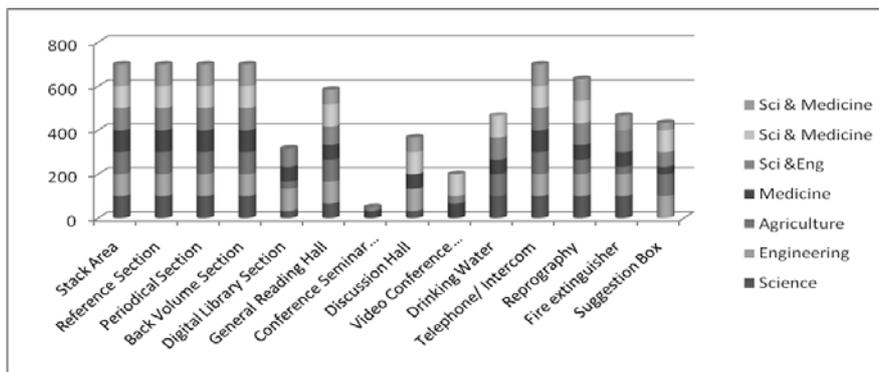


Fig. 1 Availability of Major Research Area wise Library Facility available in Research and Development Institutional Libraries

From the above table it has been inferred that 100% of science research and development institutions are having library collection of Books, reference books, national journals, international journals, back volume collections, e-books, patents, standard and conference proceedings. 66.67% of science institutions are having rare and special collections, online database, 100% of engineering research and development institutions are having library collection of books, reference books, national journals, international journals, back volume , rare and special collection, e-book, e-journal, online data base, CDs & DVDs, audio & video cassette, patents, project & theses report, standards, conference proceedings, and news papers. 100% of engineering institutions are not having audio and video cassettes in their libraries.66.67% of agriculture institutions are having e-books and conference proceedings. 33.33% of agriculture institutions are having patents in their libraries.

100% of medicine research and development institutions are having library collection of books, reference books,

national journals, international journals, e-books, e-journals, conference proceedings and news papers. 66.67% of medicine institutions are having online data base, CDs & DVDs and project & theses reports. 33.33% of medicine institutions are having rare and special collections, audio & video cassettes, patents and standards. 66.67% of science & engineering institutions are having rare and special collection, project & theses report and standards. 50% of science & engineering institutions are having patents. 100% of science & medicine research and development institutions are having library collection of books, reference books, national journals, international journals, e-journals, audio and video cassettes, projects and theses reports, conference proceedings, and news papers. 100% of science & medicine institutions are not having rare and special collections, e-books, online databases, CDs & DVDs, patents and standards in their libraries.

100% of science & agriculture research and development institutions are having library collection of books,

reference books, national journals, international journals, conference proceedings and news papers. 66.67% of science & agriculture institutions are having back volume, e-books, online database, CDs & DVDs, and project & theses reports. 33.33% of science & agriculture

institutions are having rare and special collections, e-journals and audio & video cassettes. 100% of engineering institutions are not having patents and standards in their libraries.

TABLE-2 MAJOR RESEARCH AREA WISE STRENGTH OF LIBRARY COLLECTION IN RESEARCH AND DEVELOPMENT INSTITUTIONS

Strength Of Library Collection	Science		Engineering		Agriculture		Medicine	
	Yes	No	Yes	No	Yes	No	Yes	No
Books	3 100	0	1 (100)	0	4 (100)	0	3 (100)	0
Reference Books	3 100	0	1 (100)	0	4 (100)	0	3 (100)	0
National Journal	3 100	0	1 (100)	0	4 (100)	0	3 (100)	0
International Journal	3 100	0	1 (100)	0	4 (100)	0	3 (100)	0
Back Volume	3 100	0	1(100)	0	4 (100)	0	3 (100)	0
Rare and Special collection	2 66.67	1 (33.33)	1 (100)	0	4 (100)	0	1 (33.33)	2(66.67)
E-book	3 100	0	1 (100)	0	3 (66.67)	1(33.33)	3 (100)	0
E-journal	1 33.33	2 (66.67)	1 (100)	0	4 (100)	0	3 (100)	0
Online Data base	2 66.67	1 (33.33)	1(100)	0	4 (100)	0	2(66.67)	1(33.33)
CD's & DVD's	2 66.67	1 (33.33)	1 (100)	0	4 (100)	0	2 (66.67)	1(33.33)
Audio & Video Cassette	1 33.33	2 (66.67)	0	1 (100)	0	4(100)	1 (33.33)	2(66.67)
Patents	3 100	0	1(100)	0	1 (33.33)	3(66.67)	1 (33.33)	2(66.67)
Project & Theses Report	2 66.67	1 (33.33)	1 (100)	0	4 (100)	0	2 (66.67)	1(33.33)
Standards	3 100	0	1 (100)	0	4 (100)	0	1 (33.33)	2(66.67)
Conference Proceedings	3 100	0	1 (100)	0	3 (66.67)	1(33.33)	3 (100)	0
News Papers	2 66.67	1 (33.33)	1 (100)	0	4 (100)	0	3 (100)	0

VIII. CONCLUSION

The Research & Development libraries have given due recognition and importance in terms of collection, staff and users. In the meanwhile they are using ICT as a source for book selection, display of new arrivals for library publications and for database creations. It would improved library services and enhances the productivity and efficiency of library. Most of the research libraries have good resource facilities to provide the online and offline services to the users through LAN and Web based library services by using the ICT and also to speed up the routine activities of the library.

REFERENCES

- [1] Anjali Gulati, "Use of information and communication technology in libraries and information centres: an Indian scenario", *The Electronic Library*, Vol.22, No. 4, pp. 335-350, 2004.
- [2] Singh, K. P.Availability, "Use and Barriers to ICT in the R&D Institutions: A Case Study of the Libraries and Information Centres in Noida", *DESIDOC Journal of Library & Information Technology*, Vol. 29, No. 6, pp. 21-31, 2006.
- [3] Ramesh Babu, B. P., Vinayagamoorthy, & Gopalakrishnan, S., "ICT Skills among Librarians in Engineering Educational Institutions in Tamil Nadu" . *DESIDOC Bulletin of Information Technology* , vol. 27, No. 6, pp. 55-64, 2007.
- [4] Mohamed Haneefa, "Application of information and communication technologies in special libraries in Kerala (India)", *Library Review*, Vol. 56 No. 7, pp. 603 – 620, 2007.
- [5] Murugesan. N, and Balasubramani, R, "Application of ICT Based Resources and Services in Research and Development Libraries in Tamilnadu: An Analytical Study", *European Journal of Social Sciences*, Vol 23, No 1, 2011
- [6] Husain Al-Ansari, "Application of information and communication technologies in special libraries in Kuwait", *The Electronic Library*, Vol. 29 No. 4, pp. 457 – 469, 2011.
- [7] Murugesan N and .Balasubramani R "Information Communication Technology (ICT) Infrastructure In Research And Development Libraries of Tamilnadu ". *SALIS journal of Information Management and Technology*. Vol. 2, No.2, December 2011.
- [8] Srivastava, A. K., "Survey of use of information technology by library and information professionals and its implications in library science education. In R.G.Prasher, & P. B. Mangla (Eds.), *Library and Information science:Parameters and perspectives*, New Delhi: Concept. Vol. I, pp. 228-239. 1997.
- [9] Biradar B.S., Sampath Kumar B.T. and Kumar M. Anil, "Information use Pattern by sericulture scientists: A Case study of Karnataka state sericulture research and Development Institute library", *Bangalore SRELS Journal of Information Management*, Vol. 40, No. 3. 2003.