
CHAPTER- I

INTRODUCTION

1.1 Introduction

The Function of Libraries are changing due to application of Information and Communication technology (ICT) especially in collection developments organization and services provided to users. Today the information arena is witnessing an exciting plethora of technological advances, which has been quite responsible for immeasurable enhancement in human knowledge. Information is now seen as a valuable resource within an organization, and if properly managed organized and used it can stimulate for innovation, speed, product development, raises levels of productivity, ensure consistent standards of quality and through all these means, raises its relative level of competitiveness. Approaching the end of twentieth century, societies all over the world are changing and the information now plays an increasingly important part in economical, social, cultural and political life by creating a goal of achieving an information conscious society. In the era of information explosion the user felt the need of better information services to make them aware of information available in their area.

Hence libraries have to concentrate on library and information services to the users using ICT. Higher Education sector has witnessed a growth and increase in the number of Universities visualized since independence. The number of Universities has been increased 34 times and witnessed growth from 20 in 1950 to 601 in 2012. Among 601 Universities functional at different levels 45 are Central Universities, 318 State universities, 185 state private universities, 129 are Deemed to be Universities. There are 51 Institutes of national importance established under Acts of Parliament under MHRD out of 51 institutes of national respect (Indian Institute of Technology's - 16, National Institutes of India – 30 and Indian Institute of Science Education and Research (IISERs) – 5) are established.

The higher education system in India recognizes its key responsibility in training teachers, in establishing links with teacher training institutions at other levels and in training teacher trainers. Efforts are being made to bring in teachers from the commercial and social sectors to facilitate interchange and build links with the education system.

Higher education has evolved in divergent and distinct streams with each stream monitored by an apex body. The system of higher education in India has undergone a remarkable transition from an elite system to mass system. The numbers of higher learning institutions who have played active role in the social transformation has increased rapidly after independence and the structure of governance and role of universities have also significantly changed.

It is needles to mention that for any research and developmental activities in the institutions of higher learning, current information is the basic resource for carrying out extensive research leading to better standard of living and prosperous development of the country and it's the library which acts as a heart of any institution whether it may be the university or colleges or research institute or research and development Laboratories or Corporate sector unit. Library and Information Centers now plays significant role in meeting the information needs of the user community.

Thus, academic libraries no longer restrict themselves to print services such as collection development, cataloguing and classification, circulation and reference services, current awareness, selective dissemination, and other bibliographic services, but have extended their efforts to interdisciplinary concepts of Information technological gadgets, management and psychology (Jange, 2015). This has led the investigator to study the extent of Library services provided by the University Libraries using different current technologies to their clientele with a view to understand the prospects, lacunae and thereby suggest suitable model for improving the existing library system in extending technology based information services in a University environment. As the University libraries are spread over India, the study has been confined to Maharashtra state only. This study becomes more relevant in the electronic era demanding to conduct research in order to explore the techno-based information services extended to the users in a university setup.

1.2 Background for developing research concept

Information communication technology (ICT) has transformed the means and modes of accessing, evaluating and use of information in an academic and research environment. Emergence of electronic resources has also made impact on library and Information centers and forced the libraries for modernization and adapts latest technological gadgets in the library activities and services.

The learning, teaching and research activities of universities/ institutions of higher learning, there has been an unprecedented growth rate and this trend has resulted in new technologies that facilitate access to assignments, learning course ware's and facilitates virtual delivery of academic programs as well. Library and Information Centres is becoming the key factor in the virtual environment to facilitate access to information beyond the library premises resulting in access 24x7 and thereby convert existing libraries Learning Resource Centres to support educational, social, cultural activities of the academicians and contribute to the information needs to support learning, teaching and research activities by providing e-resources, indigenous databases, research productivity, learning course instructional materials, academic computing software's in a networked environ using ICT.

Library being the Central Facility has a greater role to play in getting better accreditation and in fact, National accreditation has been made compulsory for all the colleges and universities since 2014. The Library – a central hub of knowledge for colleges and universities, it is very essential to modernize their library activities and services using the latest technological gadgets and the librarians need to equip the technological skills required to handle the technology in order to provide better services to the users. Today, majority of the users are technology savvy and emergence of Internet technology and the concept of open access movement has changed their information use behavior. More-over the users prefer electronic media than print and they have become time conscious. Under these circumstances, a traditional library will become obsolete and hence modernization of library to suit the requirements of the users and technology enabled library services to the users is the need of the hour. This research study occupies significance to explore the current status of university libraries in Maharashtra to understand the extent of use of technology in their respective libraries and thereby helps in undertaking suitable measures for modernization of university libraries.

1.3 Role of universities in education and research: - An overview

The University Education Commission (1948-49) recommended that “it should be the aim of the Universities as our national institutions to undertake research in as many branches of knowledge as possible and to produce an army of trained research workers, who, by their studies, will not only set high standards of intellectual life in scholarship and scientific research but will also actively advance the moral and marital progress of the country”. Dr. S. Radhakrishanan in the education commission report (1948.) writes, “The universities have to provide leadership in politics and

administration, the professions, industry and commerce. They have to meet the increasing demand for every type of higher education. They must enable the country to attain, in as short time as possible, freedom from ignorance by the application and development of scientific and technical knowledge. It is for the Universities to create knowledge and train minds that bring together material resources and human energies”.

Research, the most blue-eyed phase of education system, is the harbinger of professional expatriation in any field. Librarianship is now regarded as a programme faced with stiff challenges up to 1960s in India regarding its credibility to become a profession.

University of Delhi started Master’s and Ph.D.programmes in LIS in 1949 and awarded first Ph.D. degree in LIS in 1958, Till then one decade went off to accept LIS as a discipline on which a profession called librarianship can depend. One of the major reasons of this phenomenal achievement is the recommendations of post independent committees and commission on libraries and LIS education right from 1950s.

- *Ranganathan Committee for University and college library*

The University Grants Commission (UGC) appointed a committee under the chairmanship of Dr.S.R. Ranganathan in 1957. Its report published in 1965, Covered all aspects of academic libraries including the education and training of professional librarians and LIS research [2]

- *Review Committee on Library Science in India Universities*

Realizing the need for a committee to investigate the state of library in education, UGC appointed a review Committee in 1961 under the chairmanship of Dr.Ranganathan to look into the standards of teaching and research in library science in Indian universities. The report of the committee was published in 1965. [3]

- *Committee on National Policy on Library and Information system (CONPOLIS)*

The Government of India (GOI) set up a committee under the chairmanship of Prof.D.P.Chattopahyaya for the formulation of National policy on Library and information Systems in 1985. The committee after considering an interim report and one further draft submitted to the Government and final findings on May, 1986. [4]

- *Empowered Committee to Formulate an Action Plan on the National Policy on Library and Information System, 1988*

The department of Culture, GOI appointed an Empowered committee in November 1986 again under the chairmanship of Prof. D.P.Chattopadhyaya to lay down a programme of action for implementation of the national Policy on Library Information System. The Empowered Committee submitted its report to the Govt. On 2nd May 1988 [5]

- *Curriculum Development Committee (CDC) 1992*

The first CDC in LIS was appointed by the UGC under the chairmanship of Prof.P.N.Kaula in 1990. After wide ranging deliberations, the committee submitted its report in 1992. The CDC, 1992 has provided the guidelines and areas of research in LIS. [6]

- *Working group of the planning commission of Libraries an Information for Eighth Five year plan, 1990-1995*

In the context of preparation of the eighth Five- Year Plan, 1990-1995, the planning commission set up a working group on Libraries and Information under the Department of Culture, Ministry of Human Resource Development with the aim to formulate proposals for the Eighth Five- Year plan 1990-95 to establish a developed library network in the country also recommended about LIS research. [7]

- *Core Task Group on Sharing of Libraries and Information, 1996*

The planning Commission set up a Core Task Group to consider all the issues related to sharing of the resources of libraries and information centres utilizing the revolutionary advancement in computer and communication technologies. The Group submitted its reports in 1996.It also recommended about LIS research.[8]

- *Working Group of planning Commission of Libraries and Information for the Ninth five Year Plan, 1997-2002*

In the context of Preparation of the IX plan Five Year Plan,1997-2002 the planning commission set up a working Group of Libraries an Informatics under the Department of Culture, Ministry of Human Resource Development. The report of the Working Group of the planning Commission on Libraries an Informatics for the Ninth Five Year Plan 1997-2002 also recommended to bring in quality in professional education and research in LIS .[9]

- *Curriculum Development Committee (CDC) 2001*

The UGC constituted the second CDC in LIS under the chairmanship of Dr.C.R.Karisiddappa in 2000. The CDC, 2001 has discussed the admission requirements intake and duration of the Ph.Dprogramme prevalent in Indian LIS Schools.[10]

- *National Knowledge Commission*

The National Knowledge Commission (NKC) was constituted on 13th June 2005 to advise the Prime Minister of India mainly on creation, management, use and application of knowledge institutions and services. In its first report, published in 2007, the commission also laid emphasis on the need of research in Library and Information Science (LIS). [11]

- The UGC (Minimum Standards and procedure for Awards of M.Phil/ Ph.D Degree), Regulation, 2009

UGC Regulation, 2009 has presented the minimum standards and procedure for awarding M.Phil/Ph.D. degree. The regulation (2009) presents the standards and Ph.D. supervisor admission criteria allocation of supervisor, course work, evaluation and assessment methods and depository with UGC [12]

There has been tremendous growth of literature especially through doctoral and post doctoral research being conducted in universities and research institutes of India by the research community. Shodhganga – Indian PhD Thesis reservoir and national gateway of research productivity provides the status of doctoral research work conducted in different parts of the country in various disciplines including Library and Information Science.

1.4 Need of the study

Rapid advancement and diffusion of information and communication technology have altered the process of production, raised productivity and improved standard of living of society. It is needless to mention that advances in the information technology will be global, irreversible and affect every walk of our life. Prime Minister Narendra Modi's ambitious Digital India initiative aims to transform the country into a digital empowered society and knowledge economy. Idukki in Kerala is the first district in the country which has been connected to the National Optical Fiber Network (NOFN) under the Digital India initiative and plans to connect 600 million rural citizens, the optical fiber network will be the largest of its kind. Today the government of India has

spent millions of amount for modernizing the education system especially through universities, colleges and other institutions of higher learning.

Information technology has profound impact on all the sectors and subjects and Library and Information Science is not an exception. Information technology is now so wide spread that life without it can't be imagined. It is a boon to human kind. Information Technology must be fully harnessed and optimally utilized for the growth and development. In this direction, for the modernization of libraries in India, Information and Library Network Centre (INFLIBNET) – an Inter University Program of University Grants Commission was setup for linking libraries across the country and evolve a national network interconnecting various libraries and information centres in the country and to improve capability in information handling and service by providing technical, financial and manpower support to all the colleges and university libraries in the country.

In the process of institutional accreditation by National Assessment and Accreditation Council (NAAC), libraries have a crucial role as the services of the libraries have been expanding significantly and use and application of various technological gadgets in the library is desirable for providing innovative services to the users. More-over the users prefer to use electronic media than printed information sources and thus, the study to assess the use of technology based services in an academic and research environment occupies high significance and relevance today.

The rationale of adopting information technological gadgets in the library is to improve the efficiency of library services and satisfy the changing needs of users. Existing literature reveals that no studies is reported pertaining to use of different current technologies in University Libraries rendering various services in Maharashtra state. Hence the study is undertaken which is pertinent in the present Internet era, which will reveal the existing status of usage of various technologies in library services and identify the limitations with an objective to provide effective and efficient services to the users.

1.5 Statement of problem

The Library has undergone a tremendous change since independence in India. The libraries' today no more serve only academic purpose, but today they have become knowledge resource centers not only the students and scholars use the libraries, but also the awareness about the utility of the libraries has increased amongst the general public as well. With the onset of computerization library services have been digitalized and this

has resulted in the refinement of library services. Along with internet many other new technologies are being used in functioning of libraries today in particularly university libraries are playing a key role not only in the academic development of the students and scholars, but they are also playing a major role in the dissemination of knowledge to the user community and the general public also. The research study attempts to go closer to the university libraries and find out the utility of university libraries to the user community and also to find out application of different technologies by the university libraries and its effectiveness from the user perspective. Hence the title of Research undertaken is **“Status of Library services provided by the University Libraries using different current technologies: An analytical study”**

1.6 Objectives, aims and purpose of the study:-

The main objectives of the study are

- To understand profile of universities in India and Maharashtra as special area
- To understand the trends and status of university libraries in Maharashtra
- To study the status of library automation and networking facilities in University libraries in Maharashtra,
- To study the information services offered to the users for university libraries
- To understand the implications of information and communication technology in university libraries.
- To suggest suitable measures for providing enhanced library services using different technologies and best practices

1.7 Research Methodology

Selection of research problem method depends on problem undertaken by researcher considering the element of study descriptive. Research method is used in which survey of universities form Maharashtra state is conducted. There are 42 Universities in Maharashtra and to collect the data understand status of services provided university libraries.

The research tool questionnaire is used and investigator has also conducted Interviews of same librarians to supplement questionnaire. The researcher used mainly descriptive method and sampling analysis method

1.7.1 Development of questionnaire:

The Questionnaire has been categorized under following heads and relevant questions were covered under each heading:

- General Profile of Universities
- Library Collection
- Library Budget
- IT Infrastructure
- Library Automation and Networking
- Library services offered by University Libraries
- ICT Based Library services
- Implication of IT on Libraries
- Best Practices in University Libraries

1.6.2 Population of study:-

Since study is mainly focused on university library services the cone population is universities in Maharashtra hence population is universe. There are 601 Universities till 2012 as per the Survey of higher education in India 2011-12, out of these 42 are in Maharashtra covering all type of universities, Thus the population of the study is 42. All the universities approached by survey questionnaire and followed by visit to personally. Thus the population and sample is same

Out of 42 universities in Maharashtra 36 universities responded i.e.85.74% which is sizable for analysis. The universities summarized and listed as per type below.

The Universities covered in the study are

A) State Universities

1. Dr. BabasahebAmbedkarMarathwada University, Aurangabad-431 004.
2. Dr. BabasahebAmbedkar Technological University, Lonere-402 103
3. KaviKulguruKalidas Sanskrit Vishwavidyalaya, Nagpur-441 106
4. Mumbai University, Mumbai-400 032.
5. Maharashtra University of Health Science, Nashik-422003
6. North Maharashtra University, Jalgaon- 425 001.

7. SavitribaiPhulePune University, Pune-411 007.
8. SantGadge Baba Amravati University, Amravati-444 602.
9. Shivaji University, Kolhapur-416 004.
10. Smt. NathibaiDamodarThackersey Women's University, Mumbai-400 020.
11. Solapur University, Solapur, Solapur Pune Road, Kegaon, Solapur-413 255.
12. Swami RamanandTeerthMarathwada University, Nanded-431 606.
13. The RashtrasantTukadojiMaharaj Nagpur University, Nagpur-440 001 (M.S).
14. YashwantRaoChavan Maharashtra Open University, Nashik-422 222
15. GodwanaUniversity,Gadchiroli-

B) Agricultural Universities (State Universities)

16. KonkanKrishiVidyapeeth, Dapoli, District Ratnagiri-415 712
17. Maharashtra Animal & Fishery Sciences University, Seminary Hills, Nagpur-440 006.
18. Dr. PunjabraoDeshmukhKrishiVidyapeeth, Akola-444 104.
19. Mahatma PhuleKrishiVidyapeeth, Rahuri-413 722.
20. Marathwada Agricultural University, Parbhani-431 402.

C) Central University

21. Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Post Box No. 16, Panchtila, Umri Village, Arvi Road, Wardha, Mumbai - 442 001

D) Deemed Universities

22. BharatiVidyapeethBharatiVidyapeethBhawan, LalBahadurShastriMarg, Pune-411 030 Maharashtra
23. Central Institute of Fisheries Education Fisheries University Road, 7 Bungalows, Andheri West, Mumbai-400 061 Maharashtra
24. D.Y. Patil Educational Society Line Bazar, Kasaba, Bavada, Kolhapur-416 006 (Maharashtra)
25. DattaMeghe Institute of Medical Sciences Atrey Layout, Pratap Nagar, Nagpur-440 022 (Maharashtra)

26. Deccan College Postgraduate & Research Institute Pune-411 006 Maharashtra
27. Dr. D.Y. Patil Vidyapeeth Sant Tukaram Nagar, Pimpri, Pune-411 018 Maharashtra
28. Gokhale Institute of Politics & Economics BMC College Road, Deccan Gymkhana, Pune-411 004 Maharashtra
29. Homi Bhabha National Institute Regd. Office: Knowledge Management Group, Bhabha Atomic Research Centre, Central Complex, Mumbai-400 085 Maharashtra
30. Indira Gandhi Institute of Development Research General Vaidya Marg, Santosh Nagar, Goregaon East, Mumbai-400 065 Maharashtra
31. Institute of Armament Technology Girinagar, Pune-411 025 Maharashtra
32. International Institute for Population Sciences Govandi Station Road, Deonar, Mumbai-400 088 Maharashtra
33. Krishna Institute of Medical Sciences Malkapur, Karad, Distt. Satara-415
34. MGM Institute of Health Sciences MGM Campus, Sector-18, Kamothe, Navi Mumbai-410 209
35. Narsee Monjee Institute of Management Studies VL Mehta Road, Vile Parle West, Mumbai-400 056 Maharashtra
36. Padmashree Dr. D.Y. Patil Vidyapeeth Vidya Nagar, Sector 7, Nerul, Navi Mumbai-400 706 Maharashtra
37. Pravara Institute of Medical Sciences P.O.-Loni BK-413 736, District Ahmednagar Maharashtra
38. SYMBIOSIS - International University, Senapati Bapat Road, Pune-411 004 Maharashtra
39. Tata Institute of Fundamental Research Homi Bhabha Road, Mumbai-400 005 Maharashtra
40. Tata Institute of Social Sciences VN Purav Marg, Deonar, Mumbai-400 088 Maharashtra
41. Tilak Maharashtra Vidyapeeth Vidyapeeth Bhawan, Gultekedi, Pune-411 037 Maharashtra

42. Institute of Chemical Technology Matunga, Mumbai Maharashtra

1.7.3 Statistical treatment

The data collected has been inputted in Statistical Package in Social Sciences (Ver. 22.0) and data was tabulated and the statistical tests i.e. Chi-Square test to test the null hypotheses of the study. The Chi-square test of independence is applied to test whether or not two attributes are associated. On the basis of contingency table the test for independence of two variables is carried by computing X^2 . The formula used for computation of chi-square is as follows:

$$X^2 = \sum [(f_o - f_a)^2 / f_a]$$

Where, f_o = the observed frequency

f_e = the expected frequency in terms of the null hypothesis.

1.7.4 Research hypotheses

The hypothesis of the study is “There is need to enhance library services to users using ICT in Information explosion era”

1.8 Scope and limitations of the study

The scope of the study is as under:

1. The main focus of the study is and university libraries and information services provided to users using ICT
2. The scope of universities is restricted to Maharashtra state in which 42 universities are considered till 2014.
3. All type of universities form Maharashtra state are covered in survey including Health science, Agriculture, Technological, State, Deemed to be Universities, etc
4. To know the status of Library Services in University Library a survey is being conducted.
5. More emphasis is given to library and information services using e-publications, e-resources and Internet resources.

1.9 CHAPTERIZATION

Chapter I- Introduction - deals with Introduction introduce the concept and background of the research work, need of the study, objectives, methodology, hypothesis of the study and scope and limitations.

Chapter II – Review of Literature- reviews existing literature based on primary and secondary sources under four sub-headings i.e. Library services, Academic Libraries (University Libraries), Different existing technologies and upcoming technologies and Best Practices in academic libraries.

Chapter III -Status of University Libraries in Education system in Maharashtra - describes importance of academic libraries and library services providing the status of university education and library system in Maharashtra.

Chapter IV- Information Communication Technology (ICT) Based Library services- discusses on Current Trends in Information technologies in Libraries providing a glimpse of Innovative Services, Practices, Discovery Tools, Chatbot, RFID, 3M Security, Help Desks and other innovative technologies.

Chapter V – Best Practices in University Library- report's summary of findings, suggestions, future scope of research and conclusion.

Chapter VI-Data Analysis and Interpretation- deals with data analysis and interpretations of survey of library services from University Libraries in Maharashtra covering analysis on Profile of Universities, Library Collections, Budget, IT Infrastructure, Library Automation and Networking, services offered and ICT Based Library services, Implication of IT on Libraries and Best Practices in University Libraries.

Chapter VI – Findings, Suggestions and Conclusion report's summary of findings, suggestions, future scope of research and conclusion.

Bibliography, Questionnaire and List of Universities in Maharashtra are appended.

1.10 Summary

The researcher has identified the research problem introducing the concept and background of the research work, justified the need of the study and framed objectives, methodology, hypothesis of the study, scope and limitations and scheme of chapters. The following chapters deals with review of literature in the areas of research work covering

Academic Libraries, its Library Services, use of different technologies and current trends library technologies and Best Practices.

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