CHAPTER 1

INTRODUCTION

1.1 Introduction:

The primary objective of a library is to provide right information to right user at right time in right form. To fulfil this objective libraries have to provide maximum access to information irrespective of location. ICT has helped to meet these objectives successfully. Applications of ICT and development of networks, use of internet and WWW have changed the practices in libraries. Due to this change librarians and libraries are facing problems like budget, information explosion, satisfying user needs etc. However the concept of library cooperation and resource sharing is developed since long in different nomenclature like ILL, sharing of catalogue data, professional skills, information resources etc. But recently ICT made revolutionary change by developing networks and provide better services to user community.

Libraries from its inception are called as store houses of information having qualitative collection of documents useful to the information society. Libraries are also called as power houses of information and knowledge resources centers which disseminate information and help users in generating new knowledge base on the existing knowledge. However, libraries are not self-sufficient and are unable to fulfil all the needs of users due to information explosion and rising cost of publications. Urquhart (1981) rightly pointed out in one of his principles that, “No library is an Island”. This statement is an outcome of the experience that it is not possible to keep all the relevant collection on any selected area under one roof and he states that, in any library it is not possible to acquire all the documents published even in particular micro areas. The reasons are information explosion, rising cost of publications, changing habits of users and improper bibliographic control; but to overcome these problems, libraries have developed resource sharing among libraries to serve the users better. Librarians have understood the situation
and initiated Inter Library Loan (ILL) facilities and now reached to library networks in the passage of time with different transformations.

Resource sharing is initiated since long with introduction of inter library loan (ILL) in which activities were limited to only loan the documents among libraries and had limited scope and managed at local level. Later ILL activities expanded to library cooperation in which cooperative planning was developed in various library activities like acquisition, storage, exchange of staff, classification, cataloguing etc. The term resource sharing encompasses all the resources available in libraries including library services. Resource sharing was popular and many projects like INIS and AGRIS developed to achieve resource sharing at international level along with regional and national. The advent of ICT changed the scenario in libraries and information centres and the activity of resource sharing transformed to library networks and the sharing activities were enhanced and initiated network based library activities and services. The rising prices and development of e-resources forced librarian to hunt for new practices in the profession and way out was to develop consortium projects among group of libraries. This is possible due to internet usage and development of web technology and digital technology. Different factors made the surrounding in libraries to develop links and economically develop library networks to share resources among libraries and provide services based on networks. The library networks developed at different levels like local, city / metro, national, regional and international etc.

University Grants Commission (UGC) and National Information System for Science and Technology (NISSAT) under Department of Science and Technology (DST) developed many library networks to strengthen the resource collection in particular discipline and also share resources and develop specialised databases. INFLIBNET, CALIBNET, DELNET, MYLIBNET and many more city networks are the outcome of the efforts of UGC and NISSAT. Technologies also supported to the developments of networks in order to achieve maximum level of resource sharing and increase the level of productivity of information products and services.

1.2 Need of Library Networks:

In the present era of information explosion and technologies the need of library networks felt essential due to:
Chapter 1: Introduction

- Faster growth of information in all sectors
- Increased R and D activities and increased educational values in society
- Varied and multidisciplinary needs and demands of users
- Development of micro subject disciplines as well as interdisciplinary subjects
- Affordable technology and its possible use in practice due to slashing of prices of hardware, software and electronic goods
- Crunching budgets and ever rising cost of publications
- Proliferating knowledge and new areas

In academic sector university libraries are well linked due to efforts of INFLIBNET and UGC. College libraries are also coming under the preview of net but not so well linked. The colleges are gaining momentum and also acquiring status of research centre. The libraries attached to colleges are also getting weight age but funds are not adequate to grow. It is now felt that, need of networking of college libraries is essential to provide better and enhanced services. The main purpose behind developing networks at any level is to cluster or link libraries and resources and avoids duplication and increase access to information at economical rate.

In addition to this use of ICT in libraries developed automated libraries and different library activities are now performed using computers. Databases, OPAC’s, Web-OPAC’s are developed and linked through computer networks. E-resources are developing and helping in sharing the resources. But the information resources are not economical and also sufficient funds are not available to acquire needed resources in libraries. This environment is favourable in developing networks and sharing information and services economically.

1.3 Library and Information Networks:

Since past three decades earlier practices of resource sharing are enhanced due to use of ICT and development of information networks took lead in the LIS field. The different geographical networks at local, state, regional, national and international grown to fulfil the user needs. Availability of databases, e-resources, e-publications, internet, web resources and affordable technologies have supported to the development of networks. UNISIST II (1979) defined networks as "a set of inter-related systems associated with communication facilities which are cooperating through more or less formal agreements in order to implement information handling operations to offer better services to users".
The National Commission on Libraries and Information Science (NCLIS) (1975), in its National Programme Document defined library network as:

“Two or more libraries and/or other organizations engaged in a common pattern of information exchange, through communications, for some functional purpose. A network usually consists of a formal arrangement whereby materials, information and services provided by a variety of libraries and other organizations are available to all potential users. Libraries may be in different jurisdictions but they agree to serve one another on the same basis as each serves its own constituents. Computer and telecommunications may be among the tools used for facilitating communication among them”.

The above definitions connotes the meaning that when more than two libraries join together for the purpose of information or resource sharing at any level using computers and communication technology for providing better services to user community and also exchange information efficiently is the motto of library networks.

In developed countries technologies adapted quickly and developed library networks e.g. LC, OCLC, JANET, IFLA to serve the user community at global level. These networks also supported the information transfer globally. The organizations and library associations like IFLA, SLA, ALA, OCLC and LC took lead in develop resource sharing programmes at different levels. In developing countries considering the limitations they have also initiated resource sharing projects at national and local level.

1.4 Library Networks: India

Initially in India UGC and NISSAT (Project of DST) took lead in creating library networks and later many other organizations like INFLIBNET established for the same purpose. Use of ICT favoured developing different types of networks like computer networks, communication networks, data networks, library and information networks etc. The different networks developed for communication, data storage, libraries are:

- Data Networks: NICNET (NIC Delhi), INDONET (CMC Limited), ERNET (DOE), I-Net (DOT), VSNL etc.
- Communication Networks: SIRNET (CSIR set up by INSDOC/NISCAIR), ICNET, SPINT MAIL, etc
• Library and Information Networks: INFLIBNET, DELNET (Delhi), CALIBNET (Kolkata), BONET (Mumbai), PUNENET (Pune), ADINET (Ahmadabad), MYLIBNET (Mysore), HYLIBNET (Hyderabad), BALNET (Bangalore), NAGNET (Nagpur), GOAL-net(Goa)
• Subject Networks: BTISNET (For Biotechnology), MANLIBNET (for Management)

In addition to these, new and recent developments are taking place in developing local and national consortium for recourse sharing like INDEST, UGC INFONET, N-LIST, CSIR consortium, IIT, IIM consortium. A concept of mega consortium is developing fast to achieve resource sharing. The development and expansions of networks was growing fast in India based on the grounds of developed countries like LC, OCLC, JANET etc.

1.5 Background of Study:

It is observed that educational organizations are growing fast to support academics and developed specialised institutions for education like management, law, architecture, engineering, computer science etc. The growths of education in different sectors as well as institutions are growing in number and so as libraries associated to them are also proliferating. The organizations may have different branches in different places in the city or different cities. The libraries developing in different new areas are also facing the problems like:

• Qualitative and proper collection development
• Budget limitations
• Rising cost of publications
• Information explosion (Voluminous growth in published literature and in different formats and sources)
• Users demand for specialised information
• Growth in e-publications
• Use of internet in libraries
• Users migrates towards ICT use

Thus librarians are facing challenges in the profession while meeting out the expectations of users from libraries. Hence librarians are thinking seriously towards undertaking different resource sharing projects. Kent (1974), rightly pointed out that “The success and
survival of libraries depend on how much and to what extent the libraries cooperate with each other in future”. The information explosion and limited budget forced librarians and libraries to form networks and consortium in modern library practices.

National Knowledge Network (NKN) (2010) is an innovative concept developed for supporting knowledge society for information support by sharing resources. NKN is India’s achievement aiming to connect academic research zones like universities, researcher institutes, agricultural and healthcare organizations across country. Few more areas like nuclear science, space, defences may also join as a part of NKN in following years. (www.nkn.in). NKN also proposed to add hundreds of new institutions and these might also be benefited and becomes resourceful. Librarians have to take care of such opportunities for developing resource sharing.

Due to ICT library system has transformed and changing activities using technologies. The activities like databases creation in different forms (full-text, multimedia, bibliographic), creation of library home page and providing services connecting different libraries and information resources to it. Development of OPAC and Web OPAC, use of open source software’s for libraries, use of web tools and social media in addition to traditional practices helped in achieving resource sharing.

The technology development is very favourable for developing library networks to pull and push the resources of group of libraries. It is advisable that such initiations need to be developed among libraries of cities or group of libraries of any organization at initial stage. This concept later may grow fast and connect to networks at higher level among two-three cities to achieve maximum resource sharing. Considering the background development in libraries, use of technologies and the challenges faced by the profession, the researcher thought to undertake a study to develop a network among libraries of a city or in subject disciplines like management libraries for resource sharing.

1.6 Reason to Undertake the Study:

The different factors made to change the minds of library professionals from self sufficiency in collection to sharing the collection among the libraries at least at local level in the initial stage. Though resource sharing was initiated since long under different terms but the purpose was to share the resources. The implementation of ICT proved as boon to libraries and e-data helped libraries for exchanging the information among libraries easily
and affordably. Different library networks developed to share the resources at various levels and felt the need of depending on others for the peripheral needs of the users. No doubt the networks have already been practiced at higher level but the researcher felt that the resource sharing activities at city level among similar group of libraries or libraries under the organizations might help in providing enhanced services to users form the coordinated collection of all the libraries.

The ICT environment is now common in all institutes and libraries are also being automated and this situation is very favourable for the development of local library networks in similar areas like management, engineering, architecture, pharmacy, medical etc. The institutes have also opened their branches in different areas of same city or nearby city and if such libraries are networked even though the institute is new, might have proper shared collection with them. Hence researcher selected the topic “Design and Development of Network Based Model for Management College Libraries in Pune City with Special Reference to Network Security” for the study. This study is also useful to many other groups of libraries and library personnel’s in building networks.

Another reason to consider this topic in mind is that the researcher is qualified in library science (MPhil) and also in computer science (MCS) and this background supports well to undertake the study of networking of libraries in a city as basic level initiation and can be expanded later.

The reason behind selection of the management education institute and networking their libraries after understanding the status is that the researcher has worked in management library for few years and understood the importance of management education. Management science is concerned with developing and applying models and concepts to illuminate management issues and helps in solving managerial problems. A broad spectrum of management involves procedures to forecast, plan, analyze, decide, motivate, communicate, and implement concepts for better productivity. In India, higher education has received more importance in all disciplines including management education and witnessing an exponential growth in terms of number of institutes imparting management education which are usually termed as Business Schools (B-Schools) (Sanjeev Kumar and Dash, 2011).

The role of management education is to provide managers, technologists and adjust with the globalisation, commercialization and industrialization. A real manager is one who is
not only able to manage complexities and unpredictable situations of the corporate world, but also be able to handle the problems effectively. Hence the growth in management institutes and libraries is seen overwhelming everywhere. Management institutes have also incorporated e-learning system in teaching in classrooms and made environment Wi-Fi. Management institute libraries are well developed in apply in ICT. Hence the management discipline is selected for the study and networking of libraries in this area.

The era of information technology and management, the libraries and librarians are facing new challenges and libraries are changing from traditional to digital and virtual to manage library system in less budget, manage with rising prices of publications and reading materials, satisfying increasing user demand, provision for different information services using internet and web technology etc. A need is felt to apply ICT in libraries. The expectations from the users of professional education are different and demands for quick and qualitative access to information by using print as well non print media, which need use of latest technologies. If libraries are networked using ICT then maximum problems might be solved in respect of resource sharing.

1.7 Need for the Present Study:

Over the past few decades constant revolutions are faced by librarian viz publishing (print to digital), ICT, Web, Internet etc. This made impact on publishing and hence information explosion is very high. In limited budget it is not possible to acquire maximum information resources and hence need felt to find solutions. The use of computers and communication technologies in libraries changed information environment. Standalone libraries concept is diminishing and networking of libraries is growing fast due to evolution of digital libraries / virtual libraries and networking technologies helps in developing library networks. Further multimedia and internet, web made the task smoother in LIS profession. The college libraries are not exception to all these changes. The college libraries are also facing the same situations. Due to rise in digital literature like e-books, e-journals and its use at college level (especially management) is also apparent. Digital library can be easily shared online through building strong networks.

To provide access to information resources without considering geographical barriers, resource sharing in academic institute libraries is essential and a current topic of present era throughout the world. Increased availability of information in digital format as well ever growing cost of publications compels libraries to work together in present as well as
in nearer future. The sharing of resources among libraries in academics improves teaching, learning and research activities.

1.8 Statement of Problem:

Applications of ICT is increasing fast in academic library sector, university libraries have already progressed in it and college libraries felt the need of it to fulfil the user needs through pulled resources. The different resources like shortage of budget, increasing users demands from libraries, insufficient staff etc. felt the need to develop more resource sharing among college libraries, especially in Management, Medical, Architecture, Engineering, Law and so on.

College libraries are now focused and considered as nodal point in supporting education system. But the desired output from libraries is not yet properly visualised and hence felt a need to examine the situation of college libraries in management science education and try to establish networks of these libraries for pulling resources. Hence researcher considered “Design and Development of Network based Model for Management College Libraries in Pune City with special reference to Network Security.”

Thus the present study is being conducted keeping in mind the need of resource sharing at group of libraries in a city. The researcher has developed a model for management college libraries in Pune city. There is a strong collection as well as ICT facilities in these libraries across city but lack of initiation in resource sharing among different colleges of management institutes since there is no interlinking of college libraries through the network. Researcher hence felt to attempt this issue and purpose a suitable conceptual model for resource sharing.

1.9 Scope and Limitations of Study:

The present study is related to development of library network for management college libraries and its security. Through this study researcher made an effort to suggest a conceptual model for developing network for management libraries and initiate resource sharing among these libraries. The study focused on the development of networks, for effective resource sharing at city level. This study is mainly attempted to review management college libraries in Pune city and suggest their networking.
Chapter 1: Introduction

The present status of management college libraries affiliated to University of Pune, DTE and AICTE are selected to find status of networks which supported a background of collection development, staff, services, information and ICT facilities available and attitude for development of networks. The study at the end suggests model for development of network in city to improve performance of management libraries and also suggest a viable conceptual model with approximate costing for initiation of networks. Similarly efforts are made to analyse services to be provided through this network.

For the present study the scope and limitations demarked are as under:

1. The population of the management college libraries in Pune city associated with Pune University, DTE and AICTE are only considered for this study.

2. The scope of the study is limited to management institute libraries in Pune city area. It also includes Pimpri-Chinchwad, Wakad, Undari-Manjari, Chikhali, Chakan, Mulshi, Bhore, Lavale, Talegaon Dabhade etc. as these are also covered in Pune city.

3. The Management institutes conducting management courses other than MBA courses are not considered in this study viz. BBA, MPM, MCA, PGDBM etc.

4. The management institutes conducting courses like MMM, MPM and PGDM by correspondence are not considered for this study. Similarly the management colleges conducting undergraduate courses and the other institutes of management such as hospital management, hotel management etc are not considered for this study.

5. Management institutes where full time MBA courses are conducted is the core population and also the sample for the study, which are located in the vicinity of Pune. All the management libraries are selected for review. There are total 127 management institute libraries and all are selected as population.

6. Institutes approved by DTE, AICTE, and affiliated to University of Pune are only considered for the present study. In addition to above the researcher has also considered top ranked management institutes in Pune city for survey like Symbiosis Institute of Business Management, Bharti Vidyapeeth, D.Y. Patil Institute etc as these are popular autonomous institutes in the city.
7. The management institutes established till 2006 are only considered for the survey. Thus in the present study 127 management institute libraries are being selected. For statistical growth in institutes the data is considered up to 2011 which is collected from authentic sources.

1.10 Significance of Study:

From the literature review it is noticed that though sufficient efforts have been made in developing library networks but still need some more exercise at different level. Keeping in mind, this study has made an attempt to develop a management library network in Pune city to share resources and initiate cooperative ventures. This study may be useful to other group of libraries also. This effort may help in enhancing utility of available resources at city level and coordinate them properly. The networks makes efforts in content development, data based development, use of internet resources, institutional resources and coordinating in group of libraries. This effort may also reduce duplication of resources and save finances and use the saved resources for enhancing power of information. In simple way it may be a development of information grid among management libraries at city level.

1.11 Aim and Purpose:

The main aim of the study is to construct a design to develop a network for management college libraries in Pune city to achieve resource sharing among them for economical purpose. Similarly analyse the network maintenance problem and suggest security issues for networks.

1.12 Objectives:

1. To assess the status of management education and management institutes in Pune city and placed on record its role.

2. To assess the resources and facilities, library services available in management libraries and user expectations form libraries.

3. To assess the status of ICT infrastructure and ICT skills of library staff in management colleges libraries.

4. To assess the use of e-resources in management libraries.
5. To study the efforts made so far in library networks and resource sharing.

6. To study the pre-requisites for developing networks including security.

7. To workout, prepare and suggest a conceptual model for networking of management libraries in Pune city and its security.

1.13 Hypothesis:

1. The ICT infrastructure available in Management College libraries need to be enhanced.

2. Library professionals are interested in sharing the resources for providing better services.

3. The information resources are available in management area but the concept of networks in management libraries is not yet developed in Pune city.

1.14 Research Methods:

The research method has many dimensions. The present study is providing a model for resource sharing in management libraries which is new initiative using ICT. Model is developed based on the data collected and concepts used. The primary and secondary both methods are used for data collection. The survey method is commonly used to conduct research studies in social sciences, when concrete data or information about the problem is not visualised. Researcher has to gather data from the population using questionnaire and interviewed technique.

For the present research study descriptive research method is used in which questionnaire tool is used for collecting data regarding the status of libraries in management discipline. The questionnaire (Appendix - A) has been distributed to 127 management libraries (Annexure – A) in Pune city. The questionnaire contains 66 questions related to libraries, staff, collection, services, automation, modernisation, membership etc. The total population for survey is 127 management libraries which are selected for the study and hence sampling is out of site in this study as population and sample is same.

The survey of management libraries given and helped in assessing availability of resources in management institutes, library services provided and expectations of users from library. Similarly the survey assessed the availability of ICT infrastructure skilled
manpower and efforts made towards resource sharing and helped in satisfying objectives considered at serial number 2 and 3.

In addition to collecting management library data through questionnaire from 127 management libraries researcher visited following institutes to review the status of automation and networks developed in their organization.

1. Indira Institute of Management Education, Pune
2. Wadia College of Engineering, Pune
3. CSR – National Chemical Laboratory, Pune
4. Symbiosis Institute of Business Studies, Pune
5. Symbiosis Centre for Management Studies, Pune
6. Institute of Management and Carrier Courses, Pune

Thus observation method provided the insight to researcher for understanding the requirements for developing networks in organizations and libraries to achieved resource sharing.

To assess the interest of library professionals towards participating in resource sharing activities and also to seek the opinions of few librarians of prominent institutes as well as ICT experts were interviewed. The interviewers conducted informally and without any structured questionnaire. The interviews with Prof. S. K. Patil (Librarian, Symbiosis International University), Mr. Ajit Sonawane (Librarian, Wadia College of Engineering), Mr. M. Y. Khan and Mr. Mangesh Kuman (Librarian, Indira Institute of Management), Dr. Mrs. Meenal Oak (Librarian, Institute of Management Carrier Courses) were interviewed and understand the status of management libraries and its future development. Similarly network expert Mr. K. D. Deshpande (Head Network Unit, CSIR-NCL), Mr. Gajanan B. Gogavale (System Administrator, Symbiosis Centre for Management Studies), Mr. Ahmed Khan (Ex Network Administrator, Wadia College of Engineering), Prof. R. K. Kamat (Head Department of Computer Science, Shivaji University Kolhapur) were also interviewed to understand the development of networks and initialisation of network plan for this study. The discussions made with these experts
in the field of library, networks and computer science helped researcher in designing conceptual model.

**Literature Review:**

The researcher has also collected related and the available literature published in different resources and reviewed to understand efforts made towards resource sharing activities among libraries in India as well as other developed countries. The literature review helped in analysing networks benefits, topologies, security etc. Thus literature review (secondary analysis) helped in supporting concepts, observations.

Thus for conducting this study, descriptive research method in which survey using questionnaire, observation, interviews and secondary analysis are used. The data obtained from these ways helped researcher in building a model for library networks and its security.

**1.14.1 Research Process:**

The main aspect is to investigate the present status of management libraries affiliated to University of Pune and AICTE approved management institutes libraries.

The research methodology selected is based on the research problem. In the present study researcher is reviewing the management libraries in Pune city for taking the note of efforts made towards status and resource sharing by means of networking the libraries. Similarly the opinion of experts from library and networks is also sought to understand structure and finding required for networks. Prominent institutes were networks are established internally as well as accessed from outside are reviewed. Researcher visited and studied their networks. This background study was conducted user descriptive research method.

In the first phase is to understand the status of management libraries; data is collected using structured questionnaires. The data collected using questions contain aspects of library collection, staff, and user’s automation, software used, network availability, efforts made for resource sharing, users expectations etc. In all 66 questions were covered to understand the status of management libraries in city. This gave an idea of libraries and facilities provided to users. Since the ICT usage is increased at user level and also applied in teaching and learning methods in management colleges. The trend shifted from
traditional class room to e-learning system, changes are also reflected in the library system. For this purpose, user’s requirements are also evaluated from the different studies reported and also interactions were made with few users.

In second phase, to support the data collected, and concept developed, interviews of experts from management libraries as well as reputed libraries and network administrators are also conducted. This helps in getting the opinions of library professionals. The opinion of libraries is that there is a need of development of “Pune Management Libraries Network (PMLN)” at local level. The discussions with network administration helped in understanding the network requirements and structure along with literature published for developing networks.

In the third phase a review on library networks was analyzed of published literature and the topology used in existing library networks was studies. This supported to visits of different libraries and centres where networks are managed. The purpose was to study the structure, and security issues, based on this data a model could be suggested. The computer experts were also interviewed to assess the pre-requests for developing PMLN in Pune city.

1.14.2 Structure of the Questionnaire Circulated:

Questionnaire is tool that helps in collecting the data. A structured questionnaire circulated in 127 management institute libraries. A structured questionnaire contain nearly 66 questions (Appendix – A) grouped in to nine facets to get the desired data from management libraries and to understand the status of management libraries. The questionnaire is designed in such a manner that data might be gathered without prejudice and be objective.

1.14.3 Response to Survey:

127 management college libraries in Pune city (Annexure - A) were selected and sent questionnaire to them through e-mail, courier and researcher also visited few institutes. Out of 127 libraries, response received is full due to maximum efforts made by the researcher and hence 100% response is achieved for his study.
1.14.4 Data Analysis and Interpretation:

All questionnaires were analyzed statistically and systematically and presented the analysis chapter number 7.

1.15 Uniqueness of the Present Research Study:

The analysis of the past studies related to the present research indicates that the research conducted so far is covering different aspects related to resource sharing and development of concepts for networking of libraries in different sectors. Azeez (2007) in his study discussed the existing conditions of the libraries in engineering colleges in Kerala and suggested development of library consortium for engineering colleges in Kerala which might be helpful to enhance the qualitative collection and provide services to users. Thus emphasised on consortium based resource sharing and providing services. Whereas Philip (2008) described the growth in management education, management institutes, importance to management education due to globalization, industrialisation, economic integration, collaboration etc. The author concluded the study by narrating challenges and opportunities for improvements in field of management education with the support of management libraries. Ali, Owoeye and Ansai (2010) opined and stated need of resource sharing among libraries using Information and Communications Technology (ICT).

Biradar (2012) has discussed in his research thesis that resource sharing and networking of college libraries affiliated to Gulbarga University, requires a nodal center from where the network may operate. The author opined that there is a need to develop a model for resource sharing and networking of college libraries which would facilitate easy and direct access to information from the central bibliographical databases housed at the nodal center. This is a just suggestive approach towards the networking of libraries. Thus participating libraries can establish link with the regional centre to access resources of nodal centre. Kemdarne (2012) in his Ph.D. thesis suggested a network model for Dental College Libraries in Bangalore. In this model, author suggested that to create a union database of all 35 colleges and load over the main server for union database at Bangalore in M. R. Ambedkar Dental College, Bangalore. And all the 35 dental college libraries are inter-connected through the Internet and if LAN infrastructure available then can access on the internet also. All libraries can access the eG3 WEB OPAC (Based on using e-Granthalaya software) any one can access the Union Databases from anywhere.
Oak (2012) presented status of management institute libraries. The primary objective of the study is to find out the status of the management institutes libraries under the jurisdiction of University of Pune with reference to resources and services. Parvez (2010) discussed the computer and mobile networks and an attempt has been made to characterize the security and performance aspects of computer and mobile networks. Pradhan (2012) in her study elaborated the modernization aspects of management libraries using technologies. The study is focused towards resource sharing and automated services in management libraries.

Apart from these different studies few more studies are identified by the researcher as detailed below which covers areas like resource sharing and networking concepts, proposing for the development of national resource sharing activity, networking of Delhi libraries, University of Bharatidasan and user needs in the era of digital media.


From the analysis it is noticed and found that these studies, articles and thesis are covering different aspects related to:

- The studies are mainly focused on the issues like use of ICT in LIC, impact of ICT on library activities, application of ICT in modernising libraries, trends in ICT and implications in libraries, use of internet, impact and need of resource sharing in libraries, etc.
- Only few studies are reported on development of library networks and also reviewed in detail and noticed that they are encompassing broad views of networking and resource sharing and discussed issues related to planning phase mainly on theoretical aspects.

Whereas the present study undertaken to establish a city network based on NKN concept is focused on development of library network at local level and is a pilot network development study for the subject libraries like management and its use is also for the other libraries also. A conceptual model is presented at the end of study which can also be extended in other zones and hence this study might prove as a base model for the others to act on. In this study following phases are discussed while developing network model which are not focused in other studies.

1. Design and planning phase
2. Pre-requisite / pre-conditions for networking
3. Finance provision
4. H/W and S/W selection
5. Operational and maintenance phase
6. Security phase
7. Application phase and expansion phase
8. Utility phase
Thus this study has different coverage and attains possibility of developing network using modern techniques and technologies. It is also observed that information network and its security is considered at highest level for managing resource sharing. In the literature survey the researcher noticed that few prominent conferences on information and network technology as well as information security have been conducted at international level.

- International Conference on Information and Network Technology (ICINT 2014), China.
- International Conference on Network Technologies (ICNT 2014), China.
- International Conference on Networks and Information Security (ICNIS 2014), China.

These conferences has been organised very recently and the research study conducted by the researcher is seems to be very essential for the networking of libraries which is need of the time. Thus it’s different than the existing studies conducted so far in the area of Library and Information Science.

1.16 Structure of the Research Study:

The complete research study is presented in nine chapters and its contents are briefed as under:

**Chapter 1 – Introduction:**

This chapter highlights need of library networks, library networks in India, background of study, reason to select topic, scope and limitations, aim and objectives, research methodology, hypothesis, uniqueness of study and structure of the study etc.

**Chapter 2 – Literature Review:**

This chapter is a brief analysis of information literature published in different forms and consulted by researcher, relevant to study. The different facets considered while conducting literature are discussed at length with brief summary. The literature survey help in building the concepts developed in the mind of researcher and also used and cited reference in text suitably in different chapters.
Chapter 3 – Proliferation of Management Education and Institutes:

In this chapter efforts have been made to analyse the prominence and importance of management education and the growth in development of management institutions. A survey covers global to local developments in management education, a structure nature of programs etc.

Chapter 4 – Changing the Paradigms: Libraries and Technology:

This chapter highlights implementation of different technologies and its effective use in managing libraries. A review of latest trends especially in technologies applied in libraries are discussed in this chapter, along with its merits in performing different library activities.

Chapter 5 – Networks Prerequisites:

A detailed presentation in respect of network building and its different facets like need, benefits, prerequisites, maintenance and securities are discussed.

Chapter 6- Library Networks in India: An Overview:

The efforts are made to study the development of library networks at national level. The agencies, associations, organisations involved in developing library networks at different level are also highlighted in this chapter.

Chapter 7 – Data analysis and Interpretation:

This chapter analysis the data collected from the questionnaire and presented after the evaluation systematically using different statistical methods. This chapter in general helps in narrating the status of management libraries.

Chapter 8 – Findings, Suggestions and Conclusion:

This chapter highlight the observations and findings from the data collected observations and literary evidences and based on these findings suitable suggestions to initiate proper networking are narrated. At the end study is concluded stating scope for future research and usability of the study.
Chapter 9 – Conception of Pune Management Library Network (PMLN):

Based on different model studied the researcher has developed his own conceptual model for networking management libraries in Pune city. The structure of proposed network for PMLN is discussed in detailed in this chapter.

Summary:

This chapter presents the objectives suitable to frame out the research study in systematic manner. Due to different factors which are affecting the collection developments of libraries and user needs. There is a need felt for resource sharing among group of libraries specialised in a particular discipline like management. The benefits of resource sharing are many to both libraries and users. Introduction of ICT in almost all fields made it convenient to established library networks at much easier level than before. To provide maximum information current information from libraries there is a need to developed different resource sharing projects. Kent (1974), rightly indicated “The success and survival of libraries depend on how much and to what extent the libraries cooperate with each other in future”. This statement is indicating the need of resource sharing in libraries.

References:


• Oak, M. K. (2012). *A Study of Select Libraries of Management Institutes in India with Special Reference to Institutions within the Jurisdiction of University of Pune with Relevance to Networking, Accessibility and Services to the Users*. University of Pune, Pune.


• Rai Vishwanath. (2011). *A study of management training and educational institutes in Pune to develop new instructional models, so as to meet corporate’s future requirements of professional managers at the entry point*. University of Pune, Pune.


