Chapter 2  Review of Literature

This work is an attempt to study the status of libraries of management institutes under the jurisdiction of University of Pune in terms of collection, facilities and services including networking related services provided to the users. The study also considered libraries of IIM’s for benchmarking purpose.

Therefore the literature is reviewed by considering two demotions of study as the studies on networking based library services and another by studying various cases of application of the benchmarking technique in libraries.

Traditionally the library resources are shared using the inter library service and accessibility of resources necessarily required physical visit of the user to the library. The concept of networking of libraries using the ICT has diminished the geographical boundaries and the resources are made accessible through the on-line/off line databases. The traditional concept of resource sharing has reshaped in the form of consortia where the on-line resources are shared among the libraries for providing greater accessibility to the users. Therefore the literature has been reviewed by focusing all these aspects.

2.1  Review of Literature at International level

Woodward, Hazel and Cliff, McKnight (1995)1after introduction of the electronic journals, discussed the issues relating to access to and bibliographical control of e-journals from a local and national perspective. The added purpose of the paper was to assist the librarians in implementing and enhancing the access mechanisms of e-journals. They identified 3 types of e-journals as online, CD-ROM and networked journals. They further argued that for facilitating access to e-journals there are three levels of access need to be considered by library and information services. The first was access to information about what titles are available and other bibliographic details. The second level suggested an access to information about the articles within individual journal issues: what is being published by whom? The third level was about access to the actual text of the journal: how can access be made quick and easy for the end user?
Vishwanathan, Rama, Wilkins, Walter and Jevec, Thomas (1997) developed a computer assisted instructional program for giving special assistance in finding and using electronic information sources for the users at University of Illinois at Chicago (UIC). The program was designed mainly for the remote users of the libraries providing more network access to resources. During the study, sixteen-lesson course was distributed to the faculty, staff and students of the sample size 450. During the study, the pre and post tests were conducted to access the participant’s prior knowledge and subsequent knowledge gain. The survey results showed that participants built on their familiarity with e-mail to broaden their internet expertise. The well developed instructional material serve as an ongoing resource for new users and past participants also. Instead of typical class room instruction of one hour, the online medium allowed the library to reach a large number of users. The pre-course survey revealed that 60% users intended to use internet for research and work while the post-course survey showed an increase in personal use as the course increases the comfort and familiarity level of the participants.

Oulanov, Alexei and Pajarillo, Edmund (2001) conducted a survey on evaluating the usability of CUNY + a wide area network database (City University of New York). The survey used questionnaire technique five point likert scale. The survey results found that 70% users denote positive opinion in using the database while only 10% disagreed. 60% interested in using the system again and 10% were not. General satisfaction about the database was denoted by 60% users. The paper emphasizes the relevance of the user and user participation in any system planning design.

Gorman, G E and Cullen, Rowena (2002) provided a new approach to the modeling of networks where the libraries enter through the network library model, moved forward through the cooperative library model and ends in an advanced knowledge environment model. The research paper traced out three stages of development of networks as “Initial stage” which is equivalent to the Network Library Model where the libraries are self sufficient and provide full services to users without relying on other libraries. Here the printed documents, CD-ROMs and dial up connections are the main resources and the resources are discovered through the OPAC mainly describing bibliographic data about the printed resources and the library staff gives face to face service. Further the next stage is explained as “Intermediately”, equivalent to Cooperative Library Model where the library provides access to more
off-line e-resources. Further the local e and networked resources are included in OPAC. The catalogue can be accessed remotely and use of e-mail delivery can be traced. Library provides e-guide which is used by the users for accessing the system. The next stage described is “Advanced”, equivalent to Knowledge Environment Model, where the libraries provide full remote access to resources, most of the material is in e-format, dedicated internet links are used. The metadata is used comprehensively for the bibliographic description of resources. The access is provided full on-line and remotely. On-site access not necessarily human and full computer assisted support for information discovery is provided. In these models the library is viewed as one player in the information transfer process along with the internet, community information services.

The research paper indicated that no network in Asian region has achieved the advanced stage of Knowledge Environment Model. Further the paper mentioned that The China Academic Library and Information System (CALIS) is moving towards the advanced stage. CALIS is a nationwide academic library consortium that links the services across 27 provinces and cities in China.

Nfila, Reason Baathuli and Darko-amoem, Kwasi (2002) traced out the development of Library Consortia by conducting a literature review from the period 1960-2000. After tracing the historical review, the paper highlighted the scenario in 2000. The paper discussed the new purchasing environment created due to electronic publishing, types of consortia as well. The researchers mentioned that the consortia have increased the levels of library services and convenience for the patrons of large libraries. The library consortia causes the shifting from peripheral and limited sharing of resources to an integrated system wide and formalized resource sharing. Further the researchers added that this has been possible due to the developments in electronic access.

Vanbuskirk, Mary and Krym, Naomi (2003) mentioned that access to electronic media is the way of future in the paper, where the efforts were done for tracing out the history of Canada Institute of Scientific and Technical Information in resource sharing. Further the paper included present scenario faced by the libraries such as declining in budget and ever-increasing budgetary pressures faced by the information consumer. The paper has discussed the accessibility to the resources in Canadian
Universities offered through the consortia approach. The activities of major cooperative venture in Canada “scholar portal project at OCUL” which is funded by Ontario Innovation Infrastructure and Ontario Universities to expand the access to electronic and printed resources were also highlighted. The DSP (Depository service Program of Communications in Canada) provides access to federal government information. It provides this information through a network of more than 790 libraries in Canada and 147 institutions around the world. The program is administered by Communication Canada.

White, Pam and Twomey, Cherly (2006)7, studied the interlibrary network and document supply service of National Health Service (NHS) in UK. The study did a comparative analysis of the same with the service models in five countries as USA, Italy, Australia, Iceland and Canada. They identified the issues related with interlibrary network and document supply. The study shows interesting findings where the researchers mentioned that automation of library system should improve the user experience, but does not necessarily replace the need for involvement of the library services and the staff. Complementary collections are necessary for widest and most effective access to information. Access to electronic resources does not alleviate for remote document supply.

Korobili, stella, Tilikidou, Irene and Delistavrou, Antonia (2006)8 examine the use of library resources, focusing on e-resources by the members of faculty of higher educational institute in Thissaloniki, Greece. The study conducted a census survey using a structured questionnaire. The frequency of use of resources mainly e-resources, examine the impact of demographic or situational characteristics are examined. The researcher found that the majority of faculty members use printed resources, but they also use e-resources frequently. They found that use of e-resources is higher in the school of Business Administration and Economics, among those who hold PhD degree and younger faculty members. Further they added that the use of e-resources is positively indicated by the researchers as convenience of access. The study also examined the computer anxiety rating scale which indicated that the less anxious the faculty feels about PC’s, the frequent users they become.

Hammond, Ellen (2009)9 discussed how the new thinking is required about the access services provided by the large academic libraries in United States in the scenario of
Internationalization of higher education. It provided an overview of the agreements (MOU) concluded by East Asia library staff at Yale University, USA to secure access, for Yale affiliates to the University of Tokyo and Waseda University Libraries, Tokyo, Japan. The researchers argued that due to increasing trend of going abroad for research among the faculty and students, the need for the services that support their users globally provided by the library professional has also increased. Further they added that “global access”, should refer not just to retrieve information on-line but also to the myriad institutions beyond national borders that provide access to information sources and services. To provide worldwide accessibility/entry in other libraries is another role of the library science professionals in today’s scenario of internationalization of education.

2.2 Review of the literature at National level

Raina, Roshan Lal(1997)\textsuperscript{10}, proposed a model for establishing a network among the IIM libraries for sharing the resources through his thesis titled “Library Resource sharing and Networking: an approach to management schools in India.” The research work is a comparative study of IIM’s in India.

Rao, Siriginidi (2001)\textsuperscript{11} illustrated the challenges for the networking of libraries and information centers in India. The paper mentioned the changes that libraries and information centers need to undergo and also highlighted the role of ICT in transforming traditional libraries and information centre into a digital mode. The paper also discussed the government policies that led to the development of national information infrastructure. The paper mentioned that the working group of the planning commission recommended the need for networking and modernization of library and information centers in India during the seventh five year plan (1985-90).

The paper further mentioned that the libraries and information centers should set the objectives which include the availability of computerized services to users, promotion of resource sharing among member libraries, the development of a network of libraries and the coordination of efforts for suitable collection development for reducing unnecessary duplication.

Mishra, Sanjay (2001)\textsuperscript{12}, conducted a survey of local library networks in India for studying the factors affecting local library networks. A survey of participating libraries of four local networks (ADINET, CALIBNET, DELNET and PUNENET) in
India was conducted using a survey method. The study revealed that organizational factors such as planning, governance, funding, communication and administration are related to each other. The study surveyed 131 libraries. The questionnaire included items related to computerization and networking, organizational factors and general data. The study considered six organizational factors as planning, governance; funding, communication administration and success and they were measured using a likert 5 point scale. The response for these factors indicating moderate level. Researchers indicated that raising the levels of these factors will assist in developing local area networks. The researcher concluded that the local area networks in India are in elementary stage, further he added only DELNET is functioning in true sense as a network. The researcher suggested few active steps for the development of local area net works in India as follows:

Proper long term, strategic and short term planning with specific agenda of action, the network service center should be located in one of the member libraries, constant up gradation of hardware and software for successful delivery of information within the network, nominal fees from the member institutions and training for professionals.

Pandian, Paul, Jambhekar Ashok and Karisiddappa, C R (2002)\textsuperscript{13} mentioned that there have been many cooperative efforts up to 2002 among the Indian Libraries for resource sharing, but it is hard to find one successful program that could use as a benchmark to replicate in other libraries. Further they added that main factors affect such efforts are more human and attitudinal than technological or economical. Researchers designed a framework for the internet model based on a consortia approach for facilitating information access and use by providing a single web enabled window to the information users for the participating institutions (IIM’s) in the consortia program not only to their resources but the other institutions resources also. The purpose of the model was to bridge the gap between information resource rich and information deficient libraries and enhance the information use shared access and optimum utilization of information resources at an affordable cost. Thus the paper proposed a model for IIM consortia for sharing the on-line resources among IIM libraries and concluded with the fact that with the advent of the internet World Wide Web, it has been possible to provide instantaneous access to the resources available not only within the organizations, but other institutions that participating in the consortia program.
Cholin, V S and Karsiddappa C R argued (2002)14 that for meeting the genuine needs of users, libraries need to take active part and provide access to on-line resources. The paper has discussed the role of OCLC (Online Computer Library Centre) and the services offered by OCLC in different packages.

Chikkamallaiah, Neela and Usha(2002) 15 discussed the efforts for accessing the on-line resources through the formation of IIM consortium and Raina Roshan Lal (2005) illustrated sharing of online resources among the IIM’s at the INDEST Consortium of the MHRD. The IIM’s are sharing 7 on-line databases at a consortium price.

Sridhar, M S (2002)16 discussed the case study of sharing of on-line resources among the ISRO libraries where the effort has been made by using the consortia approach. Efforts were also put in to implement uniform library management software to enable remote networked access of holdings of about a dozen libraries within the organization. The online resources such as Ulrich+, Aerospace, Compendex and BIP databases are shared. Additional shared resources through the consortia were the 22 on-line journals related to aerospace, IEEE journals.

Singh, Ibohal, Singh, Khomdon and Singh, Joteen (2004)17, in a study assessed the attitude of the users towards UGC-INFLIBNET services at Manipur University Library, India under INFLIBNET program. The researcher used survey research method for collecting the primary data using stratified sampling technique. The purpose of the study was to ascertain the requirements of the users and access their attitude towards INFLIBNET services of Manipur University Library.

The study received 68% response. The researcher found that there are fewer users (51.96%) who are aware about the INFLIBNET services of the Manipur University Library. Further among the various INFLIBNET services, Internet access and E-mail are mostly used by the users. use of OPAC was negligible due to lack of awareness among the users. Whereas “downloading of e-resources” is used remarkably by the researchers (82.61%). The users had the attitude towards the internet that its speed was felt poor. The teacher community carried the attitude towards the INFLIBNET services that it enables library automation and allows greater access to information sources.

Sinha, Manoj Kumar (2004)18, studied the scenario of automation and networking of Libraries of North Eastern region of India. The researcher has evaluated the
automation and networking services in 12 libraries that had financial assistance under INFLIBNET program. The researcher used survey research method including the questionnaire technique. The survey findings mainly cover various aspects of library automation and networking, multimedia application and use of CDROM databases, OPAC and internet services like in-house operations such as acquisition, circulation, retro-conversion, serial control, information retrieval and dissemination, bibliographical services, on-line search of databases, OPAC, web OPAC.

Survey result shows that out of 15 libraries only 26.7% libraries are fully computerized whereas 33.3% libraries are partially computerized and in 33.3% libraries computerization was initiated. Only 6.7% libraries were willing to start computerization. Further, out of 15 libraries, 40% libraries have started computerized acquisition of reading materials and serial control started in 60% and library administration has started in 66%, where as computerized cataloguing started in 80% libraries. The OPAC service was available in 60% libraries, Inter library loan in 33.3% libraries. Results of the survey showed that out of 15 libraries, the users of 40% libraries are assessing all services being offered by the INFLIBNET centre.

Ramesha, Kumar B D and Kanamadi Satish (2004), evaluated IT based services on the basis of user requirements and satisfaction. The study was conducted in the University Libraries in the Karnataka state. In this study the researcher used the survey research method followed by two different sets of questionnaires one for users and another for the providers (facilitators) of service- for the Librarians. In the findings of the study, researchers noted that out of 7 universities only 3 have full time librarians and further the existing staff strength, both professional and others, is highly inadequate compared to magnitude of the work. These libraries have traditional and modern infrastructure and IT facilities and network facilities are available in most of the university libraries. Most of them were participating in the one/other network system for sharing the resources. The researchers also traced out the awareness level of the users regarding the computerization activities of the library. The results of the study showed that the lack of manpower is the basic cause of declining of the quality of library and information services. Further the study indicated that the university libraries are lacking in the programs of users awareness and publicity. The researcher mentioned the need for the library professionals to update new skills by considering the changing environment in the respondent libraries.
Cholin, Vernna S (2004)\textsuperscript{20}, in another paper took an overview of the implementation of information technology in different university libraries in India. The paper has discussed the role of INFLIBNET Centre and overall development of University libraries across the country with special emphasis on efforts through UGC-Infonet E-journals Consortium. The paper has also compared the availability of e-journals in western universities with Indian Universities. The paper traced out the problem faced by the University Libraries in meeting the user requirements even after spending more than 75-80\% library budget on journal subscription. The paper concluded that the libraries can increase buying power and access to resources through qualitative resource sharing for effective document delivery service among the universities.

Singh, Anil and Gautam, J N (2004)\textsuperscript{21}, presented an overview of the electronic databases developed in India or on Indian topics. The paper highlighted various electronic databases in India as Indian databases on science and technology established by NISSAT (National Information System on Science and technology, SAARC social sciences and humanities database, Federation of Indian Chamber of Commerce and Industry (FICCI) website business information, Technology information, Forecasting and Assessment Council (TIFAC) databases, National Institute of Science and Information Resources (NISCAIR) databases, National Union Catalogue of scientific serials in India (NUCSSI) database, Indian patents (INPAT)on CD-ROM, DELNET databases, INFLIBNET databases, other databases such as Library and information science databases, statistical databases. Researchers argued that the role of information science professional is to tap the unique items of useful information, the nuggets of knowledge and to extract the search pattern in the raw data. Further, it was concluded that the intermediary role of library science professionals in accessing, structuring, evaluating and refining has increased.

Srivastva, Mehandra and Kanauja, Laleta (2004)\textsuperscript{22}, conducted a survey for investigating the present situation of library automation, CD-ROM database services, internet and on-line facilities, reprographic services in Agricultural University libraries in India. The survey also highlighted the conventional documentation and information services namely bibliographic service, current awareness service, abstracting and indexing and newspaper clipping services in agricultural Universities in India. The study used questionnaire technique for data collection and data collected from 30 agricultural University Libraries in India. Findings showed that 100\%
libraries are providing Current Awareness Service and bibliographic services. 40% libraries providing indexing and abstracting services. Only one library (3.3%) is providing newspaper clippings service. 73.33% libraries had software operating systems and 33.33% other working software package. Majority of them had Dos/Windows based system. Working software used in these libraries were CDS/ISIS, Ms-Word, Excel and PowerPoint. All the libraries (100%) were providing manual services, 30% giving computer based services, 30% giving SDI and 70% providing CD-ROM database search facility. 13.33% of libraries were giving on-line database search, 46.66% providing e-mail and 56.66% internet search, 20% for multimedia search. All the libraries giving reprographic services and 73.33% providing microfilm reading facility.

Researchers suggested that all the libraries should provide agricultural newspaper clippings service. Further suggestion given for implementing OPAC in the library for better access to information and CD-ROM database service should be provided by all the respondent libraries and automate their library functions and services. The researchers concluded that in the new millennium, each library in India must go on electronic internet for better information services for meeting the future challenges.

Patel, Yatrik, Vijaykumar J K and Murthy T A V (2005) 23, provided an overview of INFLIBNET’s institutional repository and archive-India which is developed for Indian academic and research community to archive their intellectual work by using D-space digital library system and accessibility is provided through the network system (web).

Kanamadi, Satish and Kumbar, B D (2006) 24, discussed the web-based library services expected at management institutes in Mumbai City, Maharashtra State, India. The article explores the availability of institute website, importance and extent of the library details hosted on the institute website. This survey reveals that the lack of interest of users in library website is because of the inadequate and static information being made available on it. The researchers found that 52 faculty members (86.67%) and 175 students (92.10%) use the Internet on a regular basis. Only 2 (9.09%) libraries have provided library rules and regulations on the website. Important details like library staff details, Current Awareness Bulletins/Selective Dissemination of Information (CAS/SDI) bulletins and OPAC is not made available on any institute
website. This case study also reveals about the services users expect to access through the Internet at their convenience. The researchers suggested that the Introduction of web OPAC, announcements about new library resources and services, links to the websites of interest to the business and management studies are required for making the library portal more informative.

Another study was conducted by Kanamadi, Satish and Kumbar, B D (2006)\textsuperscript{25}, on the “Impact of Information Technology Innovations on Resources and Services of Management Institute Libraries in Mumbai”. The survey was conducted for investigating the present infrastructure available in the libraries of management institutes as well as for studying the impact of IT on library resources and on library services of Management Institutes’ Libraries in Mumbai. The study considered 24 management institutes in Mumbai.

Researchers found that 20 (90.91\%) libraries are using Library Management Software; all the libraries, 24 (100\%), are using word processing software and they also use different operating systems like DOS, UNIX, LINUX and Windows. Further it was mentioned that the majority of the libraries have automated their functions and the remaining libraries are partially automated, with workstations to access Web resources and all the required software. One observed phenomena by the researchers is the shift in emphasis from ownership to access in the respondent Libraries.

Madhusudhan, Margam (2007)\textsuperscript{26}, assessed the use of internet as an information source by the research scholars in the field of science and technology in University of Delhi, India. The study was conducted on the sample of 51 research scholars in the Central Science Library in University of Delhi. The study used questionnaire observation and interview technique. The researcher used the stratified random sampling method for data collection. The study received 81\% response. The findings of the research revealed that 66\% respondents were using e-journals and databases and handsome figure of 70\% use the internet. During the paper the researcher mentioned a need for creating awareness among the research scholars about using the internet services more efficiently.

Manthas Rajiv and Kaur, Amritpal (2008) \textsuperscript{27} studied the use of internet services and resources in the engineering colleges of Punjab and Haryana (India). The study used survey research method and data was collected using the questionnaire technique with
80.8% response rate. A total sample of 625 teachers and 903 undergraduate was focused. Random sampling method was used for the data collection (least 5, 3 teachers and 2 students) from the respondent colleges.

Results showed that all the respondents make frequent use of the Internet because they have access either at college or at home. The survey revealed that the majority of the respondents, i.e. 65.6%, access the Internet from college or their workplace. More than 75% of the respondent’s use the Internet services mainly for educational and research purposes. Google and Yahoo search engines are found to be more widely used than other search engines. More than 70% of the respondents feel that the Internet is useful, informative, easy to use, inexpensive and time saving.

Sinha, Manoj Kumar (2008) 28 identified various issues relating to access and bibliographic control of e-journals, access management problems, policy issues and development of e-journals consortium approach to subscribe scholarly peer reviewed journals for their library users in network environment. The paper has given a brief account of various consortium efforts in India. The paper has concluded that in India and South Asia or developing countries, number of e-journals is less and printed version of e-journals is available. Further they added that e-journals are very much costly and also the inadequacy of the funds provided by UGC to the institutions, therefore the national institutions like IIM’s, IIT’s and universities are involved in consortia approach for providing access to more number of e-journals and databases to the user community.

Aher, D W, Matsagar, M B and Wagh V G (2009)29, studied the impact of electronic resources on the libraries and their users in Nashik City. The study has targeted total 480 sample population using stratified random sampling method using questionnaire technique for data collection. The respondents included were teachers, librarians and students from various colleges in Nashik city. The study found that percentage of students visiting the library for electronic resources such as CD’s, e-books and e-journals is ¼ of the population who visit for reading books and journals. Further the researchers mentioned that the overall opinion of the user population is that the electronic medias helps them in understanding their subjects gathering relevant information with a faster access as compared to the information in print form.
Desale, Sanjay, Londhe, N L and Patil S K (2009), evaluated JCCC@UGCINFONET and the document supply service at the University of Pune. The paper had taken a brief review of JCCC@UGCINFONET and the document supply service provided by the University library, problems encountered while using the JCCC@UGCINFONET interface and the administrative interface in providing ILL service. The researchers discussed the new service initiated by INFLIBNET and also evaluate the JCCC software from both the user’s and administrative point-of-view.

Kaul, Sangeeta (2009), conducted a survey of DELNET libraries for assessing the usage of DELNET services. The study results show that there were total 90% respondents indicating the dedicated internet facility in their libraries and in 97% organizations, faculty have direct access to the internet from their own desk. Awareness of DELNET services was indicated by 92% of member libraries. Photocopying of journal articles and supply is the most popular service of DELNET. The study has found that 86% member libraries are benefited from the union catalogue and above 90% libraries are satisfied about the ILL/DD service of the DELNET.

Ghosh, Maitraiee(2009), studied the digital infrastructure and attitudes towards access and sharing of selected engineering libraries in Maharashtra, India. The researcher surveyed the forty nine libraries and studied the current status of the libraries. The paper focused financial, technical and structural factors of the libraries. The focus is on librarians’ perceptions on the formation of state level consortia; ICT infrastructure; users’ needs; collection development policies and the services provided by engineering libraries to the community. The purpose is to explore the possibilities of forming regional consortia for enhancing the access to information and knowledge through cooperation for benefit of the engineering communities. The engineering libraries from diverse backgrounds such as central government-funded, autonomous deemed universities, fully state government funded colleges, partially state funded colleges with autonomous status and unaided (privately funded) colleges. The study analyzed the data using various heads as library collection, information sharing infrastructure, use of on-line resources, and librarian’s perception on the current levels of cooperation, consortia relationships and obstacles towards cooperation.
Research findings showed that 66.5% libraries have online journals/bibliographic databases through INDEST. 10.5% libraries are subscribing to online resources independently. 16.5% libraries have only offline A.V. resources. Above 50% of the libraries have memberships to INDEST and are receiving e-journals and bibliographic databases at discounted price. 56% of libraries have started some digital library initiatives. Out of 49 respondents, a total of 13 indicated that they had engaged in at least one cooperative activity with other libraries.

2.3 Application benchmarking in libraries

An attempt has been done to study the application of benchmarking in the libraries.

The first reported Library benchmarking study was conducted by Metro Toronto Reference Library in 1985, which includes collection of statistical data and compared on staffing size and ratio, expenditures and services offered with similar type libraries.

Since the mid-1980s librarians have seen benchmarking as having two distinct purposes: to demonstrate how their services and overall performance rank against those of other similar libraries (external benchmarking); and to measure the value of their contribution within their organization, as compared with that of other internal divisions and information services (internal benchmarking).

Pritchard (1995) mentioned “it is true that many library applications of benchmarking have taken a statistical norm, whether from a group of comparable libraries or from a national dataset, with reference to a series of input measures, or output measures and used this for comparative purposes.”

In 1990’s, major changes in the library services, due to the impact of technology, led them to renewed emphasis on; as librarians were being asked to provide additional services with the same or minimally increased resources. In 1996 the Special Library Association's special report Competencies for Special Librarians in the 21st Century was released, which incorporated knowledge and application of benchmarking in a number of the competencies. Major issues became "how to benchmark?" "What to benchmark?" and "who to benchmark with?" Benchmarking has touched many areas of libraries from benchmarking of one service (Inter Library Loan) to benchmarking
of the collection of statistical data and compared on staffing size and ratio, expenditures and services offered with similar type libraries.

The relevant studies of application of benchmarking in libraries are mentioned below:

**National Library of Australia: Australian Study of Interlibrary Loan and Document Delivery Services (ILL/DD), Australia**

A national Resource sharing group (2001) conducted a study of Australian Interlibrary Loan and Document Delivery Services (ILL/DD)\(^3\). The purpose of the study was to improve the ILL/DD service of the Libraries. The Australian study used statistical data on Unit costs, fill rate (the number of items to be supplied), and turnaround time for both, requesting and supplying documents in 97 Libraries across Australia.

Despite the apparent superiority of some institutions, it appears that there is room for improvements in all organizations, and something to be learned from other, may be even less successful institutions. The wide range survey, address a number of issues that were perceived to be critical to best practice, such as automation, cataloguing practice, training, and cooperative agreements between libraries. The study employed a well tested instrument, questions of sufficient depth.

**University of Virginia Library, USA**

The University of Virginia Library undertook a project (1999)\(^3\), to find the improvements for shelving practices in their own Library. The goal was to provide external standard for measuring the quality and cost of internal process, and help in identifying the opportunities for improvement.

The project was chosen collaboratively in 11 libraries. The flow charts of the shelving process of these libraries were prepared by collecting the relevant data from the libraries including site visits to those libraries. The recommendations were made for the changes in the shelving procedure at the University of Virginia by using the data collected from the questionnaire, site visit reports etc.

The study consisted of the study of each library shelving process by creation of flow charts, followed by site visits for studying the shelving process of
each of them as well as also the other factors that contribute to the shelving process, such as training, number and level of employees, new book routines, pick up routines, sorting areas. The data collected by using the questionnaire method, e-mail survey, site visit reports.

**University of Queensland Library, Australia**

University of Queensland Library (1998) conducted a Quality Management program as an effort for building a culture for continuous improvement. Several benchmarking projects with the aim of achieving ‘best practice’ and ‘improved performance’.

The Benchmarking exercise was undertaken (1998), through the commonwealth management University Management club managed by Commonwealth Management Service (CHEMS), as well as with its Australian Universities 21 partners including the University of Melbourne and the University of New South Wales. In 1998, the Club selected the Library and Information services area of the member Universities for the Benchmarking purpose. It was conducted by using the survey method, by using the Questionnaire technique. The survey covered the questions on the areas strategy, planning and Management; Library services; access, collections support and training; human resource management. The survey was conducted for one year. The study consisted the major steps as determining the areas to benchmark, profiling of partners, defining core services, the material availability survey. The areas of the participating University Libraries were studied and compared by the Commonwealth Higher Education Management Service (CHEMS).

**Special library project in Jamaica, Africa**

A special library project in Jamaica (2007), worked on the pilot project of sensitizing the librarians to the application of benchmarking and develop a culture of openness and collaboration among special librarians in Jamaica. The project divided in 3 phases

Phase 1 includes a survey where the management’s perception of the value of the library to the organization was ascertained.
Phase 2 the efforts for providing basic skills and knowledge of benchmarking were undertaken by conducting a series of workshops and seminars for them.

Phase 3 the pilot benchmarking project launched where the library processes and libraries were selected as partners and benchmarked.

The results of the project were mentioned as improved services, review, analyze and use data for effective reporting, the survey guided in selection of partners and processes to be benchmarked. The conducted workshops induce the librarians towards willingness to cooperate, share the information and in implementing best practices in their organization.

Cranfield University, United Kingdom (SCONUL benchmarking pilot projects) 

SCONUL Benchmarking pilot projects (2000) coordinated by Stephen Town (Cranfield University), where the four Universities agreed to form a Benchmarking Consortium for an initial period of two years. The primary purpose of the work was to provide comparative data to support decision making and a process of continual improvement.

In 2002 the participants agreed to extend this period for a further two years.

The participants were

- University of Derby
- University of Huddersfield
- Leeds Metropolitan University
- Staffordshire University

An experimental period of approximately six months, the partners began benchmarking together in earnest in November 2000.

All the participants signed a formal a confidentiality agreement of protecting individual information from any one institution from being identified to any organization outside the agreement. An experimental period of approximately six months, the partners began benchmarking together in earnest in November 2000.

The partnership between these institutions exists to allow beneficial cross University analysis of processes, statistical information and service outcomes. The objectives of
each academic year’s benchmarking program are mutual support in the assessment and evaluation of service provision and the production of practical comparative benchmarking data. The individual elements of the program for each academic year are managed by a series of sub-groups. Each of the sub-groups is led and co-ordinate by a particular University with appropriate staff participating from all other institutions.

Outcome and Benefits of the project: The benefits of the benchmarking consortium project mentioned were

- Establishment of best practice
- Process improvements (large and small)
- Continued evaluation of customer opinion and needs
- Identification and validation of clear trends
- Networking between groups of staff involved in similar operations (quoted by many as “invaluable”)
- Exchange of views (and the generation of new ideas!)
- Staff development including learning new analysis methods such as process improvements and activity based costing (ABC).
- Greater local ownership of processes and tasks

2.4 Benchmarking University Libraries in Netherlands (1998)\textsuperscript{40}

In 1998, and 1999 a group of Dutch university libraries worked together with the objective of developing a set of instruments for performance measurement through benchmarking. The purpose of the project was after its completion, all Dutch libraries would use the method of monitoring the performance of the library in relation to one another.

The project aims were

- The design and realization of a set of instruments based on performance indicators, with which libraries can
• Measure the effectiveness of their services in relation to the requirements of their target groups;

• Gain a better insight into the efficiency of their management

• Analyze the corresponding processes better and even improve them, if necessary.

The libraries of Universities of Nijmegen, Rotterdam, Groningen, Leiden, and Amsterdam were the participant libraries. The project was supported by the IWI consortium (Innovative Wetenschappelijke Informatievoorziening) (Innovation of Academic Information Services). The difficulty in comparing the collected data of Dutch University Libraries led them into developing the measuring instruments which can be used for measuring the library processes.

The performance indicators were decided and sub grouped into four groups:

1. Financial and human resources (Primary input)
2. The range of facilities for the user (secondary input)
3. Efficiency of internal processes (throughput)
4. The use of various facilities (output)

The final set of 24 performance indicators were listed as

1. Library Resources
2. Library expenses
3. Library’s own revenues and expenditure
4. Expenses for collection development
5. Expenses for subscriptions to printed publications
6. Expenses for electronic resources, in the same categories

Apart from demonstrating the indicators, 2 questionnaires were prepared for getting the opinion of users and library staff. A sample survey of 500 to 700 respondents were taken. The results were assessed in connection with the indicators.

The set of instruments used
• A manual: directions about data collection
• Overview of measuring quantities and performance indicators
• Guideline for interpreting the indicators
• Questionnaires
• Results benchmarking: a form where the coordinating institution incorporates the assembled data in a survey.

At the end of the project, the participating libraries decided to send their data annually for national benchmarking to the coordinating centre of the project.

Implementation of the model was done in Nijmegen University Library, one of the libraries participating in the benchmarking project. It took more than 2 years to implement the same. The results of the project was improved performance of various library sections as mentioned.

2.5 Related studies at Indian Level

Gaur, Ramesh (2003), use reengineering technique for the development of the library and carried out a survey of the libraries of Management institutes in India through his thesis titled “Reengineering Library and Information Services: process, people and technology.” The study has selected 13 libraries of Management Institute for the detailed analysis. Effort of investigating the status of libraries of Management Institutes also has been done. The study has covered the case study of the IMT library by applying reengineering technique.

Manjunatha (2002), in his doctoral research work on “quality of Library and information services: a study of customer satisfaction in academic libraries”, observed that users of professional education experience more gaps as compare to general education. He also observed that perceived service quality, customer satisfaction and word of mouth are directly related. In this study he found the following hypothesis true as:

• The users of Professional education such as engineering or medicine will experience more gaps between their expectations and perceptions compared to the users of science and social sciences.
As customers’ perceptions of quality of library services (measured as difference between perception and expectation (Psq)), increases their overall satisfaction level also increases.

Manjunatha (2007) studied the “Impact of technology on Quality of services in Technical and Management Libraries in Karnataka.” The DSIR, Government of India sponsored research work was carried out to understand the status of technology supported resources services and customers in the select libraries of Karnataka state and the comparison was done with IIT and IIM’s for the purpose of benchmarking. He found that the students of state libraries perceived more gaps as compared to their counterparts in national libraries. The gap is more visible in student community. The level of expectation of faculty of IIM is high as compared to their counterparts in state libraries.

In nutshell, the networking related services created multiple choices of accessibility to the users. The way of improvement is the successful application of it in the libraries. Automated library functions, on-line access to full text databases, Web OPAC, Digital Library, remote access are few major highlights of it, whereas benchmarking is mapping out the mile stones of future development. It is an ongoing process of improvement. It is process of understanding the user requirements and application of it for the future improvement.

The review of literature reveals that most of the studies mentioned above are based on “library survey:- Primary data collected from the library, user feedback etc. These studies are based on relatively large sets of data collected from a single type of libraries such as engineering college libraries, agricultural libraries and university libraries in a particular state/area. The main focus of these studies is related to the use/impact of IT including the study of the network based services in these libraries. The present study is one of the series of such study discussed above.

The next chapter has discussed the Management Techniques used for improving quality of library services.
2.6 References:


34. Sue Henzel, “Benchmarking-measuring and comparing for continuous improvement.” Information Outlook, (July 2002).


37. Schmidt, Janine and Croud, Jennifer. “University of Queensland Library- a case study in building a culture of continuous improvement.”


