Chapter 2
REVIEW OF LITERATURE

2.1 Introduction

This chapter presents an overview of the literature which covers journal articles, articles in books, post graduate and doctoral studies, seminar papers, commission reports, books and other studies which are relevant and beneficial to the present study. Library and Information Science Abstract (LISA) on CD for the period from 1969 - February 2004. Internet were also searched to get secondary information on previous studies. Selected literature available for the period from 1976 to 2006 are included. The literature review is presented under the following headings.

- Library manpower development and Information Technology
- Library manpower development
- Library manpower development and planning
- Library manpower needs and requirements
- Library manpower development, education and training.
- Library manpower development in Kerala
- College libraries in Kerala

The entries are arranged chronologically in the descending order from 2006 to 1976 under each heading. With in a year entries are arranged alphabetically by the name of the author or title.

2.2 Library manpower development and Information Technology

Wantane, et.al.(2005) discuss the library professionals' computer literacy and use of IT in college libraries of Amaravathi city. The authors conducted a questionnaire survey of selected college libraries to find out
the proportion of librarians' computer literacy and use of IT in college libraries. The finding of the study was that out of 38 colleges, 14 colleges were selected including engineering colleges that covers IT awareness of the library professionals and IT application in libraries. The result of the study was that though the librarians are computer literate, they are not reluctant to make use of its applications in libraries. 50 percent of IT is applied in the college libraries. The library professionals are at a stage of automating the libraries when the IT stepped with vast emerging trends.

Aschroft and Watts (2004) discuss the ICT skills for information professionals in developing countries with special reference to Nigena in the electronic information environment. View that information professionals are now expected to be aware of and capable of using emerging information communication technologies, as well as having essential communication skills. The role of professional bodies such as Chartered Institute of Library and Information Professionals (CILIP) in the UK and the American Library Association (ALA) in the US in continuing professional development is highlighted. Concludes that the necessity of ICT skills has a clear impact on reference service professionals, with the emergence of digital reference services.

Sinha (2004) highlights the role of library and information professionals in 21st century. Explains the changing concept of library and information profession in new millennium. The new dimension and new approach of user to information, and the availability of information resources on various forms both in print and electronic media. The role and responsibilities of library and information professionals in IT era have also been discussed along with the impact of new Information Communication Technologies (ICT) related to information dissemination and retrieval, handling / knowledge management in library network and internet era. Describes the changes in the type of information resources available for various categories of users/ readers in different types of libraries especially in academic and technical libraries. Besides this, some
Aspects of the impacts of ICT in library and information sectors are also briefly described.

Ashraf (2003) discusses the need for acquiring new knowledge, skills and abilities by library professionals to face the new information environment. Adds that the librarian's role should be characterized by visibility and vitality. Specifically, librarians should be highly visible and well integrated into the activities of their institution and the community they serve. Education of user community is also discussed. Stresses the need to reshape and strengthen the relationships between library professionals and computer specialists in their instructions. Concludes that library staff who are struggling to keep up with the demands in today's work environment require, indeed deserve, new ways for accomplishing their work. The redesign of the library organization is imperative if we are to move rapidly and with an entrepreneurial spirit in the delivery of services in the current interactive high-speed communication environment.

Choukhande (2003) discusses about the librarians' computer awareness and application of IT in college libraries. The author conducted a questionnaire survey of college libraries to find out the proportion of librarians' computer awareness and use of IT application in college libraries of Yavatmal district (Maharashtra). The finding of the study was that out of 34 respondents 18 librarians were computer literate and aware of Information Technology. Only 8 colleges have computers in the libraries and 6 college libraries are automated. The results of the study suggest that UGC should provide financial help for the automation of college libraries of higher education and the librarians must get ready by keeping abreast of latest information technology in order to face the new challenges in information field.

Sharma (2003) discusses the competencies for library and Information professionals (LIP) in the changing information environment. Defines the terms professional and personal competencies. Professional competencies expected of a LIP in terms of knowledge, skills and attitudes
would be enumerated. Attitudes expected of a LIP could be categorized. It is concluded that competencies are contextual varying with the environmental conditions. Hence they have to be formulated at different levels and continuously modified.

Bhargava (2002) explains the role of IT in college libraries and the challenges that the librarians face for adopting IT. Library automation, CD-ROM, microforms, on-line searching, Internet and E-mail are discussed. It is concluded that there is urgent need of human resource development in academic libraries to play a new challenging role in information technology era. The library and information science personnel have to acquire, cultivate knowledge and skills for communication. Also mentions the training programmes of NISSAT, INSDOC, DRTC, NIC and UGC.

Dyckman (2002) focuses on factors that will affect the relationship between libraries and library assistants by the year 2000, and the resulting changes in libraries' organizational structure, policies and procedures, and the compensation structure. Highlights the changes resulting from technological advances, economic and political factors, changes in the climate and practices and trends in libraries. States that older workers should be trained at new technologies because older workers will become valued for their experience, skills and wisdom.

Jurrow (2002) has made a study how to prepare academic and research library staff for the changing environment. She views that academic and research libraries generally have good programmes and structures to manage the administrative aspects of a human resource programme either because it is good management practice or because they are part of a larger institution that is required by law to do so. The study covers planning for human resource management and development, organizational culture, staff skills initiatives, developing the individual, flexibility and learning. Concludes that a much larger investment in staff training and development and in organizational development will be necessary to meet the challenges of the twenty-first century.
Singh and Singh (2002) highlight the role of librarians in electronic information era. Describe that in the IT age, the librarians need a specific training to understand the implications of the new working conditions. Knowledge of computer working is essential and should be made compulsory for the future requirements, because only a trained librarian can provide better services. Information technology demand trained personnel to handle information storage and retrieval in libraries. Further add that in this changing environment the librarian should be highly skilled professional as 'processor' and 'disseminator' of the information, understanding the user's requirements. Librarian must need to overhaul themselves drastically so as to retain their identity. It is suggested that the library and information professionals have to develop and master new expertise to remain relevant to their profession.

Singh and Singh (2002a) in an another study discuss in detail the marketing of college library services for next millennium. Marketing of information offers a great potential to survive and grow their services. Marketing brings in an element of competition, which will result in providing letter services. Focus will be on saving time, money and labour and also adapting to the latest technology. The competitive marketing needs to cultivate some skills in library managers. Skills for marketing such as analytical skills, planning skills, organization skills, control skills, etc are also explained.

Baby (2001) in her paper "Challenges of information professionals in the changing environment" describes the facilities and services offered by the Cochin University of Science and Technology (CUSAT) Library in this information age. Shares her experience, difficulties, mistakes and success with others who are embarking of the same path. Views that in this new scenario, the important roles an information scientist has to take is:

Information Scientist (IS) as gateway to future and to past;
IS as knowledge manager;
IS as organizers of networked resources;

IS as collaborators with technology resource providers; and

IS as individual information consult.

Considering the above facts, quite a lot of importance was given to the manpower training to equip the staff to meet the need of the hour. Concludes the CUSAT Library has an idea to become the manpower training centre for equipping the librarians to meet the challenges of knowledge management.

Biddiscombe (2001) in his paper seeks to illustrate the Internet and IT skills that are required by information professionals in their support for learning, teaching and research within the changing context of the higher education sector in the UK and the development of managed (or virtual) learning environments. In this work environment, as in most others, IT skills, particularly in relation to the Internet are essential. However, some of the more traditional skills that have always been a part of the armoury of the information professional should not be abandoned. Current developments at the University of Birmingham are included.

Issac (2001) presents the ways and means in which professional librarians can develop their professional efficiency towards professional development. Importance of information technology in libraries is stressed. According to him the library has been one of the earliest hosts to information technology in the sense that it was among the prominent institutions the computer made its first entry. States that what is most important for professional improvement is full and continuous involvement in the immediate professional work on hand which paves the way for development through experience. Hindrances to professional development, work environment and professional development are also discussed.

Natarajan's (2001) paper deals with the aims of human resource development, key features in the library and information centre along with the definitions of content management system and its characteristics. The
promotional steps taken by the Government of India and National Informatics Centre, New Delhi are given with the present situation. The methodology of content management has been discussed in detail with content migration at the end. Also concludes that standards are needed for better implementation.

Sankaran Pillai (2001) points out the rapid technological changes brought about by the Digital Libraries. The traditional librarians need total transformation in the changed circumstances. Discusses the barriers of communication process such as economical, manpower, cultural, social and political etc. keeping in mind the Indian environment.

Seetharama (2001) examines the knowledge and skills required by information professionals in an electronic digital environment. Explains that, if the objectives of a library/information handling institution is the achievement of efficient and effective IKM, it is obvious that the focus should be on information professionals whose inputs would ultimately deliver appropriate outputs to the differential requirements of the users. To conclude, librarians and information professionals need to improve their professional competencies in which scientific, research, methodological, managerial and economic skills are integrated with communicative, navigational, information seeking, retrieval and analytical design knowledge and also have a sense of purpose and professional commitment.

Singh (2001) highlights the impact of internet on various library processes, services and products. Also emphasizes the challenging role of librarians and information professionals in the present internet era. Today the internet has revolutionized the traditional library activities. The crucial role of librarians and information professionals in designing and maintaining libraries' web page/website leading to increase in library efficiency is also discussed. It is concluded that, all that is required by the today's professionals is a thorough understanding of change in concept of librarianship and psychological willingness to look upon the internet.
Tanner (2001) discusses the role of librarians in the digital age. The digitization of valued information resources opens up new avenues of access, use and research and is an important aspect in the development of digital libraries. Describes the key issues in project planning for managing a digitization project covering the key areas of identifying the vision and the risk management in such technology-based projects. Also considers the implementation issues the costs associated with digitization projects. Finally, there is a consideration of the range of skills needed and how these may be developed for managing and running digitization projects.

Verma (2001) emphasizes the importance of manpower in library automation and networking. Explains that whatever best hardware and software is purchased for library, it is only with the help of humanware i.e. manpower that automation can be done. The hardware and software can be purchased as per requirements, but humanware cannot be purchased, they have to be produced and trained. It is certain that the days is not far off when all the library services will be computerized, hence it is high time to think about the manpower. Motivation and encouragement of staff are also briefed. Suggestions are made for consideration for creating a healthy atmosphere and motive the faculty to put in their best and for getting the desired results.

Mahapatra and Das (2000) highlight the need to institutionalize a cohesion demand among the trajectories of information technology, LIS education and librarianship. As more and more information resources are available on-line as such being the fascinating ones, the LIS professionals are desirous to adapt the changes in three important aspects: the collection formats within four walls, and information access and services without walls; and acquiring proficiency among LIS professionals for quality service. The great onus over the LIS professionals now rest to make the LIS profession more competent and viable rather being subsidiary and vulnerable to allow or diffuse this great profession to any para profession. Also pinpoint the missing links between educational
pattern of LIS and practicing platform and also suggests upholding and elevating the status quo by smoothening the aspirations of on going transitional throughputs.

Malik (2000) attempts a definitional analysis of manpower. Importance of manpower, manpower planning, manpower management or HRM, manpower development or HRD and the changing role of library manpower are presented. States that the development of the profession is in the new direction, places tremendous responsibility on the informational professionals to equip themselves adequately to the changing information environment. This necessitates the need for job redesign and reevaluation. The manpower requirements in the present day library system demands the knowledge of different information technology.

Ray (2000) examines the role of librarian in the changing environment. Discusses the facilities and library services that can be rendered in the IT age. Emphasizes that as computerization in LIS is a new thing a strong well planned infra - structure is needed to modernize the whole system gradually. Stresses the need to enrich the librarians though proper training in order to deliver all available information in a systematic way to the users. Concludes that the change in technology have influenced each and every person in his daily livelihood.

Sathivel Murgan (2000) emphasizes the importance of information professionals in the IT world. Explains that applications of information technology cause, changes in the role and responsibility of the librarian. The contemporary librarianship is confronted with the information technologies in the design, installation and management of information systems. Need for the information centre and user needs, the role of library professionals and their responsibilities, information availabilities in the on-line environment are discussed. Stresses that the library professionals must be exposed to the changing information scenario; and trained to disseminate the information through IT applications.
Dinesan Koovakkai and Jalaja (1999) focus on the challenges before the library and information profession, caused by the developments in information communication technology. The shift of emphasis in the function of libraries, from possessing information to ensuring access to information, popularization of the Internet and penetration of computer personnel in library management are considered as the major challenges. Also highlight the need for moulding library personnel competent to survive in the changed situation. Stress that library and information professionals have to change their very outlook about information handling in this challenging era.

Maheshwararappa and Tadasad (1999) study the extent of availability and use of computers based on the data collected through questionnaire from 571 out of 931 college librarians in Karanataka state. Findings show that only 121 colleges have computers, of which only 45 colleges are using computers for library activities. Only 14 of 45 college libraries are using the computer readable databases. Concludes that the UGC, Indian Council of Medical Research (ICMR), and Dental Council of India should provide funds for procurement of computers for libraries attached to First Grade, Education and Law, Engineering and Health Science Colleges in India so that libraries will be in a position to computerize and modernize their activities and services.

Manilal and Mahakuteswar (1999) stress the need for drawing a sustainable human resource development policy in the light of fast paced developments in the area of information technology. The role and structure of emerging libraries are highlighted along with the new skill set sought for libraries and information professionals to meet the demand of the user community.

Murthy (1999) highlights the librarians' connotations of information technology, IT developments in libraries, and the areas of IT as relevant of libraries. Also discusses the future of IT use, IT in Indian libraries, role of librarians in future libraries and problems of IT based information systems.
and products. Emphasizes the need for skill development for information content development. Lists some of the areas in which today's information professionals can develop new skills and strategies in order to change, survive and continue to compete in the world of electronic information.

Sambasivan (1999) discusses the impact of information technology on the reference librarian. Describes that the information technology scenario is undergoing a vast and fast transition during these days. A global library or world of information is at our fingertips now. The personal services that are being imparted by the reference librarians to their users have also wide impact in the present world. Traditional role of reference librarian, technological revolution, impact of CD-ROM, reference service and the internet, future of reference service and training for librarians are the major areas covered by the article. Suggests that the new Reference Librarian need to be redesignated as Information Service Officer, Internet Librarians, Information Specialist, etc.

Sharma (1999a) outlines the features and impact of information technology on our society and discusses in detail the role played by IT in special library environment. The changing IT environment and matching role of the reference librarian in 21st century has been discussed. A wide spectrum of impact of IT on Defence Science Library (DSL) and its various library activities and services making use of IT has been provided. Concludes that as the technology is changing at a very fast rate, there is still scope for the librarian and others involved in library activities to develop more skills and have matching human resources to keep pace with this changing information technology environment.

Sridhar (1999) cites various levels of skills required by LIS professionals in the new 'e-world' and highlights skills starting from computer literacy to electronic publishing and marketing. Further discusses that new professionals of e-world of 21st century need to have not only knowledge and skill in the areas of information technology but also matching 'will' to carry out the services in the new media and means.
Concludes that a right combination of professional, IT and managerial skills is required for LIS professionals to carryout their duties in the new changing electronic world.

Vara Lakshmi (1999) highlights the professional challenges among librarians. Changing roles of the professionals, the characteristics to suit to the present day information environment, the problems that the library professionals are facing are discussed. Stresses the need for attitudinal changes among librarians because the attitudes of the professionals have a major role to play in the performance on the job. It is concluded that the advances in IT makes us perceive a global system in which all information handling activities take place in a completely electronic mode. The professionals have to get self - motivated and positively respond to the needs of the customers with available infrastructure and thus energize the profession.

Chand (1998) highlights the challenges and role for information profession in the emerging information environment. Describes that technological advancement and changed scenario have put new challenges before LIS profession such as information overload, communication revolution, computer revolution, globalization, emergence of new disciplines, change resistance, displacement in LIS profession, impending information back out, and information poverty, etc. Suggests that the viable solutions of these challenges are to be searched by the professionals displaying their all-round knowledge of the subject, which they are supposed to deal with, professional skills, technology application and its implementation, management skills, adaptation of new developments and professional attitudes. Also lists the expected role of LIS profession in the transformed world of information.

Haider (1998) gives an overview of libraries and information technology in Pakistan. Traces the origin and development of library automation in Pakistan, giving reasons why automation is so important. Describes education and training. Highlights that automation progress is
being impeded by absence of planning, software/hardware constraints, lack of cooperation, lack of competent and willing manpower, and non-existence of standards and financial limitations.

Meadows (1998) examines the outcome of a study carried out in the U.K. on the growth of multimedia information. Describes that multimedia information is rapidly growing both in importance and in diversity. The question is not simply how such information should be handled by library and information staff, but also whether their role might be bypassed by direct end-user access. The technical problems in handling multimedia information are also discussed. It is concluded that the problems presented by the handling of multimedia information will require a change in role of library and information staff, but will not eliminate the need for their input.

Penny (1998) outlines the methods and findings of an Electronic Libraries (e-lib) Programme research project: SKIP (Skills for new Information Professionals). The project set out to evaluate the impact of information technology on the skills and roles of staff working in library and information services. The findings indicate that the personal qualities of staff are the key to their success in the networked environment, and that professional and service cultures can inhibit an individual’s professional development and effectiveness in the work place. Information Technology (IT) skills are important, but these can be acquired by those with the desired personal qualities, and who are provided with a working environment which is conducive to personal and professional development.

Raina (1998) describes the pressure on libraries and information centres to be self-sustaining so far as financial resources are concerned. Towards achieving this objective, the Indian Institute of Management, Lucknow has started Management Development Programmes in various areas like Total Quality Management, Human relations in librarianship, Information Technology applications and Marketing Library and
Information products and services for the benefit of library managers and other workers. The programme contents include human resources and IT in the context of Library and Information Centres.

Sasikala Subharao (1998) stresses that Information Technology has radically changed the nature of work, and as a consequence the context and skill base of many jobs in a library require evaluation and redefinition. Observes the functioning of IIT - Bombay library and it is found that the IIT - Bombay library staff have responded positively to the changing environment, maintaining a satisfactory balance with traditional printed information sources and services. It is well recognized that there is a substantial educational role for the librarians in familiarizing users with the networked learning environment and it is already possible to carryout many of the activities associated with this role in cyberspace.

Sharma (1998) lists the challenges due to the emergency of IT and deals in detail about one of the foremost challenges i.e. manpower development in the context of IT. The provision of raising facilities on IT in the library schools, inclusion in curriculum, short-term training facilities by other organizations, refresher courses, participation in workshops, seminars, conferences, conventions etc are discussed. It is emphasized that for their own survival and for the survival of the profession, the librarians have to play their role effectively in future; otherwise they will be replaced by a new group of professionals.

Large (1997) examines that changes in the library system are likely to influence manpower requirements, and it is to these requirements that manpower development must respond. Adds that changes in libraries, including university libraries, are likely to be influence by three factors: the increasing difficulties which libraries, librarians and users alike are encountering in using traditional methods to cope with formal sources of information; the increasing costs of operating libraries; and the opportunities offered by new technology. Education and training of information professionals are also covered by the study.
Malinconico (1997) presents a historical overview of technological developments and their use in libraries and argues that librarians have always been amongst the first to adapt to, and use, the latest information handling and communication technologies. Concludes that librarians are now actively engaged in developing digital libraries, which will extend and enhance the common notion of a library. In so doing they will help extend the limits of electronic imaging, data transmission, automatic indexing, natural language processing, and numerous other related technologies.

Wormell (1997) focuses on the roles and functions, which challenge information professionals today. Outlines the FID concept of multifunctional education and training. Describes that information professionals mediates between information providers, information users and information technologies. As mediators, their multiple roles take on a hybrid quality that demands flexibility, adaptability and special skills. Suggests that to foster the future generation of information professionals, we must promote international and historical perspectives in our field. One way to do this is to share the history of our pioneers with new generation of professionals and with newcomers to our field. This will help them to see ongoing developments in an evolutionary perspective.

Mahmood (1996) describes the activities of the Netherlands Library Development Project (NLDP) for the promotion of information technology in Pakistan. During a five year period, NLDP made great efforts in the fields of manpower training, hardware supply, software development, information networks and curriculum development in Pakistan. NLDP in association with the Pakistan Library Association were responsible for setting up computer training centres for librarians, introducing E-mail and CD-ROM technology in libraries, information centres and library schools, sponsoring courses on library automation and sending librarians abroad for training.

✓ Malwad (1996) discusses the rapid technological changes brought about by the digital libraries. The acquired skills of the traditional librarians
need total transformation in the changed circumstances. Considering the Indian scenario, a brief discussion is given on barriers such as economical, manpower, psychological, cultural, social and political in developing the required skills. Emphasizes that librarians have to be responded to the changes by adjusting or enhancing their skills.

White (1996) states that (originally appeared in the February 1969 issue of Special Libraries), librarianship is a profession in transition. The road to special librarianship is branching, and in order to succeed, members must look down both forks in order to be best prepared the future ahead. The new roles and responsibilities of the information professional must be embraced to make users realize the library’s value and worth. Focuses on ways to accomplish these goals in order to secure the librarian’s place in the workforce.

Hunt (1995) highlights the librarians role in the rapidly changing information scenario. He interprets the role of librarian as interpreters as well as gatherers. The enigma of copyright is also discussed. Suggests that the librarian of the future is quite often a practicing librarian toady, grappling with the issues that are reshaping the profession.

Rodriguez (1994) presents a discussion, based on statistical data concerning information technology and research, of some of the barriers, which inhibit the development of information technology in Latin America and the Caribbean, at the national and regional levels, and particularly the development of indigenous Latin American databases. Describes some of the options open to developing countries: development and enforcement of national or regional policies on information technology; design of educational programmes to enhance and supplement manpower resources and increase efficiency and productivity at all levels and promote linkage between users and researchers in both the private and public sectors, both regionally and nationally.

Chakrabarty (1993) describes manpower planning in an essential ingredient of effective management. Analyses the demand for library and
information workers as advertised in five national dailies in India during 1988, and assesses the situation regarding supply. Stresses the need for training specialized manpower by laying greater emphasis on information technology and information management to meet present day needs.

Ogwang - Ameny (1993) outlines the background to the project to establish a National Information System (NIS) in Uganda, the structure of the system and its target beneficiaries, and the national information policy. Discusses the need of the NIS for trained information technology manpower and presents proposals with regard to the content of training programmes and modules, training methodology, and training materials and facilities.

Ojala (1993) examines the core competencies for special library managers of the future. Discusses that, if the library of the future will be virtual - without walls - and if library patrons or information services clientele will expect the library to come to them rather than them going to a physical place, clearly the core competencies for library/ information staff will change significantly and abruptly. The 20th century special library manager will be called cybrarian in the 21st century. Concludes that in information - intensive future, the role of cybrarian is critical. Not only he can identify, provide, analyze, organize, categorize and disseminate information but also he can create information. Advises the cybrarians to go boldly, competently and confidently into the 21st century.

Malinconio (1992) emphasizes that professionals should have a broader view of the efforts of changing environment and the ability to access user needs from marketing perspective. Marketing skills are important so as to identify user needs, and advertise and propagate the services.

Bedi (1991) highlights the impact of automation on staff and on the administration of library operations. Emphasizes that the library administrators and managers must develop mechanisms for dealing effectively with the changes caused by the introduction of new technology.
in a library. Discusses the guidelines recommended for introducing staff to
the changes caused by the new technology. Concludes that any library
set-up could benefit from implementing these guidelines.

Srimurugan, et. al. (1991) present a proposal for the staff formula
for the automation and technical services section of the university library.
Emphasize the need for computerization and manpower development.
The staff pattern of the computer section in North Western University
Library, USA during the 1980's is provided.

Kemparaju (1990) reports the results of a study to identify the role
and impact of information technology (IT) on library and information
science (LIS) activities. Identifies the knowledge and skill requirements in
LIS staff needed to interact with the changing environment. Suggests
measures for development of these skills to meet the present and future
challenges in the profession.

Panigrahi (1990) highlights the importance of manpower and
manpower development in the context of computerization in university
libraries. Role of computer in university libraries, need for adequate and
highly skilled manpower, manpower development programmes in Indian
library schools are discussed. Suggestions are made for the establishment
of a National Training Institute for LIS professionals, a manpower
commission and a library Council for manpower development.

Rama Reddy (1990) describes briefly the job design, evaluation of
positions needed, staffing the activities such as staff plan, performance
standards for staff, education and training of manpower while introducing
automation in the libraries. Concludes that the staff should understand
fully the advantages of automation. Success of introducing automation for
serving users effectively and efficiently will depend largely on library staff.

Crowe and Anthes (1988) are of the view that academic librarians
face a new working environment engendered by the rapid growth of
information and advances in information technology. New conditions
create ethical considerations that go beyond questions of individual
behaviour. Value conflicts and ethical dilemmas arise from the more active, substantive role required of the academic librarian by technological developments. Discusses the ethical problems generated by the new environment. Stresses that academic librarians must be sensitive to ethical requirements inherent in their role as information mediators.

Angell (1987) conducted a study in Britain on Information, new technology and manpower. The study reports the impact of new information and communication technology on the demand for information, and the consequent efforts on employment and training of information workers. This report relates the exercise and its major findings, with emphasis on the traditional core of information workers, namely librarians and information scientists, within the wider perspectives of the information complex and the economy as a whole. The role of information workers, the future of the information profession, and recommendations for curriculum changes and in-service training are also covered by the study.

Seetharma (1987) highlights the impact of new technologies related to computers, telecommunication and reprography, on the library and information work. Examines the implications of the use of technology on the knowledge, skill and role of information professionals. Emphasizes that mere possession of knowledge would not be sufficient, but one should possess the skill or skills to apply knowledge gained fruitfully. Suggests that tomorrow's information professional must be able to recognize and assess the implications of their actions and the actions of others and they must be able to act decisively when humanity and technology threaten to clash. Stresses the need for re-orientation of the educational programmes in India to respond to the newfound situation.

Gupta (1985) outlines trends of development in information technology especially in computer technology for manpower development. Describes computer facilities including software available in Nigeria. Stresses the need for introducing courses in computer applications for library operations and information handling in educating and training the
professionals in Nigeria. Details courses currently conducted and proposed for the future.

Neelameghan (1976) raises issues relating to information manpower development policy, national information policy and the role of international professional bodies in relation to these developments in information technology.

**2.3 Library manpower development**

In an opinion study Sakhti Regha and Swaroop Rani (2006) find out the importance of certain traits as identified by library professionals employed in higher education institutions of Tamil Nadu. The study shows that sincerity, clarity of thought, good interpersonal relationship and honesty are considered more important and teaching ability and emotional stability are considered less important. Explain that it is very difficult for the library and information science professionals to live up to the expectations of the users. To meet the user expectations, certain basic qualities have to be developed. Job psychograph is used to measure an individual's qualities and fitness for the job. The study finds that the trait 'Sincerity' was accorded the maximum points and the trait 'Teaching ability' was scored minimum points. Next to sincerity, Clarity of thought, Capacity for good interpersonal relationship and Honesty were accorded the same points. As the respondents were from educational setup, the trait education was ranked as third along with other traits like Curiosity of knowledge, Organization of materials. Conclude that job psychograph provides the graphic profile of the person performing the job based on the traits required for the job. Hence, the study of the job psychograph of library science professionals employed in higher educational institutions becomes pertinent.

Gupta and Malhan (2001) have undertaken a study of library human resources development both at the University of Jammu and the University of Kashmir. At both these universities, there had been problems regarding the development, growth, placement and performance of library staff and
hence data was collected from both the university libraries to make an in depth analysis of various problems and study various facets of library human resources such as selection and recruitment, staff qualifications, pay scales and status, staff strength and workload, etc. Found that there are several factors, which contribute to the high performance of staff and keeps the staff motivated, enthusiastic, positive looking and contributing to the development and improvement of the institution. Factors such as probation, appraisal, staff record, etc. do help the institution to get work from the staff. Both the Universities of Jammu and Kashmir made considerable efforts for the development of library human resources. Suggestions are made to motivate the staff for work performance.

Tadasad and Maheswarappa (2001) discuss the results of a survey of human resources in 571 college libraries in Karnataka state. The study has revealed that, full - time professionals manage more than eighty-five percent of college libraries. More than forty percent of the professionals are graduates and more than one third are post - graduates in LIS. Nearly twenty-five percent of the professionals have an experience of less than five years. One hundred and sixty five professionals are paid a consolidated amount. Only three hundred and eight are paid in accordance with the existing pay scales. Majority of professionals do not have membership to any of the professional associations. Eighty of college libraries do not have professional staff. A greater majority of professionals who are heading the libraries are males.

Dabas, et.al. (2000) highlight the importance of 'men' in the 5m's of management. According at the 5 m's of management (i.e., men, money, machine, material and method) men is the most important means for the optimum utilization of other means of resources. In order to provide information products, services and consultations according to the needs, desires and expectations of the users we need committed, competent, confident, dynamic, educated, motivated, and trained employees. It is in this context that has brought human resource development (HRD) to the entire stage of library and information management process. Concept of
HRD, need of HRD for library and information staff, education and training, upgradation of technical skills, skills for organizational system, structure and procedures, managerial skills, etc. are explained. It is concluded that HRD mechanisms of continuing education, training in IT and managerial skills through seminars, workshops, short course will improve the work processes and will enhance the professional and personal competencies, compatibility and capability of the library staff in meeting the organizational goals and delight of the users and pride of workmanship.

Kannappanavar and Mathad (2000) has conducted a survey of the first grade college libraries in the state of Karnataka. According to the survey the 720 colleges in the state have been categorized into four kinds, viz. aided, government, constituent and unaided colleges. Various aspects of the 370 libraries in these colleges such as qualifications of librarian, library staff, working hours, classification schemes uses, lending, reference services, library building facilities, etc., have been profiled. Concludes that the present status of college libraries in Karnataka is far from satisfactory owing to inadequate funds and staff.

Sharma (1999) discusses the importance of Personal Transferable Skills (PTS) in the library and information profession. PTS are those skills that enable a library professional to acquire, structure and interpret subject knowledge. Communication skills, ability to work in groups, problem solving and interpersonal skills are the basic facets of PTS. Rating of PTS in LIS professionals, acquiring PTS are described. It is emphasized that curriculum of LIS should give due regard to practicals, seminars, role-playing and simulations to impart such skills.

Shukla and Nair (1998) enumerate the characteristics that are required for the competencies for librarians. The competencies form the basis for the continued survival and growth of librarianship in the information age. Few general observations on the state-of-affairs of the academic libraries are provided. Suggests that it is high time that the
librarians make professional activities effective and economic. To achieve this, certain skills and competencies are to be developed.

Sinha (1995) discusses the results of an analytical study of the chronological development of manpower in libraries and allied institutions in West Bengal until 1992. The manpower development introduced in different study centres in the state and general survey through questionnaire regarding intake and output from these centres during the period 1977 - 1992 have been presented. Also highlights the numbers of male and female students, failures and wastage. Attempts to achieve equilibrium between demand and supply.

Singh (1994) examines the involvement of university library professionals in activities undertaken beyond organizations for enriching the profession and also enhancing their own knowledge by academic and professional perseverance. Bases his study on data collected through questionnaire from 261 professionals. Concludes that an over - whelming majority of the professionals (75.9 percent) are not at all involved in any kind of organizational activity. Points out that this is an indication of apathetic attitude among them towards professional activities.

Verma (1994) conducted a study on the self - study behaviour of the professional staff working in the university libraries of India. Primary data for the study generated through circulation of a questionnaire to the professional staff, at selected random. Thirty university libraries responded, which constitute the sample of the study. Use of library by staff, number of books real or consulted in one academic year so as to evaluate their taste towards self - study, subscription to newspapers by them for their own and family use are covered. Factors that intervene in their aptitude towards self - study are also analyzed. It is observed that the senior professional staff is more conscious about professional development than general development whereas the professional juniors and professional assailant are on an average more conscious about their general development through self - study.
Khaled (1992) in a study discusses the information manpower development in Egypt. It is an evaluation study of the Egyptian National Scientific and Technological project. The goal of which is to implement a national network of scientific and technical information systems in Egypt.

Olorunsola (1992) explores how Herzberg's two factor theory can be used to motivate library staff. Herzberg, a psychologist contributed immeasurably to how managers can motivate employees to do their best towards achieving organizational objectives. The theory is based on the notion that the factors or conditions that are satisfying or motivation are not the same as those that dissatisfy people at work. Discusses job enrichment in the library and suggestions are made for motivating library employees. Concludes that a library is an organization having the purpose of providing a professional service to the public. How well this service will be rendered depends upon staff motivation.

Ijari and Kannappanavar (1991) discuss the development of professional manpower in public library system of Karnataka State. Give a brief account of the public libraries situation in Karnataka. Propose a good professional staff structure for providing effective and efficient library services to one and all in the state.

Patil (1990) describes about the establishment and growth of college libraries in Mangalore city. Attempts to analyze the state of these libraries regarding their staff, finance, book resources, furniture and equipment. Certain suggestions are made as to how the condition could be changed to provide better services.

Rewadikar (1990) describes some social, psychological and organizational considerations and constraints of library and information science manpower development. Importance of information and manpower development, concepts underlying manpower development, decision groups which influence manpower development in L & I S profession, factors undermining manpower development are discussed. Concludes that public and academic library professionals should be able
to perceive and grasp the opportunity in a well-planned information network and incorporate computer service to their work-place in the modern Indian situation.

Thathy and Choudhary (1990) explore the factors motivating the library professionals working in the university libraries is Orissa. Mentions that salary and status are found to be the two most important motivators. Stress the professional competence motivation to increase the productivity of the individual. Performance of an individual depends on two factors of motivation and ability. Suggestions are made for improving the motivation of library personnel.

Augustine (1989) discusses the impact of social changes in libraries and library science profession and points out the need for the development of manpower to cope with the changing needs. Identifies the different categories of manpower required for various levels of information work in India and highlights the potential areas like Management Information systems, Archives, Medical reenos Information system, etc. where library and information science personnel can function effectively.

Medina (1989) discusses the strategies adopted by the Asian and Pacific Information Network on Medicinal and Aromatic Plants (APINMAP) in the development and maintenance and use of its databases. The organizational structure, software, hardware data collection mechanisms, data exchange, linkage with other centres communicating among nodes and manpower development are presented.

Singh and Singh (1989) reveal the strength of different categories of library personnel-professional and semi-professional, in college libraries of Punjab and Chandigarh. Discuss the implications made by the Cardre Review Committee of the Punjab Government. The study also mentions the recommendations of U.G.C committee on university and college libraries on account of library personnel.

Agrawal and Walia (1988) have made an analysis of main trends, approaches, accomplishments, and contemporary issues relating to
human resources development of library and information professionals in India. Major developments in modern library and information science, emergence of modern librarianship, emergence of professional information, emergence of LIS education, the information explosion and the changing role of librarian are briefly discussed.

Keen (1988) focuses on an important challenge of information management i.e. building the skill base needed in repositioning the Information Services (IS) organization. Finds that for the next decade, the main management problems concerning telecommunications and computers will relate to people, not technology. A detailed description of the traditional IS skill base, role versus tasks, role analysis, recruiting, lateral development and education of IS professionals are presented. Suggests that encourage IS professionals to think through very clearly their own skill base, educational needs, and career trajectory. Set up a process for lateral development and movement into and out of IS. Set up a process of internal recruitment. Re-evaluates entry level recruiting in relation to role needs.

Kemparaju (1988) focuses on the trends in the job market for library and information manpower in the special library and information sector. The advertisements from leading national English newspapers which were analyzed, scanned and compiled to consider trends in manpower requirements are presented with different manifestations.

Kong and Goodfellow (1988) examine the changing role of academic librarians and major career development issues and provide a specific career stages model for academic librarians. The model is then adapted to create a career plan for the information professions. Primary roles, psychological issues, and required competencies and strategies to attain those competencies at each career stage are discussed. Critical issues are identified, and an approach is developed for systematic career planning. Human resource planning implications for information organizations are also discussed.
Malhan (1987) examines manpower development efforts and observes that they must constantly match the institutions' needs, and changes in roles and responsibilities of human resources, and new performance environments created or likely to be created by technological developments. Portrays the competence, limitations and new service requirements of library personnel working in scientific and technical libraries in India, and suggests what needs to be done for the education and training of future manpower.

Chapman (1985) describes the staff development in American academic and special libraries. He points out that 'Staff Development', also known as 'Continuing Education', is a very real concern in the United States. Due to sophisticated advances in librarianship, how can the person who has been working as a librarian for a few years keep himself from becoming obsolete? Discusses the importance of continuing education and a new method of staff development called 'participating management'. Concludes that the individual librarian must take it his or her personal responsibility to initiate and plan his own continuing education.

Gopinath (1984) mentions functions performed by information professionals in his study 'Development of information personnel'. Provides categorization of information professionals. Enumerates the skills expected in information work and skills imparted in information science schools.

Mwaccalimba (1981) in his doctoral dissertation aims to provide a way of thinking about the planned development of library human resources in Zambia. The results of a questionnaire distributed to a sample of Zambian libraries were analyzed. The historical development of the Zambia library service was traced, emphasizing the implications for the development of a library HRD design. The development of library education was found equally inadequate. Finally library HRD needs were
discussed and a detailed process presented for their attainment in Zambia, and by extension elsewhere.

Bhattachrya (1979) in a study defines the place of the information service system in a total information system in the context of Indian National Development. Analyses the implications of professional education and takes note of the expectations from a professional to be engaged in an information service. Enumerates the necessary knowledge, skills and understanding that an information professional must possess. Proposes a design of a professional manpower development system specifying the participating agencies and a full complement of programmes at different levels that can ensure the required quality and quantity.

UNESCO and DRTC (1977) in a report have recognized at the outset that qualified personnel are the key element for proper development of documentation, library and archives services. Within the National Information System (NATIS), the attention of member countries has been drawn to this problem, coaxing them to undertake comprehensive surveys to determine manpower resources in relation to the expected growth of information activities. To encourage the establishment of training programmes UNESCO gives assistance in the holding of regional and multinational courses, seminars and symposia.

2.4 Library manpower development and planning

Bhattacharya (1989) defines a system approach to manpower planning and development. Describes the factors to be taken into consideration in the development of comprehensive structural plan for an educated manpower development system relating to secondary information work and service. Details the objectives and programmes of activity of the promoting agencies and the implementing agencies for the development of manpower.

Mitra (1989) discusses the concept of planning for manpower development in library and information centres in developing countries.
such as India. Describes the stages in the manpower planning process, quantitative and qualitative aspects of manpower planning and factors affecting the process. Emphasizes the need for a staffing structure and discusses training requirements, salaries and other service conditions.

Seetharama (1989) highlights the need for manpower planning and discusses various aspects of the manpower planning process such as: qualifications, knowledge and skills required for information professionals; professional personnel development; supporting non-professional staff; and problems encountered by personnel and management. Discusses performance appraisal and lists points for consideration in manpower planning.

Oddoye (1986) in 'Manpower needs and development' examines reasons for the importance of manpower planning and the reasons why precise manpower forecasting is so difficult. Discusses the importance of formal and continuing education and training for librarians and other support staff and outlines the advantages of staff development to be gained by employees and employers.

Rochester (1984) describes the library and information planning in Australia. Suggests that the three aspects of the library and information personnel system are planning, production and utilization of personnel. Maintains that planning for personnel takes place as part of overall library and information services planning, and that the development of adequately educated and trained personnel occurs within the overall educated system. Asserts that library and information personnel utilization ensures that staff with the appropriate qualifications and skills are used to best advantages to meet library and information cost effectively.

2.5 Library manpower needs and requirements

Made (1997) outlines the general pattern of library development in West Central and South Africa. Proposes a fact-finding procedure in
Zimbabwe to establish library manpower needs and help formulate an appropriate education programme.

Venkata Ramana (1993) attempts to examine the manpower pattern and inadequacies of Indian university libraries. The proliferation of higher education in India has its bearing on the establishment of new universities. Describes that the manpower requirements of libraries are planned neither in accordance with the staff formulae enunciated by the University Grants Commission nor staff standards are worked out scientific lines. Adhocism and haphazard recruitments are seriously effecting the service oriented information dissemination in university libraries. An appraisal of the existing pattern is analyzed and suggests meaningful manpower planning, motivation for the growing information needs of the changing world.

Allison and Sartori (1988) has conducted a study on professional staff turnover in academic libraries. This pilot study was undertaken at the University of Nebraska to identify factors contributing to the turnover of professional librarians. Librarians who left between 1974 and 1984 and librarians currently on staff were surveyed. The results indicate that relationships with supervisors, career goals, financial support, and pay are most important in deciding to leave. Factors that caused dissatisfaction among those who left are explored, and a model is presented for describing the decision-making process.

Rewadikar (1985) focuses on the manpower needs in the university and college libraries of Delhi, Punjab and Madhya Pradesh. Unrolls the importance of professional library staff and their needs in the college libraries. Also describes how the library science education can be improved by introducing more number of professionals.

Neill (1982) has conducted an investigative study on the library an information system in Southern Africa and their functions and manpower development. He has made a credible forecast of future personnel needs with regard to numbers, recruitment, education, training, wastage,
promotion, case, hierarchies, tasks and functions. The main objective is to attempt to match anticipated output and demand with the anticipated growth in services. The resulting analysis will facilitate a more accurate determination of personnel needs.

2.6 Library manpower development, education and training

Larsen (2005) discusses the Continuing Professional Development (CPD) programmes of library and information professionals in a Nordic context. The emerging roles of libraries and librarians and what education and training needs emerging from those new roles are explained. Opines that today's challenges are content management, creation of institutional repositories, copyright negotiations, license agreements and digital rights management. Also discusses the importance of developing knowledge, skills and attitudes - three competencies of equal importance. Argues that personal skills and attitudes are considered more important than professional qualifications. Concludes with a number of recommendations to improve the CPD programme.

Enns and Walton (2003) discuss the outcomes from a national survey by the Chartered Institute of Library and Information Professionals (CILIP) on providing effective continuing professional development to United Kingdom academic librarians in the further education sector. Identify why continuing professional development is currently crucial for further education librarians and also why specific barriers prevent easy progress. It will use the data from the survey to produce a model that informs how different staff development stakeholders (library associations, library schools, internal delivers, etc.) need to work collaboratively. There are major challenges currently being faced by United Kingdom further education librarians and effective staff development needs to be in place for them to cope effectively. Concludes that staff development budgets in further education colleges are very limited and very rarely devolved to department heads. Therefore librarians are not in control of the staff development budget for their service.
Khan (2002) highlights the technological changes, social changes and the change in the environment need to be accepted by libraries and in the library and information science education. Describes that libraries in the present days have undergone a change to store and disseminate knowledge / information through variety of sources of information. There have been multimedia libraries, electronic libraries both print and electronic media, digital libraries etc. Concludes that the UGC, the professional associations and many schools of L & I S in the universities, which organize the courses of orientation programmes, summer courses to in-services working librarians and L & I S teachers must incorporate library automation, information technology as a major theme.

Poulter and Mc Menemy (2002) report on a new multimedia centred ICT module, called Fundamentals of Information and Communication Technology (FICT) for post - graduate information and library studies students at the Graduate School of Informatics at Strathclyde University. It had radical aims (introducing novel ICT skill content in a progressive manner, encouraging deep learning and self-directed study) and used a weekly survey and a post- module survey to investigate its operation. Skills learnt were compared to skills required during student placement in libraries. Conclusions are drawn as to its success in matching the needs of future library professionals.

Smith (2002) examines the library profession's educational ecology and concludes with some recommendations for strengthening the system. This examination consists of four components: an examination of another profession's educational ecology, a summary of three different futures oriented views of the library profession, general discussion of the current educational system, and a proposed "Green Movement" for the profession whose purpose is to address the weakness that exist in the current educational ecology. Focuses on the continuing education component of the profession's educational system. Concludes that the outcome of such a movement would be the creation of a self-renewing profession. In
essence, this movement would advance librarianship from being a learned profession to becoming a learning one.

Devarajan (2001) attempts to examine how far the existing curriculum in library schools respond to the new changes taking place especially in the field of information technology and in generating need-based manpower requirements in libraries and information centres in India. Present LIS curriculum is evaluated and comments that the existing curriculum can create only "half-backed professionals" or "broider librarians" for the 21st century unless we are not willing to change our attitude toward the revision of curriculum in LIS schools in India. Emphasizes the need for curriculum change. Concludes the design of the specialized courses in information technology is imperative to meet manpower requirements of the libraries in future. This would help to prepare future information professionals for the 21st century.

Malhan (2001) highlights the education and training needs of information professionals in view of the growing use of the internet in various types of libraries and information centres. A detailed description of the impact of information technology and developments of the internet on libraries and information centres and implications for LIS education are provided. Stresses that manpower development programmes of library and information schools must match the changing work requirements of libraries and information centres, contemporary information systems, growing and diverse information demands of society changing information seeking methods and channels and constantly adapt to the new information scenario created by electronic publishing and the internet.

Sacchanand (2000) focuses on the role that workplace learning plays in the continuing education of library and information professionals. Describes the changes that are taking place in society, particularly in higher education. Explains that the explosion of knowledge and information technology have virtually altered the characteristics of the learning environment, paving the way for new learning experiences. This
is having a dramatic impact on the library and information profession, leading to changes in the continuing education of information professionals. Reforming workplace learning is introduced. Concludes that workplace learning is important and considers this a long-term investment in the future of the organization.

Vyas (2000) presents the relevance of Continuing Professional Development (CPD) of staff in academic libraries. Objectives of CPD, need appraisal, staff development for library staff as well as Head/Librarian is covered. He is of the view that staff development is needed for organizational change. If we do not have staff development programme, we will have problems in future. It is suggested that to have strong staff development programmes, UGC in consultation with Indian library Association should form another committee on the lines of Ranganathan Committee for Academic Libraries. This committee should define objectives and go in detail to suggest staff development programmes, so that library professionals remain update.

Gopinath (1998) discusses the need for continuing education of library and information personnel. Identifies the frontier areas for continuing education and competence development. Provides a modular structure of the themes for continuing education. Stresses that we have to empower the already educated library and information personnel to handle the new developments in terms of technological, cognitive and managerial aspects of library science. Concludes that emergence of new knowledge in any field needs a 'continuing' education programme to be promoted for use. Current professional practices should absorb the ongoing competencies in a modular and helpful fashion.

Gopinath (1996) in an another paper attempts to develop a curriculum for digital information systems as a learning package for library and information professionals in the information technology context. According to him information technology has provided new media, new modes of studies, organizing, retrieving and communicating information to

Singh and Kalra (1996) emphasize the need to restructure the Master of Library and Information Science courses in order to develop quality manpower to satisfy the demands of an emerging information society in India. Discuss that the focus of the new model should be the development of: core competencies for information communication and information use; end user training; information resource management; information technology; and research evaluation. The task requires a national effort for quality control via accreditation. Recommend the establishment of a national level accrediting body.

Ocholla (1995) discusses issues and trends affecting the information profession in training, curricula development, application of information technology, cost of information materials and the crisis in manpower supply and demand in Kenya. Suggests that training institutions need to adjust their intake of trainees to the national situation and to broaden the courses they offer to include computer skills, communication studies, economics of information, marketing, research methodologies, management, publishing and book trade, resource sharing and continuing education.

Ahmed (1994) traces briefly the origin and gradual development of library, training and education as a continuous process of staff development in Bangladesh. Shows the attainment of manpower product through ceaseless efforts to meet the manpower storage for the development of libraries and librarianship in Bangladesh. Suggests specific recommendations in the curriculum for the future generation to practice in the library profession.
Feather (1994) discusses the professional development, manpower education and training in the United Kingdom. Describes the history of library and information education in the UK, tracing its development from a system of apprenticeship to its current status as a research-based academic discipline.

Hunt (1994) examines the professional development, manpower and training issues in the United States. Historical antecedents to the present models are presented together with suggestions for future directions. Gives manpower projections concerning the number of professional librarians needed in both the traditional aspects of librarianship and the non-traditional areas.

Saad (1994) is of the view that library and information professionals are an essential manpower resource in realizing the development of an information society. Their current role now is to provide quick, and effective access to relevant information beyond the traditional role as custodian of information. Among the challenges are: information technology (IT); networking environments; newer communication media such as the electronic book, optical disk, multimedia and virtual libraries. Emphasizes that library professionals of the future must have the basic information competencies and not just those competencies that the present job demands. Concludes, therefore, that they must be provided with continuing education programmes, constantly updating their professional knowledge and expertise.

Singh (1994 a) discusses the need for adequate education and training of library manpower in the changing socio-technological environment. Describes the library and information science education scenario in India at various levels from a variety of institutions. The manpower turnout with the various professional degrees are outlined. Emphasizes the increasing need for continuing education programmes for manpower development and offers suggestions for professional development, manpower education and training in India.
Kanakachary and More (1992) explain the main components of computerization of library and information systems. Stress the need for and necessity of manpower. Emphasize in-service training. Suggest a methodology for conducting training programmes for computer application in public library systems.

Younis (1992) reviews the state of library education in Jordan in three categories: professional at the post-graduate level; sub-professional at the community college level; and in-service training. Notes the role of the Jordan Library Association, particularly in relation to in-service training. Presents detailed accounts of programmes, syllabus, curriculum and course contents offered at all levels. Sets out a statistical analysis of students and trainees and highlights the impact of information technology on library and information services in order to disclose what should be incorporated into the new library education professionals to practice their profession in Jordan.

Kapoor (1991) briefly outlines the role of professional bodies in enhancing the competence of practitioners and describes the training programmes conducted by the Indian Association of Special Libraries and Information Centres (IASLIC) in emerging areas of professional practice and particularly in information technology. Outlines the approach of IASLIC to manpower development in future.

Kumar, et al. (1991) present a brief account of the training programmes, workshops and seminars in modern methods of information technology, aimed at beginners as well as qualified professionals, conducted by the National Informatics Centre, New Delhi, under its manpower development programme.

Chary (1989) defines training and development and discusses its significance in the library field. Describes the components of the three stages in the planning of a training programme and sets out criteria for the evaluation of library training programmes.
Raghavan and Sankaralingam (1989) discuss the contemporary issues and future considerations in the education for information manpower in India. The major environmental factors such as trends in publishing, information technology, etc. affecting information system are examined and their implications for education programmes in library and information science are brought out. The inadequacy of the existing programmes to meet the changing situation is highlighted. Emphasizes the need for 'de novo' approach to the problem of education in information with inputs from different fields.

Rajan Pillai (1989) highlights the training needs for professional manpower development. The need for imbibing new developments in the fields of information science and information technology which offer great promises and even more efficient and effective delivery of information is stressed. In order to correlate the training offered and its adoption on the practical plane, a function-oriented training programme is suggested. Two type of programmes professional education and continuing education- are recommended. Professional education has to be imparted at two different levels - basic professional education and advanced professional education. Concludes that information professionals have to brace themselves to measure up to the quality of services demanded of them under the changed circumstances brought about by the innovations of modern technology.

Singh (1989) highlights the qualifications and specialisation of library and information science teaches. The quantitative and qualitative improvements that have taken place in the manpower for library and information science teaching and their committant impact on the discipline are discussed. The quality of library and information science education can be linked with the interest of the teachers in the subject and their interest in carrying out research and from this point, the teachers in this field are not lagging behind. Emphasizes that there in an imminent need for incorporating new papers in the syllabus, for organizing refresher courses.
for updating the knowledge and periodic review of the performance of the teachers individually and the department collectively.

Kapoor and Banerjee (1987) highlight the relevance for introducing 'competency-based curriculum model' which aims at producing professionals who can provide service at a defined level of proficiency, in accord with local conditions, to meet local needs. The model involves precise delineation of the sets of competencies required for information work, organizing effective programme for acquiring mastery of library and information functions, and assessing achievement of desired competence. Concludes that increasing complexity and diversity in library and information practice with the impact of information technology, demands wider and newer range of knowledge, skill and attitude to meet effectively the growing information needs of the community.

Mangala (1979) in 'Manpower development for information handing' mentions the importance of information as a vital/natural resource and emphasizes the need for ready access to it through various ways of information dissemination. Explains the need for manpower training for information handling and describes the different categories of personnel for this purpose. Gives details of a formal education and training programme.

Neelameghan (1978) has prepared guidelines for formulating policy on education, training and development of library and information personnel. These guidelines provide general advice on major issues and factors to be considered in formulating an information manpower development policy, especially as concerns education and training of information personnel.

2.7 Library manpower development in Kerala

In a critical study Ramakrishnan (2001) has made an analysis of professional librarianship in Kerala by SWOT (Stength, Weakness, Opportunities and Threats) analysis. A brief account of development of professional education and impact of library automation is provided.
Describes that SWOT analysis provides an objective assessment as to whether the library or information centre is able to deal with its environment. According to the study the 'Strength' of any profession is its skilled and intelligent manpower. Just as there are several factors capable of giving strength and vitality to library profession, the 'Weakness', infact, outnumber, the strengths. An 'Opportunity' is any favorable situation in the organizations' external environment. The opportunities offered to the profession by the instantaneous revolutionary changes in IT are enormous. A 'Threat' is an unfavorable situation in the library's or information centre's external environment that is potentially damaging to it or its strategy. It is concluded that a close look at the strengths, weakness, opportunities and threats facing the library profession in the twenty first century will certainly convince that there is no need for the professionals to skeptic.

Jyothi (2000) in an investigative study describes the manpower management in the special libraries in Kerala with special emphasis to the special libraries located in Thiruvananthapuram district. The study proceeds with the following objectives. To examine the strength of manpower resources in special libraries in Kerala; to analyze the different categories of library staff; to analyze the extent of encouragement given to the employees for continued professional development; to study the extent of IT applications on libraries and to examine the extent of IT skills of the library staff. Questionnaire is designed to collect the necessary details for the study.

Mohana Kumar (2000) has conducted a survey on the professional library manpower development in Kerala. Questionnaire method and interview method were used to conduct the survey. Questionnaire was distributed among the professional librarians working in various libraries in Kerala. Library and information science education in Kerala; impact of distance education stream on library profession; employment opportunities versus distance education programme; scope of self-employment programme for professionals; role of professional library associations in
Kerala for the development of manpower and manpower investment in libraries are the major areas covered by the study. Suggestions are made for improving the library manpower situation in the state.

Devarajan (1995) in his book attempts to examine various aspects of library manpower. This book is primarily an extension of the study that the author has made on the manpower requirements of some libraries in Kerala. Also tries to ascertain the position in this regard in some of the library and information science schools in India. The position that emerges from the study shows that there is under utilization of the existing manpower as many positions in various libraries are allowed to remain vacant an unfilled. At the same time there are many trained hands remaining unemployed. Throws up various issues and findings which would serve as an incentive for official initiative for positive steps in this area which would lead to the strengthening of libraries and information centres for the all round educational progress of the society.

Devarajan (1991) in an another study discusses the professional manpower resources and prospective requirements in special libraries in Kerala. Relevance of manpower planning, library and information science education in Kerala, special library situation in Kerala are covered by the study. Assesses the manpower position, qualification of professionals employed in special libraries. Suggests that the libraries especially special libraries in India require more professional manpower investment for effective information transfer.

Varghese (1991) explains the library manpower development in Kerala with special reference to the experiments in the training of semi-professionals. Random courses organized by the Kerala Grandhasala Sangham and the certificate courses conduct by the Government in the University of Kerala and by the Kerala Grandhasala Sangham are described. Suggestions are made for the improvement of the curricula of the certificate course.
Mohana Kumar (1989) discusses the role of professional library associations the continuing education and other manpower development activities with special reference to Kerala. Describes briefly the role in continuing education and other activities of National library Associations like ILA, IASLIC, IATLIS, etc. and other state level associations. The central part of the paper provides a detailed description of the manpower development and educational activities of various professional associations in Kerala. Concludes with certain suggestions for improvement of the professional and educational activities of the associations.

2.8 College libraries in Kerala

Thomas (2001) has made a critical study on the college library situation in Kerala. Finds that absence of library culture, absence of public relations in libraries and absence of student motivation diminish the use of college library. Stresses the need for information technology tools and facilities for college libraries. Further adds that IT tools would help in saving time and money overcoming geographical barriers, and better utilization of manpower. Concludes that college librarians must be given their rightful place in the faculty and the library staff be provided training in library science.

Devarajan (1999) highlights the problems that faces college and university libraries in Kerala. Importance of academic libraries in higher education, higher education in Kerala, studies on college and university libraries in Kerala are described. Problems both internal and external affecting the normal development including professional manpower are discussed. Emphasizes the importance of IT in college and university libraries and points out that the application of IT in college and university libraries is in a slow pace, Suggestions are made to improve the libraries so as to make them function as important instrument of higher education.

Majeed (1999) in his study attempts to analyze the situation of college libraries in Kerala. Collection development, organization of
Chinnamma (1997) examines the college libraries and librarians in Kerala. College libraries are supposed to be the "heart" of the college. Comments that at present they are not even the "tail" of the college. They are situated in the most forlorn part of the college building and are considered as the least wanted property. Problems relating to the routine activities, administration, staff and finance are discussed. Suggests that there should be refresher courses for the qualified college librarians to abreast the new developments in the subject.

Ninan (1996) has conducted a study on the past graduate arts and science college libraries in Kollam district. The specific objectives of the study are to ascertain the present position of libraries in terms of grade, collection, manpower, technical organization, infra structure facilities, to identify the services offered by these libraries; to ascertain as to what extent the users are making use of the services. Data collected from 19 libraries in Kollam distinct through questionnaire, personal examinations and interview are then tabulated and analyzed. Proposals for further improvement of the college libraries are formulated.

Vishnu (1995) attempts to investigate the manpower situation in the libraries of the colleges affiliated to the University of Kerala. It includes manpower planning, investment and utilization in the college libraries. Objectives and functions of college libraries are also covered by the study. Questionnaire method is employed to conduct the survey.

Report of the Expert Committee on the College Libraries in Kerala (1994). The Government of Kerala appointed an Expert Committee of examine the functioning of college libraries and suggest measures for their improvement. V.P.Joy, Director of Collegiate Education, Kerala was the convener. The Committee submitted its report in 1994. The Committee provides valuable recommendations based on an assessment of the
existing situation of the college libraries in Kerala including the library manpower.

Lalitha Bai and Devarajan (1989) highlight the relevance of books and college libraries as tools of higher education and research. Identify the major problems in the college libraries in Kerala. Also provides viable and prospective solutions to overcome the existing problems.

Bavakutty (1988) has conducted a survey of the college libraries for his doctoral study. The general features of college libraries in Kerala, importance of college libraries as heart of the parent institution, a detailed account of the administrative set up, status of library staff, personnel investment, financial position, standard of service providing in relation to collection and staff position are discussed. Concludes that most of the college libraries in Kerala are suffering from unscientific management, inadequate library collection and library personnel. Bhavakutty (1986) in an another study discusses the college library personnel in Kerala.

2.9 Conclusion

The literature review revealed that a good number of publications are available on topics such as 'Library manpower development', 'Professional development of librarians', 'Librarianship as a profession'. Most of the studies included in this chapter were conducted outside Kerala and abroad. Only a few studies have been carried out in Kerala.

Out of the 143 publications reviewed 59 items stress the need for skill development and attitudinal change among library and information service professionals towards information technology applications in libraries. 28 items discuss the library manpower development in various types of libraries. 5 items describe library manpower development and planning. 5 items highlight the manpower needs and requirements. 29 items stress the need for Continuing Professional Development (CPD) and in-service training for library professionals in order to provide IT oriented library and information service to the clienteles in the changing
environment. 7 items discuss the library manpower development in Kerala. Finally, 10 items cover studies on college libraries in Kerala.

Survey of literature also revealed that though literature is in abundance on the topic manpower development in library profession, the scarcity of literature is witnessed in the core area of this study which focuses attention on manpower development for college libraries in Kerala in the IT environment.
REFERENCES


