Chapter 1
INTRODUCTION

1.1 Introduction

All organizations are in a period of transformation including universities/colleges and their libraries with Information Technology acting as both a catalyst and an instrument of change. Billings (1996) views libraries as "organic, living, changing bodies of information, and they are becoming increasingly 'bionic' as their traditional printed resources are being enhanced and extended through electronic technology." This radical change in libraries in general and academic libraries in particular, presenting librarians with new challenges and new roles. Walton and Edwards (1998) see this as an 'exciting time for LIS staff.' There has been a development of new 'competence' in library workers at all levels, in order to respond to the vast technological changes, which are now taking place on academic campuses. All library professionals are facing the challenge of improving the quality and quantity of library services.

Manpower is a resource that has assumed high priority today for economic theorists, public administrators, educators and in fact for society as a whole. The past decade has witnessed keen interest in manpower as a phenomenon related to everything the nation is trying to achieve in the field of economic and social development. The basic inputs for all research and development programmes are manpower and funds. Knowledge about available manpower and its future needs is a pre-requisite for the planning process. Manpower or human resources is the most vital resources in an ever-changing society. Competent personnel can increase the quality of service. Manpower constitutes an essential component of all developmental plans and programs. It is an essential raw material for the functioning of any organization.

Modern management has been laying increasingly greater emphasis on the ability of the people in the organization to achieve its goals and
objectives. The trajectory of human resources in management is, of all the 'Ms' in management, that is management of materials, machines, methods, money and motive, the most important is 'M' for men or manpower or human resource. Human resources are utilized to the maximum possible extent in order to achieve individual and organizational goals. An organization's programme and resulting productivity are directly proportional to the quantity and quality of its human resources. This is why Peter Drucker has aptly stated: "human beings has one set of qualities possessed by no other resources: this is the ability to coordinate, to integrate, to judge and to imagine" (Subramanian, 1997). Among the various assets of the firm, the human asset or the human resource, therefore, assumes much more significance. Once the human resources are developed, they become resourceful to increase organizational effectiveness and can play a vital role in creatively coping with change and innovation.

Three facets of the present study are (1) Professional Library Manpower (2) College Libraries and (3) Information Technology.

1.2 Professional Library Manpower

Manpower resource is one of the most essential component in any profession. The performance of the personnel plays a vital role in the success and failure of an organization. Libraries are no exception to this phenomenon. The library schools not only educate the students but they strive to produce competent manpower resources for the libraries.

Manpower is a broader term than working force. It not only includes the latter but generally includes the potential or maximum available working force for a desired consideration. Manpower, thus, when disciplined to
creativity becomes human resources. In this context, manpower is an essential input in all organizational activity. Manpower is the total quantitative and qualitative human assets of people in a society or a given profession or occupation. It also includes the knowledge, abilities and skills and the quality of work they are capable to carrying out (Bhargava, 1989).

Abraham (1971) reviewed the studies and problems of manpower planning in India and defines the manpower as consisting of three broad elements, (i) Forecasting the demand and supply of manpower; (ii) Integrating manpower planning with educational and economic planning; and (iii) Utilizing or employing the manpower resources of the country and said that last named area has not received much attention in India as the other two. This is true in Library and Information Science Profession also.

A detailed definitional analysis of the terms 'manpower', 'library manpower' and 'professional library manpower' has been given in the chapter 5 of the study.

1.2.1 Librarians as professionals

One of the striking features of the early 21st century is the influential role of professions and professionals. Literally, a profession is an occupation or calling, which necessitates scientific or artistic learning. Librarianship is generally considered as a profession. But it, does not seem to have acquired the status of other professions like engineering, medicine, law, architecture, etc. where their practitioners enjoy good status in society.

1.2.1.1 Meanings of library profession

The Oxford English Dictionary defines a profession as "a vocation in which a professed knowledge of some department of learning or science is used in its application to the affairs of others or in the practice of an art founded upon it." The same sense is conveyed by Dictionary of the Social Sciences which says that "the term profession denotes occupation which demand a highly specialized knowledge and skill acquired at least in part by courses of a more or less theoretical nature and not by practice alone, tested
by some form of examination either at a university or some other authorized institution, and conveying to the persons who possess them considerable authority in relation to 'clients'."

J.H. Shera holds that there are two common elements about a profession. The first is that a profession means a service, performed for the benefit of humanity and with a high sense of purpose and dedication. The second element is that a profession should have a body of intellectual knowledge, a core of fundamental theory as well as a corpus of practice.

1.2.1.2 Characteristics of a profession

Every profession has to meet certain basic requirements to get social recognition. For an occupation to be recognized as a profession, it requires certain performance standards, education or training (Ajibero, 1993). Every profession is based on some theoretical knowledge underlying its practice, which is acquired through training.

Boaz (1968) has identified following characteristics for a profession.

(i) Its members acquire intellectually based techniques,

(ii) Practitioners assume a responsibility to their clients, and

(iii) That practitioners belong to a professional association, which sets standards for admission to practice and exerts control over the actions of their members through code of ethics. Such code of ethics is supported by public licencing and supervision.

Hanks and Schmidt (1975) have further modified and restated the attributes of a profession.

(i) An organized body of systematic and theoretical knowledge,

(ii) Primary orientation to the community interest rather to individual self interests,

(iii) Autonomy,

(iv) Group control of practice through licensure and codes of ethics.
Librarianship satisfies almost all the above characteristics. So, librarianship is, definitely, an occupation, which demands specialized knowledge and skills. Its study is based on a systematic theory, which delineates and supports the skills that characterize the profession.

1.2.1.3 Librarianship as a profession

While discussing library and librarianship, Pierce Butler has stated that, "books are the social mechanism for preserving the racial memory and the library is one social apparatus for transmitting this consciousness of individuals and the librarianship in the transmission of the accumulated experience of society to its individual members through the instrumentality of the book." (Singh, 1982). According to Danton "Librarianship is that branch of learning which has to do with recognition, collection, organization, preservation and utilization of graphic and printed material." Mayors defines librarianship as "that branch of human knowledge which is concerned with the production, care and use of recorded human knowledge" (Dakhole, 2005).

From the above two definitions we can infer that:

1. Librarianship is a branch of human knowledge
2. It is a profession
3. It is tool for information or knowledge
4. It involves social service
5. It is department of scholars, not a mere craft.

When once librarianship is regarded as a profession and one is aware of its set goals, purposes and aims the responsibility on the part of the librarian is doubled. He has to acquire the needed specialized knowledge and expert applying ability for performing the functions of an efficient
librarian. In majority of situations mere application of commonsense and normal intelligence will be insufficient to meet all the needs of the whole or part of the library organization. Knowledge of the aims of librarianship is needed along with the skills on applying them effectively in individual situations. Librarianship implies the development of individual in the profession so that he can fill successfully high position for which his abilities fit him. A librarian should have the capacity in readily responding to the needs of people he serves. A librarian in his complete and modern meaning accepts this challenges and tries to fulfill these fundamental needs.

The primary aim of librarianship is 'to provide the right book for the right reader at the right time' as Melvil Dewey had coined the phrase. Ranganathan's motto is to establish the contact between reader and his documents/information, pin - pointedly, exhaustively, expeditiously and at the right time. The objective remaining the same, the scope is expanding tremendously with the advent of information technology in the matter of expansion of readers' access to information.

1.3 Information Technology

The Information Technology or IT is revolutionizing the way, in which we live and work. It is changing all aspects of our life and lifestyle. The digital revolution has given mankind the ability to treat information with mathematical precision, to transmit it at very high accuracy and to manipulate it at will. Information Technology emphasis the use of scientific method, new technologies, management techniques and computers through trained manpower to handle information collection, storage and retrieval for the integrated development of society.

Integrating information technology into libraries has become a subject of interest among library professionals and policy makers in India. Contemporary developments in information technology opened new vistas in information services. The traditional methods of information services have to be improved with the use of IT, causing a minimum disturbance to the existing system (Rajan Pillai, 1997). The new technology has made a deep
impact on the academic libraries. Now-a-days the emphasis in libraries is shifting from collection of access to information. Today academic libraries are in transition from manual to electronic system. As a result the library and information science profession is facing many new challenges in the changing environment. With the application of IT in library operations and services, the traditional practices of book issue and other library operations have become obsolete. The conventional library administration has changed to scientific management of libraries and information resources. Owing to the development of technology, the information services have increased in their variety and quantity and refined in their quality.

1.3.1. Definitions

In simple words Information Technology can be defined as the machine based activity processing, storing and transmitting of information.

As a working definition, the subject of IT can be defined "as the body of computer technology and computer applications in the field of library and information science. It includes subjects like catalogue, automation, on-line information retrieval, retrieval and indexing techniques, library automation, programming for library applications, system analysis, database construction and management, and decision support system" (Vander Starre, 1993).

Zorkoczy (1985) has discussed information technology from four different viewpoints, viz., of society, economics, technology and the individual. He says that common element of information technology is the concept and volume of information. Further he mentions the four features, which affect the quality of information. These are

1. Accuracy
2. Contents (the breadth/scope)
3. Regency (updateness); and
4. Frequency of presentation

However, in the present context the term information technology is used. It includes three important segments of technologies viz.-
Information storage technologies; (ii) Information transmission technologies; and (iii) both Information storage and transmission technologies. The Information storage technologies include printed documents, microform and audio-visual materials. The transmission technologies include-radio, telephone, television (cable and broadcasting), telex, Fax, electronic-mail, on-line etc. Both information storage and transmission technologies include video, videodisks, videotext and computer.

The above definitions clearly indicate that the information technology is basically grouping of all such sophisticated devices and techniques used to meet the challenges of information and communication at various levels i.e., selecting, recording, storing, processing, edition, retrieval, reproducing, distribution and management. The Advisory Council for Applied Research and Development (UK) has rightly observed that there are three key components of the information Technology: (i) new ways to store information compactly and cheaply, (ii) new mechanism to manipulate, scan and search such stored records, and (iii) the facilities for cheap and rapid transmission of information over long distances (Sinha, 1988).

1.3.2 Application of IT in libraries

The first and foremost IT component, which can be adopted in a library, is the computer for library automation and to have an in-house database of library holdings in electronic form. As many primary journals are being published in CD form, it becomes necessary to equip the academic libraries to optimize the use of information. E-mail, on-line retrieval, networking, multimedia, and Internet are the other important technologies, which can be used for faster access to information. The following list (taken with amendments from Lantz, 1987) provides a summary of the range of applications, which may be implemented in one library (Allan, 1996).

- Major housekeeping systems
- on-line catalogue
- on-line monograph acquisitions
- on-line circulation control
- on-line integrated system (encompassing the above applications)
- Other housekeeping systems
- serials management and control
- financial control
- inter library loans
- indexing and administration of special collections
- statistical analysis of particular activities, e.g. serials survey
- Library Publications
- preparation and maintenance by word processing
- use of desk-top publishing packages to produce publicity materials and enhance presentation of all in-house publications
- creation, presentation and publication of specialist journals, e.g. abstracts journals, SDI, acquisition lists.
- On-line information retrieval systems
- on-line database - bibliographic and non-bibliographic databases
- CD-ROM
- Prestel and teletext services
- Communication links
- local area network to link to all systems and PSS
- electronic-mail
- facsimile transmission
- Access by library users
- provision of computing facilities, e.g. word processors, desk-top publishing, access to parent organizations systems.
- provision of computer software

The length and complexity of this list indicates the need for a library-wide information technology policy, which encompasses the management and development of these resources as well as the staff development issues. A staff development policy is essential too and although this may be separate document it should be compatible with the IT policy. It must also take into account the overall development plans of the library. (e.g. the library five year plan) so that the skills and expertise of the staff continue to match the developments and activities in the library.

1.3.3 Need for IT in libraries

Today, it is beyond the working ability of any library to cater and satisfy the information requirements of the users without using modern information technology. To provide pinpointed, expeditious and exhaustive information at the right time to the right person, it is essential to use modern information technologies. It provides opportunities for libraries and information centres to widen the scope of their activities and increase their significance within the organization they serve. In the present day context, the information technology is needed in libraries because of the following reasons (Dhanasegaran, 1998).

1. Information explosion
2. Availability of the information in machine-readable records.
3. Multi-use of machine-readable records
4. Need to provide better service, on wider scale by adopting on-line storage and retrieval techniques.
5. Facilities to storage, retrieval, dissemination and access of information must faster.
6. A machine-readable bibliographic data can be used by many users for any number of times for various purposes.
7. Information technology offers a new dimension to share resources among the libraries by creating library networks.

8. With the support of information technology, a user does not need to visit a completely mechanized library. i.e., "Paperless library". He/She can access his/her information required on the TV screen in his/her laboratory, office, house or any place if he/she has the necessary telecommunication facilities.

9. Space problem can be solved by using microform facilities.

Angell (1987) highlights some of the reasons for adopting IT in libraries. According to her the major reason behind adoption of information technology was invariably to improve the quality of services to users. To some extent, this was a response to increasing demand from the users. Emphasis was upon improving the quality of information provided, the speed of its delivery and its accessibility. The second important reason behind the adoption of automation was to improve the efficiency of working procedures. This involved automating as many time-consuming and repetitive manual tasks as possible, improving the storage, handling and retrieval of information and internal management procedures and speeding up work flow. A secondary consideration behind these moves was often that of saving staff time, which was already at a premium. Other reasons behind included: Improvement of communication and cross-fertilization of ideas, reducing duplication of efforts, and facilitating the handling of large volumes of information in an effective manner. Some individuals also mentioned the need to keep abreast of the times, and, having made a commitment to the technology, the constant need to update.

1.4 Changes in Information Environment

The information environment is the totality of the information infrastructure including the plans for organization and provision of information, the trends in information utilization, information sources and services, and developments in information science and technology (Rao and Anuradha, 1988). Today information is being produced faster by more
people than in the past. The increased pace of research and development taking place in different spheres of human activities throughout the world has greatly contributed to the rapid growth of knowledge. Moreover, the increase in specialization and the discovery of new relationships among many subjects give rise to a wide variety of new knowledge. This increase in knowledge is variously described as 'Knowledge explosion' or 'Information explosion' or 'Literature explosion' in the form of reading materials in different forms and formats.

Developments in computers, microelectronics and communication technology have radically changed the library and information environment. Gone are the days of stand-alone libraries, in which the strength of a library was judged less by the quality of its resources and services but more by number of documents available with it. Traditional libraries were dominated by print based publications and the access mechanisms were also by and large manual. Today with the convergence of information and communication technologies, there is a sea change in the library scenario (Singh and Kaur, 2000). There is a paradigm shift from stand-alone libraries to library and information networks; from print-based publications to computerized databases, from intermediary to end-user model. As such our library should not work as just-in-case storehouse of books, rather these should be just - in - time gateways to pertinent information. Whereas library and information professionals should play the role of gatekeepers. The information available via the Internet can provide the end-users with a seamless connection to the Internet-based resources and services. Moreover, we are surrounded by automated, digital and virtual libraries as well as data networks, specialized networks and library networks. Multimedia and the Internet have further made the job of the library and information professionals more challenging.

It is true that both librarians and readers are caught up in a fast changing information environment. The electronic communication and publication are transforming research, scholarship, teaching and learning. Technology trends and developments have to determine the future shape of library and information services. It is realized that the whole world, not just
the libraries, is in a fast growing network environment. Sheilla Corrall, from University of Asten wrote: "Local area networks linked to national and international networks offer opportunities for end-users with sophisticated and powerful workstations on their desks to search and retrieve documents via commercial services without going through a library or information professional" (Corrall, 1995). Infact, this points to a very serious malady in the present situation.

Librarians point out from own experience that on-line access services provided in the library have only increased the work load of the library staff because of the extensive support required by users to exploit the system effectively (Augustine, 1992). Therefore, in the networked library environment more time and emphasis are being given to training the users in using networks. The Report of the British Library working party on Electronic publishing noted that the expertise and involvement of both the computer and library personnel are needed to provide full support for staff service access to provide full electronic information system (Vickers and Martyn, 1994). Hence, our user education programmes have to be duly re-organized with emphasis on developing information handling skills in using network environments.

Ashraf (2003) has enumerated some of the characteristics of the current and emerging information environment in which librarians will have to function include:

- Greater access to a range of information,
- Increased speed in acquiring information,
- Greater complexity in locating, analyzing and linking information,
- Constantly changing technology,
- Lack of standardization of both hardware and software,
- Continuous learning for users and library staff,
- Substantial financial invest in technology.
The reality, then, is that whatever labels, are used to describe the current environment, librarians need to find way of respond effectively and innovatively to a very different landscape in meeting user expectations. This is needed if librarians and libraries are to flourish, or even survive, within their institutions.

1.5 Changes in the Library and Information Profession

Significant and rapid changes in the economic and social environment are making an important impact on the scope and organization of library and information services, and, therefore, on the library and information professions, on manpower requirements, and on professional education and training. The environment in which information professionals have to perform is changing significantly due to economic, social, demographic, political, educational, and technological changes. The revolution in computers, communications, and content in the past two or three decades has had a drastic impact on the information profession and information professionals. Society continues to become more paperless, evolving away from formal communication patterns that were almost exclusively on printed paper, to non-paper-based or electronic information. Information Technology has removed geographic barriers in such a global library setting and has pushed us toward an information-intensive, networked society.

The transition from a traditional to an electronic library is characterized by electronic services and media in the library. Libraries extensively exploit new technologies, such as multimedia, knowledge navigation, multi-lingual, and networked systems. These technologies allow libraries to offer a wide range of services, as well as to equip users with new learning tools, enabling them to plug into a whole new world of information. Library environments and the methods of providing services to library users are drastically changing with the availability of new technologies (Sacchanand, 2000). On-line Public Access Catalogues (OPACs) is replacing card catalogues/CD-Rom databases have advanced beyond the
domain of their paper counterparts. Prompt delivery service is accelerating international electronic activities. As a result today's libraries, especially academic libraries, are quite different from the ones we have known during the past twenty years. Libraries thus must reexamine their roles in society - how they operate and how they deliver library services. With such important changes, professional challenges, and advancement, there is a need for librarians and other information professionals to act as mediators between users and technology - to retrieve required information and to provide quality library and information service. Librarians and other information professionals are now called upon to provide a more sophisticated level of service to a more demanding group of users, especially academicians, faculty members, and students in higher education.

These rapid changes provide an interesting challenge to society itself and to the information profession in particular, and have a drastic impact of information professional and librarians. Change, as a whole, is bound to affect, in one way or another, the preparation, role, function, and status of librarians and other information professionals. The profession of librarianship seems now to be approaching a crisis point. The arrival of the Information Society, with its far-reaching developments in information storage and retrieval, is forcing reappraisal and drastic change in all aspects of the profession, particularly on staff development for library and information professionals to meet the information challenges of the twenty first century.

1.6. Need and Significance of the study

The above discussed aspects such as 'Changes in Information Environment' and 'Changes in the Library and Information Profession' paved way for the designing of the present study which necessitates the development of professional library manpower in tune with the changes that occurring in the academic libraries in the present changing IT environment.

The Information technology has made a deep impact on the academic libraries. Now a day the emphasis in libraries is shifting from collection of access to information. Today academic libraries are in transition from manual
The concept of library is going through a revolutionary phase due to the proliferation of electronic resources. Dr. Ranganathan has rightly stated that "to increase the productivity of higher education in university and colleges, it should cease to be curriculum-centred and text-book centred. It should become student-centred and there should be a close and willing partnership between libraries, students and faculty members."

Recent information technology has really invaded the day-to-day functioning of libraries and information centres all over the world. Libraries in India are no exception. Continuous advancement in computers, communication and software technologies have regulated the flood of products and services for libraries. It has provided powerful information dissemination has become inefficient. The application of new Information Technology and Information Management is a major factor to the acquisition, storage, retrieval and dissemination of information.

The capability to handle information effectively and efficiently depends on how well and how rapidly the libraries are able to integrate new information technological methods and devices. Because of various technological developments in the field of library and information service, the present day society has rightly been termed as 'Information Society'. In such a society, the library professional is expected to function as an intermediary between information sources, information systems and information seekers (Bhargava, 1989). The availability of electronic information sources, internet and networking of libraries has made it possible for librarians to enhance quality and range of services of library and provide the same to their users. Librarians should continue to claim the role as a guide, interpreter and manager of electronic and network based information. This will involve such exploration and continuous self-education as the environment demands (Khode and Dhar, 2002).

The contemporary scenario predominated by information and knowledge provides indicate the pressing needs to educate and train the
library and information manpower towards a sustainable professional competence. The manpower of today will meet in the near future the new challenges and the onslaught of the impact of Information Technology on LIS envisages to make substantial contribution to the ever perpetuating Information Society. They need to be equipped in this context with necessary skills and competency to satisfy the high level, complex and ever growing multifarious information needs of the user.

In the present changing information scenario it is highly relevant to conduct a study like this. No comprehensive and in depth study on the area of professional library manpower development in college libraries has so far been conducted in Kerala. Some studies about the overall situation of college libraries in Kerala are available. They are not covering manpower aspect in detail. Hence, it is anticipated to be useful to investigate the professional library manpower in the college libraries in Kerala. The study aims at to measure/ estimate the present professional library manpower level/ position i.e. to estimate how far the library professionals are capable of handling IT equipments and can provide IT oriented information services in the college libraries in the state. Such a study has got special significance in the changing Information Technology environment. The outcome of the study may be useful to authorities and librarians who can plan and execute for a better manpower development programme towards IT application in the college libraries. And measures can also be taken to improve the present situation of college libraries in Kerala. This study is very relevant for library manpower planning. Library manpower planning ensures the effectiveness and efficiency of libraries and information centres in providing need based services to the user community.

1.7 Statement of the problem

The present study is entitled as Professional Library Manpower Development for College Libraries in Kerala in the IT Environment

1.8 Definition of Key terms

The key terms in the statement of the problem are defined below:
1.8.1 Professional: Relating to a profession. The Oxford English Dictionary defines the term professional as "engaged in one of the learned or skilled professions, or in a calling considered socially superior to a trade or handicraft" (Vol. XIII, p.573).

According to Websters Comprehensive Dictionary (Encyclopedic Edition) (2001), professional as "Connected with, preparing for, engaged in appropriate or conforming to a profession. Of or pertaining to a special occupation or one skilled in a profession."

For the purpose of the study professional means librarianship.

1.8.2 Library: A place where books and other sources of information are collected, organized and made available for use by those who need them.

1.8.3 Manpower: According to Ginzberg (1967) "Manpower refers usually to human beings who work for wages or who earn income from the work they do. It also includes those out of work and seeking employment".

An operational definition is given by Megginson (1967). According to him manpower as "the total knowledge, skill, creative abilities, talents and aptitudes of any organization's workforce as well as the value, attitude and beliefs of the individuals involved. It is the sum total of the inherent abilities, acquired knowledge and skills represented by the talents and aptitudes of the employed persons".

1.8.4 Library Manpower: Qualified workforce involved in discharging the duties and responsibilities in the profession. It excludes the para-professional personnel produced by Certificate course in Library Science.

1.8.5 Development: The Oxford English Dictionary defines the term development as "The bringing out of the latest capabilities (of anything); and further expansion (of any principle or activity)". "Gradual advancement through progressive stages, growth from within." (Vol. IV, p.563-564).

For the purpose of study the term refers to the pattern of growth and employment of the manpower in the college libraries of Kerala.
1.8.6 **Manpower development**: The process of person's acquiring skills, knowledge and capabilities over a period of time moving towards levels of higher resource value. The process also involves the whole amalgam of recruitment, selection, career planning etc.

1.8.7 **College**: An institution where students study for higher or professional education.

1.8.8 **Kerala**: Refers to the state of Kerala, denoting a specific area in India.

1.8.9 **IT (Information Technology)**: A well-calibrated definition appeared in a US report is as follows:

"Information Technology means the collection, storage, processing, dissemination and use of information. It is not confined to hardware and software, but acknowledges the importance of man and the goals he sets for his technology, the values employed in making these choices, the assessment criteria used to decide whether he is controlling the technology and is being enriched by it" (Zorkoczy, 1985).

Another definition is by the British Advisory Council for Applied Research and Development (1980). "The Scientific, Technological and Engineering disciplines and the management techniques used in information handling and processing, their applications, computers and their interaction with men and machines, and associated social, economic and cultural matters."

Broadly IT may be said to be that technology which is used for information management, which involves acquisition, processing, storage, retrieval and dissemination of information. Reprography, printing and publishing are all activities involved in information management. Hence, the corresponding technologies also become part of IT.

1.8.10. **Environment**: Environment as "The conditions under which any person or thing lives or is developed, the sum - total of influences which modify and determine the development of life or character" (Vol. V, p.314).
For the purpose of this study IT environment means the major components in IT that affect the functions of college library.

1.9 Objectives of the study

The major objectives formulated for the present study are:

(i) To assess the present situation of college libraries in Kerala in the IT environment.

(ii) To assess or measure the present level/position of library manpower in the college libraries in Kerala and estimate its development towards IT application by designing a Professional Library Manpower Measurement Scale (PLMM Scale).

(iii) To examine the relevant aspects of the future development and utilization of professional library manpower in the colleges by designing a manpower development plan for the improvement of the present situation in the IT environment.

(iv) To identify the major areas where professional librarians need further training

1.10 Hypotheses of the study

The following are the major hypotheses for the present study.

(i) The present situation of most of the college libraries in Kerala is not satisfactory for providing IT oriented services to its users.

(ii) The present manpower investment in the college libraries is inadequate and is not based on any manpower survey to assess the actual requirements.

(iii) The professional library manpower in college libraries in Kerala at present has not reached a level to develop skills and talents to carry out the duties and responsibilities in the changing IT environment.

(iv) There will be significant difference in the mean scores of the elements of Professional Library Manpower towards IT application when librarians
categorized on the basis of each of the select independent variables are compared.

(v) The professional library manpower development and utilization for IT application in college libraries in Kerala are far from satisfactory.

1.11 Methodology

1.13.1. Data collection procedure

The study envisages the use of the following methodologies for collecting data.

(a) Questionnaire method

(b) Interview method

(c) Observational study

(d) Verification of records

(e) Literature survey

Primary data for the study were collected through questionnaire method, interview method, observational study and verification of records and secondary data from literature survey.

(a) Questionnaire method

Two questionnaires, one for the library and another for the librarian were designed to collect the necessary details for the study. Questions were formulated to elicit the details about the library and professional staff in various college libraries.

(b) Interview method

Interviews were also conducted with the librarians of various college libraries in the state for obtaining information regarding the manpower, investment, utilization, and professional status of librarians and discussed their personal difficulties in handling IT services.
(c) Observation

During present survey, observation process has been taken by the investigator while visiting the various college libraries. This facilitated the investigator to collect data/information, which is not revealed by the respondents either in the questionnaire or in the interview. The facts observed have been analyzed and interpreted.

(d) Verification of records

Admission records and other office records of Departments of Library and Information Science of various Universities in Kerala have been verified for collecting information regarding the production of professionals.

(e) Literature survey

Many documents including books, Journal articles, dissertations, theses and seminars papers dealing with manpower were referred to get a clear idea of the scope of the topic. Then an effort was made to locate the previous studies made in the field of library manpower.

1.11.2 Tool used for measurement

A comprehensive tool viz. Professional Library Manpower Measurement Scale (PLMMS) towards IT application in libraries developed by the investigator is used to measure or assess the present level of professional library manpower in the college libraries in Kerala in the IT environment. The independent variables for the purpose of the study are identified as seen in page no. 235 of chapter 6. The dependent variables were measured by the PLMMS Scale towards IT application. A detailed description of the scale is given in the chapter six of the study.

1.11.3 Statistical techniques used

The statistical techniques used for the analysis of data are the following:

1. Cross tables
2. Descriptive statistics
3. Z-test for comparing the mean scores of Elements of Manpower, Factors of Manpower development and Job satisfaction of two groups in the independent variables.

4. One-way ANOVA (F-test) was used for comparing the mean scores of more than two groups in the independent variables along with Scheffe test to identify the pairs of groups showing significant difference.

5. Multiple Regression Analysis of the impact of selected independent variable on Elements of Manpower with Multiple Classification Analysis (MCA).

1.12 Scope and Limitations of the study

The purpose of the present study is to get a clear knowledge of the library manpower development and its utilization in college libraries in Kerala and focuses into the development of professional library manpower for IT application in the college libraries. The study also explores the elements of professional manpower and factors responsible for the development of the library professionals working in the college libraries in Kerala in the present Information Technology environment. The result of the study will definitely help the authorities who are responsible for the management of the college libraries to utilize the human resources of the libraries in an effective way for the largest interest of the readers. It requires a comprehensive investigation of all the library staff members in all the college libraries in Kerala.

The limitation of the study is that it is designed to include only professional library manpower. It excludes the para-professionals or semi-professionals who hold a Certificate or Diploma in Library Science. Another limitation is that only selected independent variables are used for Multiple Regression Analysis.

1.13 Organization of the study

The study has been presented in 8 chapters. The chapter headings and their contents are given below.
Chapter 1: Introduction

Chapter 1 is introductory in nature and presents the underlying rationale for selecting the present problem, its significance in the present context. Explains the concepts librarianship as a profession and Information Technology. Application of IT in libraries, need for IT in libraries, changes in Information Environment, changes in Library and Information profession, need and significance of the study, statement of the problem, definition of key terms, objectives and hypotheses, methodology, scope and limitations and organization of chapters are covered.

Chapter 2: Review of Literature

This chapter reviews the literature on related areas of the topic. The literature reviewed is organized under various headings.

Chapter 3: College libraries in Kerala

Chapter 3 describes the present situation of college libraries in Kerala. Objectives and functions of colleges, Educational role of college libraries, Objectives and functions of college libraries and higher education set up in Kerala are discussed.

Chapter 4: Professional Library Manpower in Kerala

Chapter 4 presents an overview of the professional library manpower in Kerala: Past and present. Present situation of various types of libraries in Kerala, library science teaching professionals, manpower investment of retired professionals and library and information science education in Kerala are briefly discussed.

Chapter 5: Professional Library Manpower: Elements and Factors of Manpower Development

Chapter 5 gives the detailed description of the concepts manpower, Library manpower, and professional library manpower and discusses the elements of professional manpower in respect of IT application in libraries. Manpower development and various aspects of Manpower development,
Factors of manpower development including satisfaction in job/position and qualities of library professional are also discussed.

**Chapter 6: Methodology**

In chapter 6, an overview of the total population, sample, data collection procedure, fieldwork experience and variables of the study are briefly discussed. The tool used for measurement and statistical techniques used for analysis of the data are presented.

**Chapter 7: Analysis**

In chapter 7, the data collected for the study has been subjected to a detailed analysis and presented in three parts.

**Chapter 8: Summary of Findings and Conclusion**

The last chapter provides the summary of major findings of the study followed by tenability of hypotheses, recommendations for professional library manpower development, areas for further research and conclusion. The thesis ends with a general bibliography listing books and articles consulted by the investigator for the preparation of the work.
REFERENCES


