CHAPTER 1
INTRODUCTION

The end of 20th Century has witnessed tremendous shift in the nature and function of the libraries and information centers worldwide. This is due to unimaginable progress in computing and telecommunications. Computers and optical storage devices have dramatically changed the way in which we can store, process and retrieve information. Television, fax, e-mail and networking allied with growth in telephone, cable and satellite links have even more drastically changed the way we access this information. Due to these developments, the delivery and management of information has entered a new era, which is characterized by a vast array of electronic information resources brought to information users by computer and telecommunication technology. The paradigm shift in the fundamentals of the library and information science (LIS) profession poses great challenges to the professionals. To cope with these challenges, the future information professionals should be well qualified and equipped with optimal combination of knowledge and technical skills and attributes for survival in the new information society. The future information professionals should acquire expertise in management tools cataloguing, classification, thesaurus construction, research techniques, retrieval methods, presentation, quality control, searching the internet database and CD ROMs communication skills, writing and presentation skills, graphics, data analysis, business skills, financial planning, project management, public relations and marketing the human personnel skills, customer service techniques, the inside knowledge of organizational culture, strategy planning etc. Imparting all these subjects in the profession would redefine the curriculum and teaching methodology of LIS education. Further, strengthening the LIS teaching faculty along with IT infrastructure and curriculum would, in fact, produce efficient information managers for the digital age.
The present age is therefore rightly called the age of Information Technology (IT), especially Information and Communication Technology (ICT). Recent developments in IT have revolutionized the whole world. No area of sphere is untouched from this miracle. It has also revolutionized the education systems. The entire process of teaching, learning and knowledge delivery has become somewhat easy or somewhat complex. The field of librarianship has also undergone sea change due to the application of IT. Technological change in libraries over the past few years resulted in some shift of responsibilities and roles of librarians.

LIS education in India has achieved new heights and has a bright future, which is reflected in the growth of the library and information science departments, research in new areas, increase in number of Ph.Ds awarded and other research projects completed or those in the pipelines. The foundation of LIS education in India is very strong and on firm footing. ICTs have profoundly affected the way users seek information, libraries organize themselves and serve the stakeholders. With advent of the internet, a new phenomenon has occurred that has widened the horizon of both, the library managers and information seekers. It has extended the boundaries of four walled libraries to libraries without constraints of space and time. All these changes are being partially reflected in the present LIS education curriculum. Earlier it began with the change in nomenclature of departments, from library science to library and information science. There has been growth in the number of LIS departments and it is in demand through distance education also.

1.1 Need for the present study

The convergence of digital, telecommunication and other information technologies provides the LIS schools the opportunity to build cutting edge environment for learning. Each of these technologies has meaning and
implications for the core curriculum of LIS education. A.S. Charyulu\textsuperscript{18}, redefining LIS education in a challenging world (Fifty years of library and information science education in India, emphasises that the LIS schools need to develop vision plans for strengthening faculty, curriculum and students with the following objectives and experiences in preparing students for the 21\textsuperscript{st} Century.

a) Opportunities to learn and practice skills related to Information Technology
b) Improving relationships with experts for learning and collaboration.
c) Imparting skills to learn how to teach others about information technology and services.
d) Continuing instructions in electronic resources throughout the course
e) Lifelong learning in IT based services
f) Strengthening faculty through integration of electronic resources

To develop information professionals in the new information environment it becomes necessary to establish IT infrastructure through which students can learn essentials skills for navigating the internet and for organizing resources on the internet. This helps students to teach these skills to others. LIS schools should transform into ideal practical learning laboratories for information professionals in such areas as setting up and maintaining LANs, managing client-server environments and distributed computing resources and developing user interfaces.

Till now the field of library and information science has focused primarily on the automation of catalogues (OPACs). But in the new environment, it is essential to understand metadata and its relationship to cataloguing; explore database models to manage library web pages; investigate new role for automation including automated record creation, subject analysis and classification. It is also essential to undertake self-directed projects on
topics such as identifying, selecting and cataloguing internet resources; developing collection development policies and planning for implementing new cataloguing approaches. These efforts call for facility that will enable researchers to create large systems and experiments on them.

Along with internet, the wave of digital library is advancing rapidly. The development of digital library involves bringing all types of information elements in the form of multimedia information resources by using different digitization processes. These electronic techniques include thorough knowledge of mark up languages such as SGML, HTML, PDF, digitization of text; graphics; pictures; sound; animation and video, etc., and finally communicating this specialized information across networks. These markets indicate that the future electronic resource librarian will not be confined simply to find exact information resources, but will create information resources and distribute them through latest technologies.

LIS schools should therefore prepare students who can be able to create electronic information packages, distribute them electronically and teach such skills to others. This will only happen provided LIS schools have a total new environment powered with state-of-the-art hardware and software components.

Furthermore, facilitated by the power of IT, classroom learning now extend beyond a single campus to distant sites across the country. Beyond that dramatic change in student demographics, the current knowledge explosion, new tools for accessing, creating, displaying and assessing information are transforming the nature of learning process.

Today, many private companies throughout the world are targeting the vast new educational and training multimedia market with educational software and CD-ROM-based products. Also several universities are reaching their
students through video-conferencing, audiotex and other technologies for distance delivery. A new learning called ‘networked learning’ is becoming a basic feature of this environment. Computer assisted open learning is widely considered to hold major potential for teaching LIS education both for effective resource utilization and for enhancing student independence in learning. Some of the initiative in this direction in different areas of LIS education and training that exist today around the globe are: ASLIB, a computer based course called “The Internet for Absolute Beginners”. And “Essential skills in information and library work” OCLCs course package called “DDC21: A Resource Kit for Teaching”. The Michigan Community College Telecommunication Network Programme for training library technical assistants, South Carolina University’s MLISc Degree programme offering delivery of course-ware via live Interactive Satellite Channel support etc.,

The above discussion no doubt brings forth question before us where are Indian LIS schools heading? What is their preparedness for this new challenge? To answer these questions, there is a need to study the state of art of the content of curriculum of courses offered by LIS Schools in Universities in India. Hence is the present study.

1.2 The statement of the problem

The present research problem is conceived under the title “Information Technology components in LIS curriculum in universities in India: A Study”.

The study intends to ponder over the impact made by the information technology on library and information science education. Precisely it attempts to find out the extent to which issues relating to IT based content such as fundamental of computers their applications to library operations, techniques of information storage and retrieval and IT based information services.
1.3 Information Technology - Definition

The technology associated with the handling of information. The UNESCO definition of this term is “the scientific, technology and engineering disciplines and the management techniques, computers and their interaction with men and machines; and associated social, economic and culture matters” In the UK, the year 1982 was designated as Information Technology Year.

Information Technology is a general term used to denote the materials and methods used for information storage, retrieval, processing, transfer, display and demonstration of computers and their peripheral devices, telecommunication equipment and methods, data transfer modes and routes etc. are the components of Information Technology.81

1.4 Objectives

The present study aims to know the extent to which the library and information science schools in India have attempted to incorporate IT related issues in LIS education at different levels, viz Bachelor, Masters and Post Master Degree levels. The specific objectives of the study are:

1. To know whether all Library and Information Science departments in universities in India have incorporated issues relating to IT in their LIS curriculum.

2. To find out the extent of IT content in LIS curriculum in Bachelor Degree and Master Degree programmes.

3. To know the extent to which practical/hands on/ skill development activities are included in the content and are provided to students practically.

4. To assess the infrastructure facility such as computers, LIS software, internet, projection aid facilities etc., including UPS and other supporting facilities to provide uninterrupted training to LIS students.
5. To know the problems, if any for LIS schools that are interested in incorporating IT content in LIS curriculum, and also those LIS schools providing LIS education incorporating IT content in their curriculum.

6. To pool the opinion of working librarians and authorities concerned in library administration about the need for incorporation of IT content in LIS education at different levels.

7. To know whether library information science departments have adequate trained persons to teach and train pupil, the IT related courses.

8. To suggest necessary IT component needed for LIS students from the point of modern library work environment.

1.5 Hypotheses

The following are the hypotheses of the study,

1. Majority of LIS schools in India have not incorporated issues relating to IT based information storage and dissemination.

2. Those LIS schools which have incorporated IT based issues in their curriculum have given emphasis primarily on theoretical aspects and as such practical/ skill development aspects are neglected.

3. Majority of LIS schools do not have adequate infrastructure facilities such as computers, library software, internet, UPS, LCD projectors and such other facilities to provide rigorous hands on training to LIS students.

4. Majority of LIS schools do not have adequately trained teaching faculty to teach IT based courses to the LIS students.

5. Large majority of LIS schools are suffering due to inadequate financial resources and other lacunae to establish adequate IT based laboratory facilities for teaching and learning.

6. Majority of the librarians/ administrators concerned with the administration of libraries and information centers are not happy with IT skill and knowledge that library professionals possess to perform their functions.
1.6 Methodology of Research

The investigator began the research study with literature search. The primary source for literature search was LISA (Library and Information Science Abstract) database. He has also used other sources such as bibliographies and other indexing and abstracting journals. He has also consulted the primary sources such as journals, reports, conference proceedings, UGC model curriculum etc., to gain knowledge regarding LIS curriculum and studies made in this area.

In the second stage, the investigator prepared a questionnaire and mailed to all the departments of library and information science in Indian Universities and other centers such as DRTC and INSDOC (NISCAIR) which are offering LIS courses, to collect primary data about LIS curriculum and the IT content therein and other information such as Infrastructure facilities, teaching staff, of teaching hours of IT papers.

Altogether, 96 LIS departments offering various courses in library and information sciences were identified for getting responses on the above aspects. After repeated reminders and personal visits, the researcher has been able to get response in the form of duly filled-in questionnaires from 77 LIS departments, including DRTC and NISCAIR. Hence, the response obtained is 80.20%

Along with the responses from the 77 heads of the departments, copies of the latest curricula and time-table were also obtained from all these departments to know the details of IT related papers, as well as, traditional papers offered for BLISc, MLISc and M.Phil., courses.

Further, another questionnaire was prepared for working librarians to elicit their opinion about the products of the LIS schools. In doing so, a sample survey method was adopted. While choosing samples (stratified random
sampling) care was taken to elicit information from the representative group of working librarians and library administrators. After the receipt of the duly filled in questionnaires from 140 working librarians, they were analyzed and interpreted in the light of the objectives stated. The hypotheses were tested with the data obtained from the analysis. After the completion of the analysis, the findings were drawn and presented in the form of this report. In doing so, statistical tables and figures have also been used for clarity and simplicity of presentation.

1.7 Scope and Limitations

The scope of the study was limited to the LIS departments of various universities in India which are offering degree and post graduate programmes in library and information science. However, the study was also extended to open universities which are providing distance education programme in LIS and also to DRTC Bangalore, NISCAIR, New Delhi which are offering courses in LIS. The subject scope is restricted to the IT content in the LIS curriculum in courses offered by LIS Schools at Bachelor and Master degree levels. Geographical coverage has been the entire country since information has been sought from all the LIS departments in Universities.

1.8 Conspectus

The report of the study has been presented in six chapters

Chapter-I gives the introduction about the research topic, its need and the importance. It states the research problem, defines the important concepts and presents the objectives and hypotheses of the study. It also discusses methodology followed for data collection and analysis and further states the scope and limitation of the study

Chapter-II presents review of literature. It briefly discuss the studies carried on with in India and outside, about the LIS curriculum, particularly with an emphasis on IT components in the curriculum and related areas.
Chapter-III brings out brief historical account of the development of the LIS education in the country with particular emphasis on LIS education in Karnataka state.

Chapter-IV deals with the IT content in LIS curriculum in different universities in India. It gives detailed analysis of the data received from LIS departments of different universities.

Chapter-V provides opinion of the working librarians and library administrators regarding the preparedness and capability of LIS professionals in attending IT based functions and rendering IT based information services.

Chapter-VI will be a concluding chapter where in the summary of findings and recommendations of the study. Based on the findings, constructive suggestions have been made for improving the curriculum, IT infrastructure and for teaching IT components in LIS schools, so as to prepare LIS professionals to work in IT environment confidently and to handle IT based information sources and services effectively and efficiently.

Chapter- VII is the Bibliography covering relevant monograph publications, journal articles, proceedings of the conferences and seminars, and the research papers hosted on the web.