

**Library and Information Science Education in North East
Region: A Critical Study**

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for the award of Degree of**

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by

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CERTIFICATE

This is to certify that the thesis entitled “Library and Information Science Education in North East Region” submitted by Lalngaizuali for the award of Doctor of Philosophy in Library and Information Science is carried out under my guidance and incorporates the students bonafide research and this has not been submitted for award of any degree in this or any other university or institute of learning.

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11th May, 2010

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Professor & Supervisor

DECLARATION

I hereby declare that the thesis entitled “Library and Information Science Education in North East Region: A Critical Study” submitted by me has not previously formed the basis for the award of any Degree or Diploma or other similar title of this or any other University or examining body.

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List of Abbreviations

AICTE	-	All India Council for Technical Education
ALISE	-	Association for Library and Information Science Education
APA	-	American Psychological Association
BCI	-	Bar Council of India
BLISc	-	Bachelor of Library and Information Science
CDC	-	Curriculum Development Committee
CEP	-	Continuing Education Programme
CLISc	-	Certificate Course in Library and Information Science
CLS	-	Certificate in Library Science
CSIR	-	Council of Scientific and Industrial Research
DEC	-	Distance Education Council
DESIDOC	-	Defense Scientific Information and Documentation Center
DLSc	-	Diploma in Library Science
DLIS	-	Department of Library and Information Science
DRTC	-	Documentation Research and Training Center
IASLIC	-	Indian Association of Special Libraries and Information Centers
IATLIS	-	Indian Association of Teachers in Library and Information Science
ICSSR	-	Indian Council of Social Science Research
IFLA	-	International Federation of Library Associations and Institutions
IIT	-	Indian Institute of Technology
ILA	-	Indian Library Association
INSDOC	-	Indian National Scientific Documentation Center
ICT	-	Information and Communication Technology
LCSH	-	Library of Congress Subject Heading
LIS	-	Library and Information Science
MCI	-	Medical Council of India
M.Phil	-	Master of Philosophy
MLA	-	Modern Library Association
MLISc	-	Master of Library and Information Science
NAAC	-	National Assessment and Accreditation Council
NASSDOC	-	National Social Science Documentation Center
NCTE	-	National Council for Teachers Education
NISCAIR	-	National Institute for Science Communication and Information Resources
PGDIT	-	Post Graduate Diploma in Information Technology
PGDLAN	-	Post Graduate Diploma in Library Automation and Networking
Ph.D	-	Doctorate in Philosophy
RRRLF	-	Raja Rammohun Roy Library Foundation
UGC	-	University Grants Commission

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1.1 INTRODUCTION

Education is one of the largest activities in the world involving an estimate over 700 million students and more than 31 million teachers at all levels of the educational system in different countries. It is as important as any other resource for the nation's economic and industrial development because it is the key to human resource development. This gains importance as an activity not merely because of the size of the people but more so because of institutionalized knowledge – the principal repository, producer, disseminator and transmission of all forms of knowledge. Knowledge explosion and information explosion have expanded the catchment areas of learning at such a rapid pace that any field becomes obsolete in less than a decade. Library supplements a great deal in achieving educational goal and serves as a gateway for academic world. Libraries in general play an important role in the socio- economic and educational development of the state. Library is a social institution, the development of the libraries led to the development of a state as well as the nation. The library and information science profession requires a systematic education to make them dedicated for the cause to serve the humanity for the all round development. Depending upon the prevailing educational system, the library science education has undergone changes since its beginning in the nineteenth century. Graduate, undergraduate and PG programmes in library and information science are growing in size and scope. The present programmes like CLS/DLIS/BLIS/MLISc/ M.Phil/ Ph.D are recognized by UGC. Many colleges and universities recognize the importance of this dynamic field and have invested significant new resources into these programs. Their shapes increasingly reflect the academic culture in which they exist. Library and information science has now become a recognized discipline of study like any other.

Library and information science education began in India in 1911, initiated taken by Sayaji Rao Gaekwad II, the ruler of the erstwhile Baroda State. The second school of Library Science was started in Punjab University of Lahore under the direction of another American Librarian, Asa Don Dickinson in the year 1915. This school has the pride to be the first school of Library Science in India, patronized under University system.

After partition, the first school of library science was established in University of Madras in the year 1929 in collaboration with the Madras Library Association. Before this also some informal training programmes were conducted by the Andhra Library Association in 1920s at Vijayawada, and also during the same period in Bangalore (erstwhile Mysore State) with the initiative of the then Dewan of Mysore, Sir M. Vishveshwariah. The training course started by the Madras Library Association was a regular programme and it was taken over by the University of Madras in 1931, which used to give a certificate course of three months duration. In 1937 this certificate programme was converted by the University into a Post-Graduate Diploma in Library Science of 1 year duration and minimum qualification for admission was laid down as graduate in any discipline. Banaras Hindu University (BHU) has the credit to become the second Indian University to start a Post-Graduate Diploma in Library Science in the year 1941. The University of Bombay followed the suit and started a similar part-time diploma course from the year 1944, restricting the admission to working personnel. Calcutta University and University of Delhi started the diploma courses in 1946 and 1947 respectively. For the first time in 1949 the University of Delhi conceived 2 courses i.e M.Lib.Sc programme and Ph.D programme in addition to the PG Diploma in Library Science. Aligarh Muslim University, Aligarh; M.S.University, Baroda; Nagpur University, Nagpur; and Vikram University, Ujjain started library and information science courses in 1951, 1956 and 1957 respectively.

At present there are more than 100 universities and institutions in India which are imparting different levels of courses in library and information science, ranging from certificate to Ph.D courses in library and information science. There are universities which are running library and information science courses under the distance mode. Although doctoral programme in library and information science was started in the University of Delhi in the year 1949, the pace of research was slow up to 1980s, which is evident from the fact that the first Ph.D in library and information science was awarded after a gap of nearly 20 years by Punjab University in the year 1977 to Dr. Pandey S.K.Sharma. Thereafter the Indian Universities showed an upward trend in Ph.D programme in library and information science, and today over 50 universities in the country are offering Ph.D programme in library and information science.

Library and information science education in India is presently offered at different levels like Certificate, Diploma, Bachelor's Degree, Master's Degree, M.Phil., Ph. D. The Certificate and Diploma courses are offered at Under Graduate level and from Bachelor's Degree in Library and Information Science (BLIS) to Ph.D are offered by most of the Post-Graduate departments attached to the Universities. University Grants Commission since its inception has been instrumental in formulating Model Curriculum for different disciplines of studies including Library and Information Science. A number of Committees appointed by UGC have submitted their report to UGC namely- 1. Ranganathan Committee on "Library Education" (1960) 2. Kaula Committee on Curriculum Development in LIS Education (1990) 3. Karisiddappa Committee on Curriculum Development in LIS Education (2001). All these reports are aimed at formulating LIS Curriculums at two levels (Bachelor's and Master's). Since library and information science at university level are imparting two courses namely BLIS(One year) and MLIS(One year), the latest UGC Model Curriculum (2001) recommends with option that the universities may opt for two years integrated MLIS course after Graduation or one year BLIS and one year MLIS.

Though there are eight states in the north – eastern region including Sikkim, the library and information science courses are being offered by seven universities through regular/ conventional mode. The following table gives the name of the seven universities along with the courses offered by them.

Table 1.1 Name of the Seven Universities in North East Region

<i>Sl.No.</i>	<i>Name of the University</i>	<i>Courses and Duration</i>
1	NEHU, Shillong	MLIS (2 yrs integrated), Ph.D
2	Guwahati University, Guwahati	MLIS (2 yrs integrated) Ph.D
3	Manipur University, Imphal	MLIS (2yrs integrated) Ph.D
4	Mizoram University, Aizawl	MLIS(2 yrs integrated) M.Phil, Ph.D
5	Dibrugarh University (Center for Library & Information Studies)	BLIS - 1 yr (Self financing course)
		MLIS - 1 yr (Self financing course)
6	D.S.College, Gangtok (Affiliated to Sikkim University)	BLIS - 1yr
7	Assam University, Silchar.	MLIS - 2yrs (Under Planning)

1.2. STATEMENT OF THE PROBLEM

A comprehensive study on the four universities offering LIS courses in North East Region have not yet been undertaken so far by any research scholar in library and information science. Besides library and information science education in the country have taken a sea change. Therefore in the changing information scenario, the scholar has made an attempt for a critical and in-depth study of library and information science education especially in north eastern region which will be benefited by library and information science educators, practitioners and future perspective students desiring to enroll in library and information science. So, such a study is the need of the hour and thus prompted the researcher to take up this research problem.

1.3. OBJECTIVES OF THE STUDY

The main objectives of the study are:

- To present the current scenario of library and information science education at the national level in general and north east region in particular.
- To undertake a detailed study of the curriculum, learning resources and the competency achieved by the students after passing out library and information science course.
- To assess the potential of library and information science products successfully completed their course and their demand in the job market.
- To suggest improvement of physical, human and financial resources available in the department of library and information science in the north east region.
- To suggest measures to be undertaken to provide the best library and information science education aiming at developing professional competencies in the changing information scenario befitting to the national and global market.

1.4. SCOPE OF THE STUDY

Although there are over 90 universities and institutions offering library and information science course in India providing Certificate in Library science, Diploma in Library Science, Bachelor of Library and Information Science(1year), Master of Library and Information Science(1year), Master of Library and Information Science

(2years integrated) , the scope and coverage of the present study is limited to the following four universities namely –

1. Guwahati University, Guwahati,
2. North Eastern Hill University, Shillong,
3. Manipur University, Imphal and
4. Mizoram University, Aizawl.

The study is further limited to course curricula, resources including learning resources and competencies achieved during their courses of study.

1.5. METHODOLOGY

Library and information science education in India has undertaken a sea change both in balancing tradition and technology, restructuring and incorporating the latest trends and developments. Therefore it is necessary to collect the factual data of current scenario of library and information science education in India as well as the future directions. Besides the competition in the national and global market is also compelling the library and information science schools in India to go for advanced syllabus combining both theories and practices. The researcher has taken into account the different course curricula, UGC reports, records, annual and perspective plan and other sources of information for data collection. The following methodologies/tools for data collection have been adopted for the purpose.

a)Questionnaire Method

The questionnaire method was adopted and the researcher prepared a questionnaire which was circulated to passed out students, faculty members and few senior professionals in the respective areas to solicit their opinion about the current system of LIS education and changes if any required in future.

b)Personal Interview Method

The personal interview method supplemented the questionnaire method and include interview with some of the authorities like Heads of Departments of the concerned four

universities and other academics associated with Board of Studies, School Board, Board of Research etc of the concerned four universities.

c)Historical Method

Historical method was used to go through UGC Curriculum Reports, LIS Curricula of other Central Universities, Annual Plan/Perspective Plan of the departments of library and information science. Heads of the departments shared this information with the scholar.

d)Observation Method

The researcher made a detailed study of four departments in the north east region to assess, observe and study the resources/infrastructure, learning resources available to support and strengthen the library and information science education of the respective departments. Besides the researcher availed an opportunity to meet the faculty members, passed out students and library employers to solicit their suggestions and feedback to improve an appropriate model of library and information science education in future.

Data Analysis and Findings

The size of population under study was very large (total number of MLIS passed out students) and only 300 students could be contacted to whom the questionnaires were distributed. Out of 300 students only 220 could respond to the questionnaires. Therefore the size of the samples is limited to 220. In other words 220 respondents represent the total population. Data collected through questionnaires were properly analyzed and interpreted using quantitative data analysis software namely Excel spreadsheet and the findings were drawn accordingly.

1.6 REVIEW OF LITERATURE

Library and information science education world over in general and India in particular have made a steady progress. But the library and information science curricula,

teaching methods, instructional technology vary from country to country. Although there are lot of literature available in the field of library and information science education, hardly there are any specific research output in the form of publication are available. There is a need for reviewing the research publications in order to know the status of LIS education and its future avenues. This is the reason which has prompted the research scholar to make a review of literature available in the field of LIS education in Indian context. There is not much scholarly publication available in the areas of research undertaken by the scholar for which an attempt has been made to provide some basic research publications in the field of library and information science education as stated below

Johnson, Ian M. (2009). Education for Librarianship and Information Studies: Fit for Purpose? *Information Development*. Vol.25, No. 4.pp. 258-259.

Hosting or initiating a conference reflects the growing maturity of a School of Librarianship and Information Studies, often an indication of some regular engagement in research in the topic addressed by the conference. In developing countries, many schools of Librarianship and Information Studies have been operating for a long time now that they are already confident about the relevance of their curricula to local needs. There are now more conferences than ever before, many of which are held as regular events with a specific focus. This article discusses how a new conference can succeed, how to attract enough participants to make the event seem worthwhile, and whether conference organizers can use the strengths of the Internet to reach potential participants.

Kiani, H. (2009) Education for Library and Information Science in Iran: Current Trends. *International Journal of Information Science and Technology*. Vol. 7. No. 2. Pp. 15-28.

The article presents an account of the Library and Information Science (US) education in Iran. It briefly reviews the growth and development of the US education in the periods: 1939-1978, as the Pre-Islamic Revolution period, and 1979-2007, as the Post-Islamic Revolution period. The paper covers an up-to-date list of the 29 universities in Iran offering various LIS programs including Post-Diploma, Associate Diploma, Bachelor of Library and Information Science, Master of Library and Information Science and Ph.D, and the establishment of the LIS departments in chronological order

(84 depts.). It also emphasizes the redesigning of the curriculum based on the emerging needs to match the new technological age. It highlights the current trends in the last 10 years. The paper concludes that Post-Islamic Revolution LIS education witnessed more progress comparing to the Pre-Islamic Revolution period, particularly in the last decade (1997-2007). At the end, some suggestions are given for improving the LIS education in Iran.

Pierce, Jennifer Burek (2009). LIS Educators Reflect on Past and Present Trends. *American Libraries*. Vol.40. No. 3. Pp. 24.

Library and Information Science (LIS) educators and librarians convening in Denver, Colorado for the Association for Library and Information Science Education (ALISE) conference, held on January 20-23, 2009, offered their perspectives on the role of librarians in mediating technology and community dynamics and reflected on past and present instructional trends that shape the profession. Among the topics were: the skills needed by librarian in the 21st century; new technology applications as a core component of effective library service; and how to create systems that attract passionate librarians who will transform their communities.

Gerolimos, Michalis. (2009). Skills developed Through Library and Information Science Education. *Library Review*. Vol. 58. No. 7. Pp. 527-540.

The purpose of this paper is to report a study designed to identify qualifications and skills that library and information science (LIS) students should have when they graduate. The reported research examines the curriculum of 49 institutions in three countries which offer programs in LIS. Course descriptions are studied through the web and the module specifications presented there. The study identifies 59 qualifications/skills that were central to graduation in the field of LIS. Course specifications have some limitations as they do not always include the detailed description that would be desirable. The paper examines the orientation of institutions that provides LIS programs and, more importantly, the way that orientation is integrated into their programs of study.

Lynch, Beverly, P. (2008) Library education: Its Past, Its Present, Its Future. *Library Trends*. Vol.56. No.4. pp. 931-953.

This paper traces the history of library education primarily as it developed in the United States. The issues pertaining to curriculum, students, and faculty are presented as are the current questions of whether the educational program should have a professional, vocational, or discipline-based focus.

Mezick, Elizabeth, M, Koenig, Michael E.D (2008). Education for Information Science. *Annual Review of Information Science and Technology*. Vol.42. pp. 593-624.

Information Science plays an important role as a meta-science and as discipline distinguished by its interest in the subject matter of all conventional disciplines, as well as its unique efforts to organize that subject content in a way that provides value for society. The distinguishing characteristic of an information scientist is the ability to think about a resource in terms of the features that matter to the organization and retrieval of it, rather than in terms of mastering its content. This chapter follows in the tradition of treating the topic of education for information science broadly, with emphasis on Canada, The United States, and the United Kingdom. Examines the directions in which information science education continues to struggle with the problem of identity. Continuing tension between library science and other information – related fields poses serious challenges for educators and practitioners. It is necessary to address the information needs of individuals and groups that is the main concern of both fields. Programs need to define specializations clearly so as not to compete against each other for students and resources.

Ur Rehman, Sajjad(2008). Quality assurance and LIS education in the Gulf Cooperative council (GCC) countries. *New Library World*. Vol. 109. No. 7-8. Pp. 366-382.

The purpose of this paper is to investigate the situation and evaluation strategies and processes of nine library and information science (LIS) education programs in the six member nations of the Gulf Cooperative Council (GCC), namely Saudi Arabia, The United Arab Emirates, Kuwait, Qatar, Muscat and Bahrain. It also aims to explore what accreditation practices can be introduced and this process can be streamlined. The paper describes the situation of the LIS programs in terms of their organizational placement, strategic plan, students, faculty and resources and facilities. It also describes the evaluation efforts undertaken in these programs through self-study and external

assessment and the outcomes of these exercises. Policies and practices of evaluation through self-study or external reviewer vary among these programs. None has used evaluation exercises for improving their computing facilities and instructional resources. The LIS programs in the six GCC nations primarily offer undergraduate degrees. There is only one school that is offering a structured Master's program. The study is limited to one region, but it has implications for neighbouring Arab nations that may also use a similar accreditation model. This is the first study of this kind in this region that has investigated this vital issue of LIS education in the region.

Elmborg, James K. (2008). Framing a Vision for 21st Century Librarianship: LIS Education in Changing Times. *The Serials Librarian*. Vol. 55. No. 4. Pp. 499-507.

Librarianship is at a critical juncture. Technological changes have reshapes the information landscape, but libraries as social institutions have not been able to transform themselves to keep pace. This is the challenge of Library and Information Science education. As we look to a future professional education for librarians, we need to acknowledge the need to reinvent our educational goals and methods so our graduates can lead on this new emerging environment. A relevant education for the information sectors will include a synthesis of global, technical, and critical perspectives to encourage librarians to understand the changes they need to enact to ensure relevance for the future.

Johnson, Catherine A. (2007). Library and Information Science Education in developing Countries. *The International Information & Library Review*. Vol. 39. No. 2. pp. 64- 71.

This paper introduces the special issue on education for library and information science in developing countries. It reviews past articles that appeared in the International Information and Library Review on the same topic and comments on the articles appearing in this issue. Previous articles reveal that this topic has been of interest to readers and contributors to the journal since its beginning. Some issues have remained constant throughout the history of the journal, for instance, the relevance of LIS curriculum to developing countries, dependence on Western education models, lack of respect for the profession and need to upgrade the skills of librarians and other information professionals to address the challenges of the information society. The articles contained in this issue address some of the same concerns with an additional

focus on the need for LIS education to prepare graduates to become more involved in the economic and social development of their countries.

Burger, Leslie (2007). Changing Library Education. *American Libraries*. Vol. 38. No.4. pp. 5

It stresses the need for strong, competitive library education programs that focus on both the history and foundation of the library and information profession as the future and possibilities of libraries in a changing society. Aside from adopting stronger and more prescriptive accreditation standards, library education can be transformed in another arena: by working together with the Association for Library and Information Science Education; other national, regional and state library associations; library practitioners; and current and recent library school students and graduates to develop recommendations that ensure that library school education creates a twenty first century workforce that is highly valued and compensated. One way to effect that change is to create accreditation standards that define the core elements of library education and the competencies expected in every library school graduate.

Asundi, A.Y; Karisiddappa, C.R. (2007). Library and Information Science Education in India: International Perspectives with Special Reference to developing countries. *DESIDOC Bulletin of Information Technology*. Vol. 27. No. 2. pp. 5-11.

The paper presents a succinct profile and contributions of Indian LIS education since its inception. It also attempts to bring to the fore how this profile presents its international potentiality and perspectives scenario in context to developing countries.

Varalakshmi, R.S.R. (2007). Need for National Consensus on Library and Information Science Education in India. *DESIDOC Bulletin of Information Technology*. Vol. 27, No.2. pp. 13-20.

Library and information science education in India is nearing to celebrate centenary celebrations. However, several issues need to be resolved to meet the demands of the contemporary information society. The paper reviews the growth of LIS education in India, foresees the future trends and suggest for national consensus on some of the basic issues.

Singh, S.P. (2003). Library and Information Science Education in India: Issues and Trends. *Malaysian Journal of Library and Information Science*. Vol.8. No. 2. pp. 1-17.

This paper traces the emergence of library and information science (LIS) education in India before and after independence. It describes the current status, the different patterns and levels of LIS education, as well as the research programmes being offered by various universities. It provides an overview of the institutions providing LIS courses at various levels through regular courses and open schools. It emphasizes the need for having a national level accreditation body to maintain uniformity and standards in LIS education. It discusses the problems affecting the status of LIS education and suggests ways to solve these problems and the approaches to prepare the LIS professionals to face the growing challenges of the job market.

Raju, J. (2003). The “core” in library and/or information science education and training. *Education for Information*. Vol.21. No. 4. pp. 229-242.

The issue of what constitutes or should constitute the “core” in library and/or information science (LIS) education and training is one that is frequently debated. This article reviews literature related to this matter and cites findings from an empirical study conducted in South Africa on library and/or information science education and training. The literature reviewed as well as findings in the study suggest that while it is possible to identify certain knowledge and skill components as being appropriate for the core library and/or information science curriculum for a first-level LIS qualification, it is difficult to be precise about what exactly constitutes or should constitute the core in library and/or information science education and training. This core is continuously evolving, as the information environment to which LIS education and training programs need to respond in also in a state of flux.

Enser, P. (2002). The role of professional body accreditation in library and information science education in the UK. *Libri*. Vol. 52. No. 4. pp 214-219.

It describes the accreditation instrument currently used by the Chartered Institute of Library and Information Professionals (CILIP), and then considers some aspects of the future relationship between this professional body and library and information science (LIS) education and training in the UK. A convergence of interests between CILIP and Quality Assurance Agency (QAA) for Higher Education is discussed, notably with

reference to subject benchmarking and the need to expand the traditional boundaries of LIS in order to encompass the interests of the archives, records management and museum communities. It considers the impact on the information profession of certain aspects of Government policy in Higher Education, including lifelong learning and the expansion in Continuing Professional Development (CPD). It concludes with reference to a scoping exercise to be undertaken by CILIP in order to redefine professional territory and establish a new accreditation instrument.

1.7 CHAPTERIZATION

Chapter 1 deals with introduction about the growth and development of library and information science education in India beginning from 1911 till 2009. The introduction discusses about different committee reports highlighting, the importance of library and information science course. It further discusses the statement of the problem, objectives, scope of the study, methodology, review of literature and different chapters covered in the research topic.

Chapter 2 describes the library and information science scenario in India covering universities and institutions offering LIS courses, their levels (Certificate, Diploma, Blis, Mlis, M.Phil, Ph.D), duration etc. This chapter provides the importance of library and information science education as has been recognized as an established discipline by UGC and other national bodies.

Chapter 3 analyses the LIS education with special reference to north east region covering seven universities namely - 1.Gauhati University, Guwahati 2. North Eastern Hill University (NEHU), Shillong 3. Manipur University, Imphal. 4.Mizoram University, Aizawl 5. Dibrugarh University, Assam. 6. D.S.College, Gangtok (affiliated to Sikkim University) 6. Assam University, Silchar.

Chapter 4 explains the professional competency building through LIS programmes in the changing information scenario. This chapter specifically emphasizes the capacity building of LIS professionals in the changing information and communication technology (ICT) scenario.

Chapter 5 analyses the data received from the respondents like MLIS passed out students of four universities, HODs and faculty members and senior library and information professionals of north east region. Data collected are scientifically analyzed and interpreted to derive factual findings.

Chapter 6 derives conclusions from the research under study and made suggestions so as to improve the LIS education in the north east region in terms of enhancing professional skills and competencies of the LIS learners.

LIS education in India has been recognized as a distinct discipline for almost 100 years and making a steady progress in the emerging Information and Communication Technology scenario. The present scenario of Library and Information Science education in India is discussed in detail in the following chapter entitled, "LIS Education in India: An Overview".

Each chapter is followed by references along with a comprehensive bibliography at the end and arranged in alphabetical order (based on APA Format) in order to authenticate the research work under study and scientific communication.

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2.1 INTRODUCTION

Library Science refers to “The professional knowledge and skill with which recorded information is selected, acquired, organized, stored, maintained, retrieved, and disseminated to meet the needs of a specific clientele, usually taught at a professional library school....” (http://lu.com/odlis/odlis_1.cfm)

Information Science deals with “The systematic study and analysis of the sources, development, collection, organization, dissemination, evaluation, use, and management of information in all its forms, including the channels (formal and informal) and technology used in its communication.”(http://lu.com/odlis/odlis_i.cfm)

Library and information science is the combination of library science and information science. Very often, library science is considered as traditional area of study and information science is regarded as advanced field of study that deals with different aspects of information, involving application of ICT in a great deal. Library and Information Science (LIS) provides education for library and information professionals. It aims at creating appropriate human resources to run the libraries and information centres such as Librarians, Information officer and Documentation Officer. It is just a question of preference. In actual practice, there are no hard and fast rules. LIS education is a life-long process. After initial formal education, it continues in the form of continuing education and staff development.

2.2 GROWTH AND DEVELOPMENT OF LIS EDUCATION IN INDIA

Schools Before Independence

Baroda School

The first ever library school was started by Melvil Dewey in USA in 1887. W.A Borden a disciple of Dewey initiated training in librarianship in India in 1911 at Baroda to create a cadre of men to man the newly established libraries in the State library system. In 1913, another training course for working librarians of town libraries was started. These courses continued even after the departure of Borden. However, the existence of in-service training was initiated by John Macfarlane, the first librarian of the Imperial Library (now National Library) at Calcutta from 1901 to 1906 as mentioned in some

reports. In subsequent years, the training programme was opened to the staff of other libraries and even to non-librarians but dealing in books and other documents.

Panjab University

A more systematic training program was initiated by another American librarian by name Asa Don Dickinson at Panjab University, Lahore (now in Pakistan) in 1915. This happens to be the first university course in India. Mr. Dickenson also prepared a manual for the use of students namely The Punjab Library Primer.

Andhra Desa

Library movement in Andhra is described as the ‘people’s movement’ because it was the common man who took the lead in the establishment of the libraries and the reading rooms. With the coming-up of innumerable libraries, there arose the need for people with some background knowledge and technique of library management. The Andhra Desa Library Association was founded in 1914 and started conducting ‘training classes’ for the library workers in the State in 1920 at Vijayawada. The classes covered a module on running adult education classes in addition to library techniques.

Mysore State

In the same year, i.e. in 1920, a course for the training of librarians was conducted at Bangalore under the ‘programme of library development’ initiated by the then Dewan of Mysore, M. Visweswarayya.

Madras Library Association (MALA)

A regular certificate course in Library Science was organized by MALA from 1929. A “Summer School” for college librarians and Lecturers – in – charge of college libraries in Madras was held in 1928 and repeated in 1930. University of Madras took up the training courses of MALA in 1931.

Library science education began in India in 1911, owing to the initiative taken by Sayaji Rao Gaekwad II, the ruler of the erstwhile Baroda State. It may be recalled in this context that the Maharaja, foresighted as he was, sensed that existence of libraries as the most crucial factors for all round development of the society and for education of the masses. He, therefore invited William

Alanson Borden from USA and under his direction established a network of libraries in the state of Baroda by the year 1910. Again, under the direction of Borden, the Maharaja started a Library Science school at Baroda in the year 1911. The second school of Library Science was started in the undivided India in Punjab University at Lahore under the direction of another American Librarian, Asa Don Dickinson in the year 1915. This school has the pride to be the first school of Library Science in India, patronized under University system.

After partition, the first school of Library Science was opened in University of Madras in the year 1929 in collaboration with the Madras Library Association. Before this also some informal training programmes were conducted by the Andhra Desh Library Association in 1920s at Vijayawada, and also during the same period in Bangalore (erstwhile Mysore State) with the initiative of the then Dewan of Mysore, Sir M. Vishveshwaraiah.

The training course started by the Madras Library Association was a regular programme and it was taken over by the University of Madras in 1931, which used to give a certificate course of three months duration. In 1937 this certificate programme was converted by the University into a Post – graduate Diploma in Library Science of 1 year duration and minimum qualification for admission was laid down as graduate in any discipline. After this, for a decade or so the University of Madras remained the sole university to provide library science education and training, although the Bengal Library Association, the Andhra Desh Library Association, and the Imperial Library, Calcutta used to organize stray courses for training library personnel. Banaras Hindu University (BHU) has the credit to become the second Indian University to start a Post – graduate Diploma in Library Science in the year 1941. The University of Bombay followed the suit and started a similar part – time diploma course from the year 1944, restricting the admission for working personnel. Calcutta University and University of Delhi started diploma courses in 1946 and 1947 respectively. For the first time in 1949 the University of Delhi conceived 2 courses i.e M.Lib.Sc programme and Ph. D programme also in addition to the PG diploma in library science. Aligarh Muslim University, Aligarh; M.S.

University, Baroda; Nagpur University, Nagpur; and Vikram University, Ujjain started library science courses in 1951, 1956 and 1957 respectively.

Library and Information Science education in India is presently offered at different levels like Certificate, Diploma, Bachelor's Degree, Master's Degree, M.Phil., Ph.D. The Certificate and Diploma courses are offered at Under Graduate level and from Bachelor' Degree in Library and Information(BLIS),Master of Library and Information Science (MLIS) and M.Phil and Ph. D are offered by most of the Post –Graduate Departments attached to the Universities. University Grants Commission in India since its inception has been instrumental in formulating Model Curriculum for different disciplines of studies including Library and Information Science. A number of Committees appointed by UGC have submitted their report to UGC namely 1. Ranganathan-Committee on “Library Education” (1960) 2. Kaula Committee on Curriculum Development in LIS Education (1990) 3.Karisiddappa Committee on Curriculum Development in LIS Education (2001).All these reports are aimed at formulating LIS curriculums at two levels (Bachelor's and Master's). Since Library and Information Science at university level used to teach courses namely BLIS (one year) and MLIS (one year) and M.Phil. The Ph.D courses are offered either full time or part time. The UGC Pay Committee Report (2008) further recommends that successful completion of Pre-Ph D course is also mandatory for admission in to Ph.D. The latest UGC Model Curriculum (2001) recommends with option that the universities may opt for two years integrated MLIS course after Graduation or one year BLIS and one year MLIS.

As on date there are 90 universities (Conventional/Regular), 31 Open Universities and Correspondence Course Institutions attached to Universities which are offering Library and Information Science Education at Master's level, 16 university offering M.Phil in Library and Information Science and 59 universities at doctoral level in India. In addition to these, two national level institutions namely National Institute of Science Communication and Information Resources (NISCAIR), New Delhi and Documentation Research and Training (DRTC), Bangalore are offering two years integrated course in Associateship in Information Science equivalent to MLIS and two years integrated master's Degree programme on M.S. library and Information

Science(MSLIS) respectively.. Very few universities are offering M.Sc. (Information studies/Information Science) equivalent to Master of Library and Information Science.

2.3 LEVELS OF COURSES

Presently Library and Information Science courses in India are offered at six levels namely, CLISc, DLSc, BLISc, MLISc, M.Phil, and Ph.D. These courses are broadly classified into semi professional and professional. The semi professional level courses are CLSc and DLSc. The professional level course includes BLISc, MLISc, M Phil, and Ph. D.

The Library Associations and Institutions (Non University level) were primarily offering semi-professional courses. The non-university level courses can further be grouped into vocational and non-vocational courses. The LIS departments (university level) are primarily concerned with higher professional level courses. The courses offered by NISCAIR and DRTC shall also come under this category. The University level courses can further be grouped into undergraduate (BLISc) and post graduate MLISc, M Phil, Ph.D courses. The courses offered by the open universities and institutes of correspondence course attached to the universities (non formal) under distance learning mode added new dimension to LIS education in India.

The curriculum development committee (UGC, 1990) report suggested that some special courses may be offered on the recent advances in sub topics of the core subjects as well as electives of BLISc and MLISc programmes. For example, application of information technology in Libraries, Marketing of library services etc.

The minimum admission requirement, the duration of the course and the name of the sponsors of the different levels are given in the Table-2.3(A) and Table 2.3(B) below.

Table-2.3(A)
Levels of LIS Education in India

<i>Course Title</i>	<i>Institutions/ Universities</i>	<i>Minimum Admission Requirement</i>	<i>Duration</i>	<i>Objectives</i>
Certificate	Library Associations/ University affiliated Colleges & Institutions	HSLC/HSSLC, with 45% -55%	2 to 6 months also 1-year part time	Provides students elementary of library science to serve in a small Library
Diploma	Women's Polytechnics/ Library Associations	Secondary 10 th Class Matriculation/Senior	1 to 2 years	To give the student an understanding of the Normative principles And theoretical foundations of LIS. The preparation and use of Lib Tools and in the Lib Management of various Types Libraries
Bachelor's Degree	University Depts & Colleges	Degree in arts/Science commerce or their equivalent certain schools have in	1 year	To enable the students to understand and appreciate

		addition, a system of admission tests or interviews		function and purpose of libraries in changing social and academic set up, and to train student for using library tools.
Master's Degree	University Dept	Degree/BLIS and an admission test is prescribed by most of the Lib Schools.	1 to 2 years	To acquaint universe of subject, to give students specialized & deeper knowledge, to make student proficient in design, development for using library tools and technique, to acquaint research methodology, IT Applications in Libraries.
M.Phil	University Dept	A Master's degree in Lib.Sc with second division is usually Insisted upon by most of the Universities	1 to 2 years	To make students proficient in methods and techniques of research, to give student specialized

				knowledge, to prepare of further study to leading a Ph.D or other research degree.
Ph.D	University Dept	A Master degree in Lib.Sc. in some Universities it is M.Phil /NET, whereas in some Universities a pre-Ph.D written test and Viva voice examination is conducted to test the ability of the student certain universities have a system of admission test for both M.Phil and Ph.D	2 to 3 years	To expose the students to research methodology and technique, to make significant contribution to existing knowledge, to give evidence of carrying out original, innovative and scientific research independently.

Table- 2.3 (B)
Imparting LIS Education at Different Levels

<i>Level/Category</i>	<i>Functions</i>	<i>Responsibilities</i>	<i>Educational Qualifications</i>
Semi-Professional Assistant/Technical Assistant	To do routine jobs e.g. filing of cards & circulation work	To function as filing assistants, circulation assistants	Certificate/Diploma in Library Science
Professional Level III/Professional Assistant	Routine/Operational technical work	To function in different sections of Lib & doc. Centres	BLIS
Professional Level II	Routine/Operational technical work, administrative at lower level	To function as sections in charge	MLIS
Professional Level I	Planning, designing, developing and managing library & Info. System	To hold positions as heads of division.	Ph.D with Published work.
Senior Professional Level	Planning, designing, developing and managing Lib & Info Systems and , services	To hold positions as Chief Librarian/ Director in different types of libs, Info centres and doc centers.	Same as above with difference in experience and publications etc.

2.3.1 Course Objectives:

Certificate/Diploma

Objectives

- To expose students about the concept of library, its types, objectives and functions
- To acquaint elementary technical operations associated with a small library
- To motivate /encourage towards a career in librarianship.

BLISc

Objectives:

- To familiarize students the concept of librarianship and information science.
- To appraise different management tools and techniques to be applied in libraries and information centres.
- To expose students different components of information technology and its application in LIC's.
- To make aware of various sources of information.

MLISc

Objectives

- To acquaint and expose the students about the trends and developments in information society.
- To familiarize different modes and patterns of information seeking behavior of the users to developed expertise in the analysis, organization and consolidation of information.
- To provide advance ICT knowledge and its application in LICs.
- To understand the importance of quantitative techniques including statistical methods.

M.Phil.

Objectives

- To make an advancement of knowledge and contribution to new ideas in the library and information science.

- To apply different methods of research design to find solutions to the problems, formulate research proposals.
- To demonstrate an innovative and scientific research in library and information science.

Ph.D.

Objectives

- The objective of the Ph.D programme is to allow a researcher to work independently in a specialized area of knowledge.
- To make contributions to innovative and original ideas to suggest modifications in the existing practices in the areas of library and information science

2.4 NUMBER OF UNIVERSITIES OFFERING LIS EDUCATION

Library and Information Science has today become a full fledged discipline in its own right. Library schools attached to universities and affiliated institutions are treated at par with other departments. They are conducting courses leading to degree of BLIS, MLIS, M.Phil and Ph.D. Two candidates have been awarded D.Litt. in LIS. There are 89 Universities that offer regular courses, whereas 31 universities are conducting courses through correspondence or distance mode. However, Certificate and diploma courses have not been taken into account. Break up about the number of universities (including Distance mode) offering these courses is as follows:

- 126 Universities/Institutions are offering Bachelors degree
- 90 are offering Master's Degree,
- 16 are offering M.Phil degree
- 59 are offering Ph.D degree

2.4.1 LIS Education at University Level (Conventional /Regular Mode)

LIS Education is conducted by many Universities in several parts of India. The Researcher prepared a list of universities offering LIS education through Conventional mode by area wise which is provided in the following table.

TABLE 2.4 (1)**LIS Education by Area Wise (Conventional Mode)****A. North India**

1. Dept of Library & Info Science University of Delhi Tutorial Building Delhi - 110 007	2. Dept. of Library & Info Science Jamia Millia Islamia Jamia Nagar New Delhi – 110 025
3. Dept of Library & Info Science Kurukshtra University Kurukshetra, Haryana – 136 119	4. Dept of Library & Info Science University of Jammu Jammu – 180 001
5. Dept of Library & Info Science University of Kashmir Hazrathal, Srinagar - 190 006	6. Dept of Library & Info Science Guru Nanak Dev University Amritsar – 143 005
7. Dept of Library & Info Science Punjab University Chandigarh – 160014	8. Dept of Library & Info Science Punjabi University Patiala – 147 002
9. Dept of Library & Info Science Aligarh Muslim Universtiy Aligarh Uttar Pradesh – 202002	10. Dept of Library & Info Science Babasaheb Bhimrao Ambedkar University Lucknow – 226024
11. Dept of Library & Info Science Banaras Hindu University Varanasi – 221 005	12. Dept of Library & Info Science Bundelkhand University Jhansi, Uttar Pradesh – 248 128
13. Dept of Library & Info Science B.R. Ambedkar University Agra – 282 004	14. Dept of Library & Info Science University of Lucknow Lucknow – 226 007
15. Dept of Library & Info Science Mahatma Gandhi Kashi Vidyapeeth	16. Dept of Library & Info Science Sampurnanand Sanskrit

Varanasi – 221 002	Vishwavidyalaya Varanasi – 221 002
17. Dept of Library & Info Science U.P Rajarshi Tandon Open University Allhabad	18. Dept of Library & Info Science Guru Ghasidas University Bilaspur, Chattisgarh – 495 001
19. Pandi Ravishankar Shukla University School of Studies in Library & Info Science Raipur, Chattisgarh – 492 010	

B. South India

1. Dept. of Library & Info Science Andhra University Vishakhapatnam Andhra Pradesh – 530 003	2. Dept. of Library & Info Science Osmania University Hyderabad Andhra Pradesh – 500 007
3. Dept. of Library and Info Science Sri Krishna devaraya University Ananthapur Andhra Pradesh – 515 003	4. Dept. of Library & Info Science Sri Venkateswara University Tirupati Andhra Pradesh – 517 502
5. Dept. of Library & Info Science Bangalore University Bangalore Karnataka – 560 056	6. Dept. of P.G. Studies and Research in Library and Information Science Gulbarga University Gulbarga, Karnataka - 585 106
7. Dept. of Library & Info. Science Karnatak University	8. Dept. of Library & Info. Science

Dharwad Karnataka - 580 003	Kuvempu University Shimoga Karnataka – 577 451
9. Dept. of Studies in Library and Info Science Mangalore Universiy Mangalore Karnataka – 574 199	10. Dept. of Studies in Library and Info Science University of Mysore Mysore Karnataka – 570 006
11. Dept. of Library & Info. Science University of Calicut Kerala Mallapuram – 673 635	12. Dept. of Library & Info. Science University of Kerela Thiruvanathapuram – 695 034
13. Dept. of Library & Info. Science Mahatma Gandhi University Kottayam Kerela – 686 560	14. Dept. of Library & Info. Science Annamalai University Annamalainagar Tamil Nadu – 608 002
15. Dept. of Library & Info. Science Bharatidasan University Tiruchirappalli – 620 017	16. Dept. of Library & Info. Science Bishop Heber College Tiuchirappalli Tamil Nadu – 620 017
17. Dept. of Library & Info. Science Gandhigram Rural Insitute Gandhigram Tamil Nadu – 624 302	18. Dept. of Library & Info. Science University of Madras Chennai Tamil Nadu – 600 005
19. Dept. of Library & Info. Science Madurai Kamaraj University Madurai Tamil Nadu – 625 021	20. Dept. of Library & Info. Science Mother Teresa Women’s University Kodaikanal

	Tamil Nadu - 624 102
21. Dept. of Library & Info. Science Pondicherry University RV Nagar, Kalapet Pondicherry – 650 014	

C. East India

1. Dept. of Library & Info. Science Birla Institute of Technology Ranchi, Bihar- 835 215	2. Dept. of Library & Information Science Lalit Narayan Mithila University Darbhanga, Bihar – 835 215
3. Dept. of Library & Information Science Patna University, Patna, Bihar – 800 005	4. Institute of Library & Information Science Tilka Manjhi Bhagalpur University Bhagalpur, Bihar - 812 007
5. College of Library & Information Science Berhampur University, Ankushpur, Orissa – 761 100	6. Dept. of Library & Information Science North Orissa University, Sambalpur, Orissa – 768 019
7. Dept. of Library & Information Science Sambalpur University, Sambalpur, Orissa – 768 019	8. Dept. of Library & Information Science Utkal University Bhubaneswar, Orissa – 751 004
9. Dept. of Library & Information Science University of Burdwan Burdwan, West Bengal – 713 104	10. Dept. of Library Science University of Calcutta, Kolkata, West Bengal – 700 050
11. Dept. of Library & Info. Science	12. Dept. of Library & Information

Jadavpur University, Kolkata, West Bengal -700 032	Science Rabindra Bharati University, Kolkata, West Bengal – 741 235
13. Dept. of Library & Info. Science University of Kalyani, Kalyani, West Bengal – 741 235	14. Dept. of Library & Information Science University of North Bengal, Darjeeling, North Bengal – 734 430
15. Dept. of Library & Info. Science Vidyasagar University, Midnapore, North Bengal -721 102	

D. WEST INDIA

1. Dept. of Library & Info. Science Bhavnagar University Bhavnagar, Gujarat – 360 002	2. Dept. of Library & Information Science Gujarat University, Ahmedabad, Gujarat – 380 009
3. Dept. of Library & Information Science Gujarat Vidyapeth Ahmedabad, Gujarat – 380 014	4. Dept. of Library & Information Science Hemchandracharya North Gujarat University Patan, Gujarat – 384 265
5. Dept. of Library & Information Science MS University of Baroda Vadodara, Gujarat – 390 002	6. Dept. of Library & Information Science Sardar Patel University, Vallabh Vadyanagar, Gujarat – 388 120
7. Dept. of Library & Information Science Saurashtra University	8. Dept. of Library & Information Science South Gujarat University

Rajkot, South Gujarat – 360 001	Surat, South Gujarat – 395 007
9. Dept. of Library & Information Science Awadesh Pratap Singh University, Rewa, Madhya Pradesh – 486 003	10. Dept. of Library & Information Science Barkatullah Vishwavidhyalaya Bhopal, Madhya Pradesh – 474 011
11. School of Studies in Library & Info. Science Jiwaji University, Gwalior, Madhya Pradesh – 474 011	12. Dept. of Library & Information Science D.R. Harisingh Gaur Vishwavidyalaya Sagar, Madhya Pradesh – 470 003
13. Dept. of Library & Information Science Makhanlal Chaturvedi National University Institute of Journalism, Bhopal, Madhya Pradesh – 462016	14. Dept. of Library & Information Science Rani Durgavati Vishwavidhyalaya, Jabalpur, Madhya Pradesh – 462016
15. Dept. of Library & Information Science Vikram University Ujjain, Madhya Pradesh – 456 010	16. Dept. of Library & Information Science Amravati University, Amravati, Maharashtra – 444 602
17. Dept. of Library & Information Science Bharati Vidhyapeeth, Pune, Maharashtra – 411 030	18. Dept. of Library & Information Science BR Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra – 431 004
19. Dept. of Library & Information Science University of Mumbai,	20. Dept. of Library & Information Science Nagpur University,

Mumbai, Maharashtra – 400 098	Nagpur, Maharashtra – 440 010
21. Dept. of Library & Information Science North Maharashtra University, Jalgaon, Maharashtra – 425 001	22. Dept. of Library & Information Science University of Pune, Pune, Maharashtra – 411 007
23. Dept. of Library & Information Science Shivaji University, Kolhapur, Maharashtra – 416 004	24. SNDT Women's University SHPT School of Library Science Mumbai, Maharashtra – 400 020
25. Dept. of Library & Information Science Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra – 431 608	26. Dept. of Library & Information Science Tilak Maharashtra Vidyapeeth Pune, Maharashtra – 411 037
27. Dept. of Library & Information Science M L Sukhadia University, Udaipur, Rajasthan – 311 001	28. Dept. of Library & Information Science University of Rajasthan, Jaipur, Rajasthan – 302 004
29. Dept. of Library & Information Science H N B Garhwal University, Srinagar.	

E. NORTH EAST INDIA

1. Dept. of Library & Information Science Gauhati University, Assam – 781 014	2. Dept. of Library & Information Science Manipur University, Imphal Manipur – 795 003
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3. Dept. of Library & Information Science North Eastern Hill University, Shillong, Meghalaya - 793014	4. Dept. of Library & Information Science Mizoram University, Aizawl, Mizoram – 796 009
5. Centers for Library & Information Science Dibrugarh University, Dibrugarh, Assam	6. Dept. of Library & Information Science Assam University, Silchar

Table 2.4(2)

**Universities and Other Institutions Offering LIS Educations
BLIS, MLIS Courses (Conventional Mode)**

1. Andhra University Dept. of Library & Information Science Visakhapatnam, Andhra Pradesh	2. Kakatiya University Manair College of Library Science Khammam, Andhra Pradesh.
3. Osmania University, Dept. of Library & Information Science Hyderabad, Andhra Pradesh.	4. Osmania University, Central Institute of Library Science, Hyderabad, Andhra Pradesh.
5. Sri Venkateswara University, Dept. of Library & Information Science Tirupati, Andhra Pradesh	6. Sri Krishnadevaraya University, Dept. of Library & Information Science Ananthapur, Andhra Pradesh.
7. Gauhati University, Dept. of Library & Information Science Guwahati, Assam	8. Lalit Narayan Mithila University, Darbhanga, Bihar.

9. Patna University, Institute of Library & Information Science Patna, Bihar	10. Tilka Manjhi Bhagalpur University Institute of Library & Information Science Bhagalpur, Bihar
11. Guru Ghasidas University, Dept. of Library & Information Science Bilaspur, Chattisgarh.	12. P T Ravishankar Shukla University Dept of Library & Information Science Raipur, Chattisgarh.
13. University of Delhi Dept. of Library & Information Science New Delhi	14. Jamia Millia Islamia Dept. of Library & Information Science New Delhi
15. Bhavnagar University Dept. of Library & Information Science Bhavnagar, Gujarat.	16. Gujarat Vidyapith Dept. of Library & Information Science Ahmedabad, Gujarat.
17. Gujarat University, Dept. of Library & Information Science Ahmedabad, Gujarat.	18. Hemchandracharya North Gujarat University Dept. of Library & Information Science Patan, Gujarat
19. M S University of Baroda Dept. of Library & Information Science Vadodara, Gujarat.	20. Sardar Patel University, Dept. of Library & Information Science, Vallabh Vidyanagar, Gujarat
21. Saurashtra University, Dept of Library & Information Science Rajkot, Gujarat.	22. South Gujarat University, Dept. of Library & Information Science, Surat, Gujarat.

23. Kurukshetra University, Dept. of Library & Information Science, Kurukshetra, Haryana	24. University of Jammu, Dept. of Library Science, Jammu, Jammu & Kashmir.
25. University of Kashmir, Dept. of Library & Information Science Srinagar, Jammu & Kashmir.	26. Bangalore University, Department of Library & Information Science Bangalore, Karnataka
27. Bangalore University Sree Siddaganga College of Arts, Science and Commerce for Women Tumkur, Karnataka	28. Gulbarga University, Department of PG Studies & Research in Library & Information Science Gulbarga, Karnataka.
29. Karnatak University, Dept. of Library & Information Science Dharwad, Karnataka	30. Kuvempu University Dept. of Library & Information Science Shimoga, Karnataka
31. Mangalore University, Dept. of Library & Information Science Mangalore, Karnataka	32. University of Mysore Dept. of Studies in Library & Information Science Mysore, Karnataka.
33. University of Calicut, Dept. of Library & Information Science, Calicut, Kerela.	34. Farook College, Dept. of Library & Information Science University of Calicut, Kozhikode, Kerela.
35. Majlis Arts and Science College University of Calicut Valanchery, Calicut, Kerela	36. University of Kerela Dept. of Library & Information Science Thiruvanthapuram, Kerela.

37. Mahatma Gandhi University Dept. of Library & Information Science Kottayam, Kerela	38. Awadesh Pratap Singh University Dept. of Library & Information Science Rewa, Madhya Pradesh.
39. T.R.S College Awadesh Pratap Singh University Rewa, Madhya Pradesh.	40. Barkatullah Vishwavidyalaya Dept. of Library & Information Science Bhopal, Madhya Pradesh
41. AEC Training College and Centre Dept. of Library & Information Science Parchmarhi, Madhya Pradesh	42. Hemchand Mangilal Sharma College Bhopal, Madhya Pradesh.
43. Jai Hind Defence College Department of Library Science Bhopal, Madhya Pradesh	44. JLNS College Dept. of Library & Information Science Ganj Basoda, Madhya Pradesh
45. Rajeev Gandhi College Dept. of Library & Information Science Bhopal, Madhya Pradesh	46. R. K. Memorial Mahavidyalaya Dept. of Library & Information Science Visisha, Madhya Pradesh
47. Vikramaditya College Department of Library Science Bhopal, Madhya Pradesh	48. Dr. Harisingh Gaur Vishwavidyalaya Dept. of Library & Information Science Sagar, Madhya Pradesh
49. Jiwaji University School of Studies in Library & Information Science Gwalior, Madhya Pradesh	50. Govt. Girls Degree College Department of Library Science Gwalior, Madhya Pradesh
51. Govt. MLB College of Excellence Dept. of Library & Information Science Gwalior, Madhya Pradesh	52. Makhanlal Chaturvedi National University Institute of Journalism Dept. of Library & Information

	Science Bhopal, Madhya Pradesh.
53. Rani Durgavati Vishwavidyalaya Dept. of Library & Information Science Jabalpur, Madhya Pradesh	54. Jabalpur College of Computers & Communication Jabalpur, Madhya Pradesh.
55. Kamta Prasad Guru Bhasha-Bharati Dept. of Library & Information Science Jabalpur, Madhya Pradesh	56. Katni Arts & Commerce College Katni, Madhya Pradesh.
57. Vikram University Dept. of Library & Information Science Ujjain, Madhya Pradesh	58. Sandipani Arts and Commerce Ujjain, Madhya Pradesh.
59. Amravati University Dept. of Library & Information Science Amravati, Madhya Pradesh.	60. College of Library & Information Science Buldana, Maharashtra.
61. College of Library & Information Science Amravati, Madhya Pradesh.	62. Nagar Vachnalaya Yavatmal, Maharashtra.
63. VidyaBharati Mahavidyalaya Amravati, Maharashtra.	64. Bharati Vidyapeeth Dept. of Library & Information Science, Pune, Maharashtra.
65. Yashwantrao Mohite Arts, Commerce & Science College Pune, Maharashtra.	66. Dr. Babasaheb Ambedkar Marathwada University Dept. of Library & Information Science Aurangabad, Maharashtra.

67. College of Library & Information Science Aurangabad, Maharashtra	68. JSP Mandal's College of Library & Information Science Beed, Maharashtra.
69. University of Mumbai Dept. of Library & Information Science Mumbai, Maharashtra.	70. Nagpur University Dept. of Library & Information Science Nagpur, North Maharashtra.
71. North Maharashtra University Dept. of Library & Information Science Jalgaon, North Maharashtra	72. JDMVP College, Dept. of Library & Information Science Jalgaon, North Maharashtra.
73. MJ College Dept. of Library & Information Science Jalgaon, North Maharashtra	74. Nutan Maratha Mahavidyalaya Library Science Section Jalgaon, North Maharashtra.
75. SS Patil Arts, TT Salunkhe Commerce and GR Pandit Science College Dept. of Library & Information Science Jalgaon, North Maharashtra	76. University of Pune Dept. of Library & Information Science Pune, North Maharashtra.
77. HPT Arts/RVK Science College Dept. of Library & Information Science Nashik, Maharashtra.	78. Nowrosjee Wadia College Pune, Maharashtra.
79. Shivaji University Dept. of Library & Information Science Kolhapur , Maharashtra.	80. SNDT Women's University SHPT School of Library Science Mumbai, Maharashtra.
81. Swami Ramanand Teert Marathwada University Dept. of Library & Information Science	82. Rajdharma Vikas Probdhini's College of Library & Information Science Latur, Maharashtra.

Nanded, Maharashtra.	
83. SANT Sambhji Shinde College of Library Science Pabhani, Maharashtra.	84. Tilak Maharashtra Vidyapeeth Dept. of Library & Information Science Pune, Maharashtra.
85. Nehru Institute of Social Studies Pune, Maharashtra.	86. Manipur University Dept. of Library & Information Science Imphal, Manipur.
87. North Eastern Hill University Dept. of Library & Information Science Shillong, Meghalaya	88. Berhampur University College of Library & Information Science Ankushpur, Orissa.
89. North Orissa University Dept. of Library & Information Science Baripada, North Orissa.	90. Sambalpur University PG Dept. of Library & Information Science Sambalpur, North Orissa.
91. Asian Worker's Development Institute Nabakrushna Choudhury Library Rourkela, Orissa.	92. Utkal University Dept. of Library & Information Science Bhubaneshwar, Orissa.
93. Pandit Nilakantha College of Library & Information Science Bhubaneshwar, Orissa.	94. SB Women's College Dept. of Library & Information Science Cuttack, Orissa.
95. Punjab University Dept. of Library & Information Science Chandigarh, Punjab.	96. Punjabi University Dept. of Library & Information Science Patiala, Punjab.

97. Jai Narain Vyas University Onkarmal Somani College of Commerce Dept. of Library Science Jodhpur, Rajasthan.	98. M.L. Sukhadia University Dept. of Library & Information Science Udaipur, Rajasthan.
99. Maharshi Dayanand Saraswati University Behani Siksha Mahavidyalaya Srinagar, Rajasthan.	100. University of Rajasthan Dept. of Library Science & Documentation Jaipur, Rajasthan.
101. Arya Vidyapeeth Kanya Mahavidyalaya Bhusawar, Rajasthan	102. Annamalai University Dept. of Library & Info. Science Annamalainagar, Tamil Nadu.
103. Bharathidasan University Dept. of Library & Information Science Tiruchirappali, Tamil Nadu.	104. Bishop Heber College Dept. of Library & Information science Tiruchirappali, Tamil Nadu.
105. Gandhigram Rural Institute Dept. of Library & Information Science Gandhigram, Tamil Nadu.	106. University of Madras Dept. of Library & Information Science Chennai, Tamil Nadu.
107. Madurai Kamaraj University Dept. of Library & Information Science Madurai, Tamil Nadu.	108. Mother Teresa Women's University Dept. of Information Studies Kodaikanal, Tamil Nadu.
109. Aligarh Muslim University Dept. of Library & Information Science Aligarh, Uttar Pradesh.	110. Banaras Hindu University Dept. of Library & Information Science Aligarh, Uttar Pradesh.
111. Bundelkhand University Dept. of Library & Information Science Jhansi, Uttar Pradesh.	112. Campus for Open Learning Jhansi, Uttar Pradesh.

113. CH. Charan Singh University Meerut Institute of Management Education Sahibabad, Ghaziabad, Uttar Pradesh	114. Dr. B.R.Ambedkar University, Dept. of Library & Information Science Lucknow, Uttar Pradesh.
115. University of Lucknow Dept. of Library & Information Science Lucknow, Uttar Pradesh.	116. Isbella Thornburn College Dept. of Library & Information Science Lucknow, Uttar Pradesh.
117. Mahatma Gandhi Kashi Vidyapeeth Dept. of Library & Information Science Varanasi, Uttar Pradesh.	118. U P Rajarshi Tandon Open University Dept. of Library & Information Science Allahabad, Uttar Pradesh.
119. HNB Garhwal University Dept. of Library & Information Science Strinagar, Uttaranchal.	120. University of Burdwan Dept. of Library & Information Science Burdwan, West Bengal.
121. University of Calcutta Dept. of Library Science Kolkata, West Bengal.	122. Jadavpur University Dept. of Library & Information Science Kolkata, West Bengal.
123. Rabindra Bharati University Dept. of Library & Information Science Kolkata, West Bengal.	124. University of Kalyani Dept. of Library & Information Science Kalyani, North Bengal.
125. University of North Bengal Dept. of Library & Information Science Darjeeling, North Bengal.	126. Vidyasagar University Dept. of Library & Information Science Midnapore, North Bengal.

Table 2.4 (3)
Universities offering MLIS (2yrs Integrated)

1. Andhra University Dept. of Library & Information Science Visakhapatnam, Andhra Pradesh.	2. Sri Venkateswara University Dept. of Library & Information Science Tirupati, Andhra Pradesh.
3. Sri Krishnadevaraya University Dept. of Library & Information Science Ananthapur, Andhra Pradesh	4. Gauhati University Dept. of Library & Information Science Guwahati, Assam.
5. Guru Ghasidas University Dept. of Library & Information Science Bilaspur, Chattisgarh	6. Bhavnagar University Dept. of Library & Information Science Bhavnagar, Gujarat.
7. Gujarat Vidyapith Dept. of Library & Information Science Ahmedabad, Gujarat.	8. Sardar Patel University Dept. of Library & Information Science Vallabh Vidyanagar, Gujarat
9. South Gujarat University Dept. of Library & Information Science Surat, South Gujarat.	10. University of Kashmir Dept. of Library & Information Science Srinagar, Jammu & Kashmir.
11. Bangalore University Dept. of Library & Information Science Bangalore, Karnataka.	12. Gulbarga University Dept. of PG Studies & Research in Library & Information Science Gulbarga, Karnataka.
13. Karnatak University Dept. of Library & Information Science Dharwad, Karnataka.	14. Kuvempu University Dept. of Library & Information Science Shimoga, Karnataka.
15. Mangalore University	16. University of Mysore

Dept. of Studies in Library & Information Science Mangalore, Karnataka.	Dept. of Studies in Library & Information Science Mysore, Karnataka.
17. Dr. Babasaheb Ambedkar Marathwada University Dept. of Library & Information Science Aurangabad, Maharashtra.	18. North Maharashtra University Dept. of Library & Information Science Jalgaon, Maharashtra.
19. University of Pune Dept. of Library & Information Science Pune, North Maharashtra	20. Shivaji University (Vocational) Dept. of Library & Information Science Kolhapur, North Maharashtra.
21. North Eastern Hill University Dept. of Library & Information Science Shillong, Meghalaya.	22. Utkal University Dept. of Library & Information Science Bhubaneswar, Orissa.
23. S B Women's College Dept. of Library & Information Science Cuttack, Orissa.	24. Annamalai University Dept. of Library & Information Science Annamalainagar, Tamil Nadu.
25. Bharathidan University Dept. of Library & Information Science Tiruchirappali, Tamil Nadu.	26. Bishop Heber College Dept. of Library & Information Science Tiruchirappali, Tamil Nadu.
27. University of Madras Dept. of Library & Information Science Chennai, Tamil Nadu.	28. Madurai Kamaraj University Dept. of Library & Information Science Madurai, Tamil Nadu.
29. University of Calcutta Dept. of Library Science Kolkata, West Bengal.	30. Babasaheb Bhimrao Ambedkar University Dept. of Library & Information Science M.Sc(Information Studies)

	Lucknow, Uttar Pradesh.
31. Birla Institute of Technology Dept. of Information Science Ranchi, Bihar.	32. Mizoram University Dept. of Library & Information Science Aizawl, Mizoram

Table 2.4(4)
Universities offering M. Phil in LIS

1. Dept. of Library & Information Science Andhra University, Visakhapatnam, Andhra Pradesh.	2. Osmania University Dept. of Library & Information Science Hyderabad, Andhra Pradesh.
3. Sri Krishnadevaraya University Dept. of Library & Information Science Ananthapur, Andhra Pradesh	4. Sri Venkateswara University Dept. of Library & Information Science Tirupati, Andhra Pradesh.
5. University of Delhi Dept. of Library & Information Science Delhi.	6. University of Kashmir Dept. of Library & Information Science Srinagar, Jammu & Kashmir.
7. Gujarat Vidyapith Dept. of Library & Information Science Ahmedabad, Gujarat.	8. Gulbarga University Dept. of PG Studies & Research in Library & Information Science Gulbarga, Karnataka.
9. University of Kerela Dept. of Library & Information Science Thiruvanthapuram, Kerela.	10. University of Pune Dept. of Library & Information Science Pune, North Maharashtra.
11. Sambalpur University P.G Dept. of Lib & Inf. Science Sambalpur, North Orissa.	12. Annamalai University Dept. Library & Information Science Annamalainagar, Tamil Nadu.

13. Aligarh Muslim University Dept. of Library & Information Science Aligarh, Uttar Pradesh	14. Mizoram University Dept. of Library & Information Science Aizawl, Mizoram.
15. University of Calcutta Dept. of Library & Information Science Kolkata, West Bengal.	16. University of Burdwan Dept. of Library & Information Science Burdwan, West Bengal.

Table 2.4 (5)
Universities offering PhD in LIS

1. Andhra University Dept. of Library & Information Science Visakhapatnam, Andhra Pradesh.	2. Osmania University Dept. of Library & Information Science Hyderabad, Andhra Pradesh.
3. Sri Krishnadevaraya University Dept. of Library & Information Science Ananthapur, Andhra Pradesh	4. Sri Venkateswara University Dept. of Library & Information Science Tirupati, Andhra Pradesh.
5. Gauhati University Dept. of Library & Information Science Guwahati, Assam.	6. Tilka Manjhi Bhagalpur University Institute of Library & Information Science Bhagalpur, Bihar.
7. Guru Ghasidas University Dept. of Library & Information Science Bilaspur, Chattisgarh.	8. PT Ravishankar Shukla University School of Studies in Library & Information Science Rajpur, Chattisgarh.
9. University of Delhi Dept. of Library & Information Science Delhi.	10. Indira Gandhi National Open University Faculty of Library & Information Science New Delhi.
11. Bhavnagar University Dept. of Library & Information Science Bhavnagar, Gujarat.	12. Gujarat Vidyapith Dept. Library & Information Science Ahmedabad, Gujarat.
13. Saurashtra University Dept. of Library & Information Science Rajkot, Gujarat.	14. Kurukshetra University Dept. of Library & Information Science Kurukshetra, Haryana.
15. University of Jammu Dept. of Library Science Jammu, Jammu & Kashmir.	16. University of Kashmir Dept. of Library & Information Science Srinagar, Jammu & Kashmir.
17. Bangalore University Dept. of Library & Information Science	18. Gulbarga University Dept. of PG Studies & Research in

Bangalore, Karnataka.	Library & Information Science Gulbarga, Karnataka.
19. Karnatak University, Dept. of Library & Information Science Dharwad, Karnataka.	20. Kuvempu University Dept. of Library & Information Science Shimoga, Karnataka.
21. Mangalore University Dept. of Studies in Library & Info. Science Mangalore, Karnataka.	22. University of Mysore Dept. of Studies in Library & Info. Science Manasagangotri, Karnataka.
23. University of Calicut, Dept. of Library & Information Science Calicut, Kerela.	24. University of Kerela Dept. of Library & Information Science Thiruvanthapuram, Kerela.
25. Dr. Harisingh Gaur Vishwavidyalaya Dept. of Library & Information Science Sagar, Madhya Pradesh.	26. Jiwaji University School of Studies in Library & Info. Science Gwaior, Madhya Pradesh.
27. Makhanlal Chaturvedi national University Institute of Journalism Dept. of Library & Information Science Bhopal, Madhya Pradesh.	28. Vikram University Dept. of Library & Information Science Ujjain, Madhya Pradesh.
29. Amravati University Dept. of Library & Information Science Amravati, Maharashtra.	30. Dr. Babasaheb Ambedkar marathwada University Dept. of Library & Information Science Aurangabad, Maharashtra.
31. University of Mumbai Dept. of Library & Information Science Mumbai, Maharashtra.	32. Nagpur University Dept. of Library & Information Science Nagpur, Maharashtra.
33. University of Pune Dept. of Library & Information Science Pune, North Maharashtra.	34. SNDT Women's University SHPT School of Library Science Mumbai, North Maharashtra.

35. Swami Ramanand Teerth Marathwada University Dept. of Library & Information Science Nanded, North Maharashtra.	36. North eastern Hill University Dept. of Library & Information Science Shillong, Meghalaya.
37. Berhampur University College of Library & Information Science Ankushpur, Orissa.	38. Sambalpur University PG Dept. of Library & Information Science Sambalpur, North Orissa.
39. Utkal University Dept. of Library & Information Science Bhubaneswar, North Orissa.	40. Guru Nanak dev University Dept. of Library & Information Science Amritsar, Punjab.
41. Punjab University Dept. of Library & Information Science Chandigarh, Punjab.	42. Punjabi University Dept. of Library & Information Science Patiala, Punjab.
43. M L Sukhadia University Dept. of Library & Information Science Udaipur, Rajasthan	44. University of Rajasthan Dept. of Library & Information Science Jaipur, Rajasthan.
45. Vardhaman Mahaveer Open University Dept. of Library & Information Science Kota, Rajasthan.	46. Annamalai University Dept. of Library & Information Science Annamalainagar, Tamil Nadu.
47. University of Madras Dept. of Library & Information Science Chennai, Tamil Nadu.	48. Babasaheb Bhimrao Ambedkar University Dept. of Library & Information Science Lucknow, Uttar Pradesh.
49. Banaras Hindu University Dept. of Library & Information Science Varanasi, Uttar Pradesh.	50. Bundelkhand University Dept. of Library & Information Science Agra, Uttar Pradesh.
51. Dr. B.R.Ambedkar University Dept. of Library & Information Science Agra, Uttar Pradesh.	52. HNB Garhwal University Dept. of Library & Information Science Srinagar, Uttaranchal.
53. University of Burdwan	54. University of Calcutta

Dept. of Library & Information Science Burdwan, West Bengal.	Department of Library Science, Kolkata, West Bengal.
55. Jadavpur University Dept. of Library & Information Science, Kolkata, West Bengal.	56. North Bengal University Dept. of Library & Information Science Siliguri, West Bengal.
57. University of Kalyani Dept. of Library & Information Science, Kalyani, West Bengal.	58. Vidyasagar University Dept. of Library & Information Science Midnapore, West Bengal.
59. Mizoram University Dept. of Library & Information Science Aizawl, Mizoram.	

2.5 LIS EDUCATION THROUGH DISTANCE MODE

Open and Distance learning has gained momentum over the period of time. The very objective of open and distance learning is to provide access to education. Many open universities and correspondence course institutions in India are offering a number of courses starting from certificate to Ph.D in order to provide higher professional degree. Library and information science courses are being offered by many open universities and correspondence course institute. (List enclosed). B.R. Ambedkar Open University, Hyderabad was the first university to offer BLIS course, then IGNOU offered BLIs in the year 1998. The objectives of offering LIS courses through distance mode are as follows

Objectives

The various objectives associated with this Open University have been mentioned below:

- Distance learning can be of vital assistance in overcoming the shortage of qualified personnel,
- Provides opportunities for career advancement,
- Allows acquiring a higher professional qualification, knowledge and skills,

- Acquaints the techniques and management of library systems and services,
- Understands the basic functions of each type of library/information center/documentation center in the changing educational and social set up,
- Increase awareness and motivation among learners and
- Transcends geographical barriers extending access to those in the remote

2.5.1 DEC INITIATIVES

The norms and standards for LIS programmes (BLISc, MLISc) through distance mode was developed by Distance Education Council (DEC) in 1996. The Curriculum Development Committee (CDC) examined the DEC Norms and Standards and accepted them with some modifications as given below:

For admission to BLISc Programme the following eligibility may be accepted in order of preference:

Graduate with two years of working experience in a library.

Graduate with Diploma/Certificate in Library Science.

Professional Graduates (Law, Pharmacy, engineering)

Graduates with 50% marks.

II. Increase in counseling/contact programme (study hours) both for theory as well as practice.

III. Introduction of compulsory computer practical both for BLISc and MLISc students.

IV. Curriculum designed by CDC/UGC should be followed by CCI's and OUs.

V. Provision of Internship should be introduced for all BLISc students and should also be exposed to different libraries and their organizational pattern and services offered (Visit to Libraries)

VI. Committee strongly recommends the adequate infrastructure in Head Quarters and in every study centre, so that professional standards would be maintained properly. (Computer hardware and software, Classification Schedules, Cataloguing Codes and Reference Sources).

VII. Orientation programmes should be organized by ICC's and Open Universities to make the Counselors known about the latest developments in different countries.

Table 2.5.1 Universities Offering LIS Education through Distance Mode

Sl. No.	Name of the University	Place	Courses offered
1	Indira Gandhi National Open University,	New Delhi	BLISc., MLISc. PGDLAN, and Ph.D
2	Dr. B.R. Ambedkar Open University	Hyderabad	BLISc., MLISc
3	Yashwantrao Chavan Maharashtra Open University	Nashik	BLISc., MLISc.
4	Birla Institute of Technology and Science	Pilani	Information Science/ System
5	Kaktiya University	Warangal	CLISc., BLISc
6	Sri Venkateswara University	Tirupati	CLISc., BLISc
7	Barkhatullah Viswavidyalaya	Bhopal	DLISc., BLISc., & MLISc
8	Kota Open University	Kota	DLISc., BLIS, MLIS Ph.D
9	University of Calicut	Calicut	BLISc
10	Awdesh pratap singh University	Rewa	BLISc & MLISc.,
11	Barkhatullah Viswavidyalaya	Bhopal	DLISc., BLISc., & MLISc.
12	Kota Open University	Kota	DLISc., Ph.D
13	University of Calicut	Calicut	BLISc.
14	University of Madras	Chennai	CLISc., BLISc
15	Awdesh Pratap Singh University	Rewa	BLISc., & MLISc
16	Kurukshetra University	Kurukshetra	CLISc., BLISc., & MLISc
17	Patna University	Patna	BLISc

18	Guru Ghasidas University	Bilaspur	MLISc
19	Annamalai University	Annamalai	BLISc
20	Alagappa University	Karaikudi	BLISc., & MLISc
21	Bharthidasan University	Tiruchirpalli	BLISc
22	Mahatma Gandhi Gramodaya Viswadyalaya	Chitrakoot	BLISc., & MLISc
23	University of Kashmir	Srinagar	CLISc
24	Madurai Kamraj University	Madurai	CLISc., BLISc
25	Nalanda Open University	Patna	DLISc., BLISc
26	Punjabi University	Patiala	DLISc
27	Dr. Hari Singh Gour Viswavidyalaya	Sagar	BLISc., MLISc
28	Jai Narain Vyas University, Omkaamal Somani College	Jodhpur	CLISc
29	University of Hyderabad	Hyderabad	PGDLAN
30	Lalit Narayan Mithila University	Darbhangha	BLISc., MLISc.
31	M.P.Bhoj University	Bhopal	BLIS, MLIS

Although this chapter provided an overview of library and information science education in India, the courses at different levels keep on changing keeping in view the demand for the same course and infrastructure available. The following Chapter entitled “LIS Education in North East Region” focused the Universities and other institutions, different levels of courses and learning outcome in the north east region of India.

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3.1 INTRODUCTION

Library and information science education in north east region begins in the late 1960's. Although there are seven universities in the north east region offering library and information science course, the study is limited to four universities. Library and information science course was first started by Gauhati University as an evening course in the year 1966. It was a Bachelor Degree course leading to BLibSc and later in the year 1979, one year master's degree course was started leading to MLibSc. The nomenclature of both BLibSc and MLibSc was changed to BLISc and MLISc in 1984 along with renaming of the department as Library and Information Science. From the academic session 2001-2002, two years integrated Master degree programme leading to MLISc was introduced with fully revised syllabus. The second University to start library and information science course was the North Eastern Hill University. It was started in the year 1985 with a two years integrated programme leading to Masters of Library and Information Science. Manipur University was the third university to start the programme in 1986. It was started with a Bachelors Degree of one year duration. Later on the Department introduced one year programme of Masters of Library and Information Science (MLISc) in 2004 with an intake of 6 students. Two Years Integrated MLISc Course was also introduced in the Department from the 2006-2007 academic session. Mizoram University introduced Bachelor of Library and Information Science (BLISc) programme in the year 2002 which was a one-year course. Later on, the university introduced one year Master of Library and Information Science (MLISc) in 2003. From July 2005 the university started two years integrated MLISc course thereby abolishing one year BLISc and one year MLISc. Dibrugarh University, Assam, started one year BLISc programme in the year 2005 and one year MLISc programme in the year 2007. D.S College, Gangtok (Affiliated to Sikkim University) started BLISc course in the year 2008, and Assam University, Silchar is also planning to start 2 years integrated MLISc from 2010 academic session.

The location of seven universities offering Library and Information Science courses in the different states of North East region is shown in a map appended at the end of this chapter.

The following table provides information about the four universities under study.

Table 3.1 Brief Profile about the Department

<i>Sl. No</i>	<i>Name of the University</i>	<i>Year of estd.</i>	<i>Courses on offer</i>	<i>Intake Capacity</i>	<i>No. of Faculty Members</i>	<i>ICT Infra structure</i>	<i>Dept. Library</i>	<i>Learning Resources</i>
1.	Gauhati University	1966	MLIS, Ph.D	25 As per ordinance and statute	Professor -2 Reader-1	Computer with LAN Connectivity	Yes	Books-3,000 UGC-Infonet LIS Journals
2	NEHU	1985	MLIS, Ph.D	30 As per ordinance and statute	Reader-2 Lecturer-3	Computer with LAN Connectivity	Yes	Books-7,000 National-10 Intl-12
3	Manipur University	1986	MLIS, Ph.D	21 As per ordinance and statute	Reader-2 Lecturer-2	Computer with LAN Connectivity	No	Books-2,000 National-10 Intl - 2
4	Mizoram University	2002	MLIS, MPhil, Ph.D	15 05 As per ordinance and statute	Professor -1 Reader-1 Lecturer-3	Computer with LAN Connectivity	Yes	Books-1,500 National-4 Intl- 5

3.2 LIS EDUCATION IN GAUHATI UNIVERSITY

3.2.1 INTRODUCTION

The Gauhati University was established in 1948 and the Department of Library Science (then Library Science) was started as evening course in the year 1966 with University Librarian Dr Jogeswar Sarma as Head of the Department. Gauhati University is the first university of this region and the department is also first one in this region. Firstly in

1966/67, one year Bachelor degree programme leading to BLibSc and later in 1979, one year Master degree programme leading to MLibSc were started in the department. The nomenclature of both BLibSc and MLibSc was changed to BLISc and MLISc in 1984 along with renaming of the department as Library and Information Science. Former librarian of the Gauhati University Dr.Jogeswar Sarma was the Head of the Department till his retirement (up to 1983) and then Prof. Alaka Buragohain took over the charge of the Department. From 1984, both BLISc and MLISc courses became full time day courses with revised syllabi. From the academic session 2001-2002, two years integrated Master degree programme leading to MLISc was introduced with fully revised syllabus accommodating new areas in conformity with the UGC-CDC suggestions in LIS. Since 1987 the Ph.D programme is also introduced. Prof. Bhadra Bora , Prof. Narendra Nath Sharma and Prof. N.K.Lahkhar were also Heads of the Department at different times. Prof. R.K.Barman is the present Head of the Department. During its thirty one years of glorious existence, the department has produced good number of LIS professionals and contributed a lot for the development of the LIS profession particularly in the North Eastern India.

3.2.2 COURSES ON OFFER

BLISc (earlier BLibSc) and MLISc (earlier MLibSc) both with one year duration were continuing since 2000/01. From the year 2001/02 the department is conducting two years integrated Master of Library and Information Science (MLISc) with four semesters. The department is also having research programme in LIS leading to Doctor of Philosophy (Ph.D). The department is planning to introduce Master of Philosophy (MPhil) course in LIS from the next academic year.

Master of Library and Information Science (MLISc) Course

Students are admitted in to the MLISc course on the basis of their past academic career or from HSLCE onwards plus performance in the admission test conducted by the department. The admission test consists of objective and subjective type questions of degree standard and also the viva voce.

The MLISc course is a two years integrated course with 4 semesters and 25 intake capacity. Each semester is having four papers of 100 marks each. Each paper is evaluated on the basis of internal assessment and final examination with 20 and 80 marks respectively. Internal Assessments are based on terminal examination, seminar/group discussions, assignments, computer practical and library visit report etc. During the course, students get practical experiences regarding the library management, use and application of ICT, use of library software packages in the Gauhati University library, other college and special libraries. They are also required to submit report on job diary of the activities and experiences undertake and gained from the selected library. The students are also required to prepare an annotated subject bibliography on different topics of interest. In their fourth semester, students have to prepare a dissertation on a specific area in LIS making an in depth study on that particular topic. The syllabus of the course is revised regularly and in the year 2007-2008 new syllabus is introduced incorporating sufficient components of recent developments in LIS.

3.2.3 OBJECTIVES

The main objectives of the course are:

- To acquaint students with the principles of modern management of Library and Information Centres.
- To make them aware about the growth and development of universe of knowledge and its organization in different fields.
- To provide training in methods and techniques of research and their application to the problems in Library and Information Science and preparing one for further research.
- To acquaint students with the theory and practices of Information Technology in information collection, processing, storage and retrieval.
- To acquaint on the principles, methods and techniques of organization and management of modern Library and Information centres.

Table 3.2.2 Core Papers ,Electives and Marks Allotted

First Semester

Paper	Title	Marks
1.1	Library & Society	20+80=100
1.2	Organization of Knowledge (Theory)	20+80=100
1.3	Reference & Information Service and Sources	20+80=100
1.4	Organization of Knowledge (Practice)	20+80=100

Second Semester

2.1	Library Management	20+80=100
2.2	Introduction to Computers	20+80=100
2.3	Information Retrieval Techniques	20+80=100
2.4	A. Organization of Knowledge B. Bibliographical Project and Viva Voce	60+40=100

Third Semester

3.1	Information and communication	20+80=100
3.2	Research Methodology	20+80=100
3.3	Information Systems and Programmes	20+80=100
3.4	A. Different Library Systems B. Job Diary and Library Visit report	60+40=100

Fourth Semester

4.1	A. System Analysis	20+80=100
4.2	Library automation and Networking	20+80=100
4.3	Library Software Packages	60+40=100
4.4	Dissertation Work	20+80=100

The complete curriculum and syllabus is provided in Appendix 1.

Doctor of Philosophy (Ph.D)

The department is offering Ph.D in LIS since 1989. The rules and regulations for eligibility, admission, registration, and submission of the thesis have been laid down by the University. Till today 16 scholars have been awarded Ph.D degree from the department under the guidance of Prof Alaka Buragohain, Prof. Narendra Nath Sharma, Prof. N.K.Lahkhar and Dr. Rajani Kanta Barman. It is worth mentioning that Prof Buragohain had obtained her Ph.D from this department independently.

3.2.4 ICT INFRASTRUCTURE

The department has a computer laboratory with internet connectivity. The department is fully utilizing the internet connectivity with broadband extended by the university in its computer laboratory. Besides normal computer practical like word processing using MS Office, internet browsing, etc, the computer laboratory is used for practice for the CDS/ISIS and SOUL library package. The open source software: GSDL and DSpace are also being practiced by the students, research scholars and faculties.

3.2.5 DEPARTMENT LIBRARY

The departmental library has a good collection of documents for the students, research scholars and faculties. It contains the library classification schedule like the DDC, CC, and the UDC and also the Sears' List of Subject Headings. Recently, good numbers of books on various areas of LIS are procured in the departmental library.

3.2.6 LEARNING RESOURCES

The University Central Library i.e. the KKH Library has a good collection of LIS books and journals and students, researchers and faculties have the access to these resources and use extensively. The central library has a total collection of around 3,000 books in library and information science.

The department is trying its best to march along with the development of LIS discipline and it is successful also to a large extent. The standard of activities of the department is teaching and research in LIS. The department is always trying to provide the students both traditional and the modern approaches with regard to LIS. The LIS itself is fast growing during recent times and it is the responsibility of library schools to train new generation in order to face the challenges and the department of Library and Information Science, Gauhati University is accepting the challenges in the right perspectives and prepare professionals applying various teaching methods including ICT in its academic programmes as well as in examination process. At regular intervals syllabus is revised incorporating new developments in its PG programme. Researchers have conducted and are being conduct on the topic having recent values with social and professional impact. Of

course, the department is facing some acute problems like insufficient space, non availability of funds for changing over to latest editions of practical tools like DDC, UDC, Sears List of Subject Headings, etc. In spite of all these, the department will continue to grow and play major role in developing LIS in days to come.

3.3 LIS EDUCATION IN NORTH EASTERN HILL UNIVERSITY (NEHU)

3.3.1 INTRODUCTION

The Department of Library and Information Sciences was established in 1985 with a new approach to Library and Information Science education in the country. The Department introduced for the first time a two-year integrated programme leading to Master's degree in Library and Information Sciences in the country. The same pattern of education has now been recommended by the UGC under Model Curriculum in Library & Information Science in 2002. Since 1986 nearly 350 students have already got MLISc degree from the Department and seven students have been awarded Ph.D. Some of the students who have passed out are working in many senior positions in the university libraries, college libraries, state libraries R&D, lecturers in the University, etc. Besides, currently there are 15 students registered for Ph.D..

3.3.2 COURSES ON OFFER

The department is offering the following courses in library and information science

MLISc (Masters in Library and Information Science) – 2 Years Integrated

The Master of Library and Information Science course was started in the year 2002 with an intake capacity of 30 students. The Department has been regularly revising and updating the syllabus keeping with the rapid developments of information technology (IT) and its crucial role in the library and information profession. The last revision of the syllabus was made in 2003.

3.3.3 OBJECTIVES

The main objectives of the course are

- To give the students an understanding of the basic principles of fundamental laws of library science and to enable him/her to understand and appreciate the functions, purposes and services of Libraries and Information Organizations in this fast changing world of ‘Information Age’.
- To train the students in the techniques of Information Management and equip them with the latest developments in Information Technology (IT) and its applications in libraries and information centres.
- To acquaint the students with the organizations and development of the Universe of Knowledge and research methods.

Table 3.3.2 Core Papers, Electives and Marks Allotted

First Semester

<i>Course</i>	<i>Title</i>	<i>Marks</i>
LIS 101	Foundations of Library & Information Science	25+75=100
LIS 102	Organization of Knowledge(I) (Theory)	25+75=100
LIS 103	Organization of Knowledge(I) (Practice)	25+75=100
LIS 104	Information Sources & Services	25+75=100
LIS 105	Introduction to Information Technology	25+75=100

Second Semester

LIS 201	Database Management System	25+75=100
LIS 202	Organization of Knowledge(II) (Theory)	25+75=100
LIS 203	Organization of Knowledge(II) (Practice)	25+75=100
LIS 204	Library Software Packages (Practical)	25+75=100
LIS 205	Library House Keeping Operations	100

Third Semester

LIS 301	Library System Analysis & Design	25+75=100
LIS 302	Information Users & their Needs	25+75=100
LIS 303	Information Retrieval	25+75=100
LIS 304	Research Methodology	25+75=100

Fourth Semester

LIS 401	Management of Library & Information Systems	25+75=100
LIS 402	Communication Technology and Digital Libraries	25+75=100
LIS 403	Dissertation	25+75=100
LIS 404	Optional Paper (Any one from the following) A. Agricultural Information System and Services B. Collection Development C. Knowledge Development	25+75=100

The complete curriculum and syllabus is provided in Appendix-2.

Ph.D

The Ph.D course was started from the year 1990. Till date there are 14 Ph.D awarded from the department. There are 9 numbers of candidates who have registered for Ph.D and the work is in progress.

3.3.4 ICT INFRASTRUCTURE

The Department has a well equipped computer laboratory with internet facilities catering to the need of the students.

3.3.5 DEPARTMENT LIBRARY

The departmental library has a collection of dissertations and job diaries. Other learning resources are not procured in the department library.

3.3.6 LEARNING RESOURCES

The University Library is being used as a laboratory for the students for practical training under the guidance of faculty members and practising librarians. Thus, the theory and practice are given equal emphasis through this integrated approach. The central library has

a total collection of 7,000 number of books in library and information science and subscribe 10 number of national and 12 numbers of international journals.

3.4 LIS EDUCATION IN MANIPUR UNIVERSITY

3.4.1 INTRODUCTION

Manipur University is located at Canchipur, Imphal, the capital city of Manipur, an Indian state bordering Myanmar. The University campus is spread over an area of 287 areas in the historic Canchipur, the old palace of the kingdom of Manipur. The Langthabal Palace (Konung) was established by Maharaja Gambhir Singh in 1872 (October) A.D. just after the liberation of Manipur from Burmese occupation. Maharaja Gambhir Singh took his last breath in Canchipur. Canchipur is also the birthplace of Dr. Lamabam Kamal, a renowned poet of Manipur.

Manipur University was established on June 5, 1980 under the Manipur University Act, 1980 (Manipur Act 8 of 1980), as a teaching cum-affiliating University at Imphal with territorial jurisdiction over the whole of the state of Manipur was converted into a Central University w.e.f. 13/10/2005. The Manipur University Act No. 54 of 2005 received the assent of the President on 28/12/2005.

The Department of Library and Information Science was established on 2nd April 1986. Professor M.R. Kumbhar, the then University Librarian of the University was its Head. The Bachelor of Library and Information Science (BLISc) programme was started in the Department in the year 1986 in response to the demand for training human resources in the field particularly for the state of Manipur. The Department introduced one year programme of Masters of Library and Information Science (MLISc) in 2004 with an intake of 6 students. Two Year Integrated MLISc Course was also introduced in the Department from the 2006-2007 academic sessions. In addition, the department provided facilities for carrying out research programme leading to Ph.D in the year 1987 under the guidance of Prof. M.R. Kumbhar. Professionals trained by this department have been manning libraries in Schools, Colleges, Universities and Government Departments of Manipur and other parts of the country and in some foreign countries as well.

3.4.2 COURSES ON OFFER

MLISc – 2years integrated

The department started MLISc programme from the year 2006-2007. The intake capacity of students is 21.

3.4.3 OBJECTIVES

The course has been started with the following aims and objectives:

- To give the students an understanding of the basic principles of fundamental laws of Library and Information Science and to enable him/her to understand and appreciate in this fact changing world of “Information Age”.
- To train students in the techniques of Information Managements and equip them with the latest development in Information Technology (IT) and its application in libraries and information centers
- To acquaint the students with the organization and development of the Universe of knowledge and research methods.
- To make the students fully aware of various sources of information and dissemination of information in the context of different user groups.

Table 3.4.2 Core Papers, Electives and Marks Allotted.

First Semester

<i>Paper</i>	<i>Title</i>	<i>Marks</i>
101	Library & Society	25+75=100
102	Organization of Knowledge (Classification Theory)	25+75=100
103	Organization of Knowledge (Cataloguing Theory)	25+75=100
104	Information Technology Basics (Theory & Practice)	50+50=100

Second Semester

201	Library Management	25+75=100
202	Knowledge Organisation (Classification Practical)	100
203	Knowledge Organisation (Cataloguing Practical)	100
204	Information Service & Sources	25+75=100

205	A.Journals/Project Work	40
	B.Field Work/Study Tour	40
	C. Viva Voce	20

Third Semester

301	Fundamentals of Information Sciences	25+75=100
302	Information Analysis, Repackaging & Consolidation (Theory & Practice)	50+50=100
303	Information Retrieval (Theory & Practice)	50+50=100
304	Research Methodology	25+75=100

Fourth Semester

401	Information Technology Application (Theory)	25+75=100
402	Information Technology Application (Practice)	20+80=100
403	Elective Information System (Theory & Practice)	50+50=100
404	Dissertation/ Project Work	20+80=100

The syllabus offered by the department is provided in Appendix 3.

Ph.D

The Ph.D course was started from the year 1987. Till date there are around 13 scholars who have been awarded with Ph.D Degree.

3.4.4 ICT INFRASTRUCTURE

The Department has a well equipped Information Technology laboratory developed to meet the requirements of the academic and research programme of the Department.

3.4.5 DEPARTMENT LIBRARY

The Department does not have a department library in a separate room but they have a good collection of books which they keep in the office.

3.4.6 LEARNING RESOURCES

Students, Research Scholars and Faculty Members are provided with a good collection of learning resources in the library. The total collection of books in library and information science in the central library is around 2000. 10 national journals and 2 international journals are subscribed by the department.

3.5 LIS EDUCATION IN MIZORAM UNIVERSITY

3.5.1 INTRODUCTION

Soon after Mizoram become an independent state in the year 1987, the state witnessed a number of economic, social and educational activities including libraries in the state. These libraries include development of academic libraries (school, college, and university), public libraries and special libraries as well. To add value and importance of libraries to the literate and new literate citizens of the state, the Government of Mizoram also recognized the value of public library service by enacting Mizoram Public Libraries Act in the year 1993. Due to high literacy percentage and the interest of reading habits of the mass population of the state, the libraries are constantly getting recognition from all walks of life. Therefore scientific organization and effective dissemination of library services have necessitated undertaking library and information education in the state.

Mizoram University introduced Bachelor of Library and Information Science (BLIS) in the year 2002 which was a one-year course. In the year 2003, Master of Library and Information Science (MLISc) of one year duration was introduced. From July 2005 department switched over to two years integrated MLISc. The Department also announced Ph. D course w.e.f. July 2005.

3.5.2 COURSES ON OFFER

MLIS (2 Yrs Integrated)

The department introduced MLIS two years integrated in the year 2005 with an intake capacity of fifteen students.. The core papers and marks allotted for each paper is given in the following table.

3.5.3 OBJECTIVES

The objectives of library and information science course have been described as under –

- To provide students an understanding of the basic principles and fundamental laws of library and information science and to enable them to understand and appreciate the functions and purposes of the libraries in the changing social and academic set-up of north eastern India.
- To train the students in the techniques of modern methods in librarianship and management of libraries.
- To acquaint the students with the structure and development of the Universe of knowledge and research methods.
- To make the students proficient in advanced techniques of classification, cataloguing and documentation, and
- To develop specialized knowledge and skills in respect of organization and management of different kinds of libraries and reading materials.

Table 3.5.2 Core Papers, Electives and Marks Allotted.

First Semester

<i>Paper</i>	<i>Title</i>	<i>Marks</i>
101	Foundations of Library & Information Science	75+25=100
102	Organisation of Knowledge	75+25=100
103	Classification Practical	75+25=100
104	Cataloguing Practical	75+25=100

Second Semester

201	Management of Library & Information Centers	75+25=100
202	A.Information Sources and Services (Theory) B. Information Sources & Services (Practical)	50+15 35
203	Introduction to Information Technology	75+25=100
204	IT Practical and Job Diary	65+35=100

Third Semester

301	Information Processing & Retrieval	75+25=100
302	Information Technology Applications	75+25=100
303	Information Technology Applications (Practical)	75+25=100
304	A.Information Analysis, Repackaging & Consolidation B.Tour Diary and Viva-Voce	50+15 35

Fourth Semester

401	Information Systems and Networks	75+25=100
402	Electives (Any one) A.Preservation and Conservation of Library Materials B.Agriculture Information Systems and Services C. Community Information	75+25=100
403	Research Methodology	75+25=100
404	Project/Dissertation and Viva-Voce	100

The curriculum and syllabus is given in Appendix 4

M.Phil

The department introduced M.Phil programme in Library and Information Science from the year 2007 with an intake capacity of 5 students. The course comprises three semesters leading to Master of Philosophy in Library and Information Science (M.Phil) with the following objectives.

- To provide the students an understanding and strong theoretical, practical and innovative base on emerging areas of Library and Information Science.
- To acquaint and expose the students to different methods, techniques associated with scientific management of Libraries and Information Centers

- To provide an in-depth exposure to the latest trends and developments of ICT and its application in LICs with special emphasis on Library Automation, Networking and Digitization.
- To appraise students the various research methods and tools essential for data collection, analysis and interpretation.

It is worth mentioning that Mizoram University is the only university in the north east region to offer M.Phil (LIS) as on date.

Ph.D

The department introduced Ph.D in library and information science since July 2005. The University had laid down procedures of admission, eligibility, registration and submission of Thesis. Presently 2(two) candidates have completed been awarded with Ph.D Degree under the guidance of Prof. Pravakar Rath and 11(eleven) candidates have been registered and 6 (six) candidates are in the process of registration.

3.5.4 ICT INFRASTRUCTURE

The department established a state-of-the-art Information Processing Laboratory with 11 computers including server computer which allows students of two semesters to undertake their Information Technology Practical. Information technology practical facilitates students to develop the professional competencies in the changing environment. The different components of IT practical include:

- Creation and maintenance of databases by CDS/ISIS and others.
- Hands on experience on Library Software Packages.
- CD-ROM, Online Searching.
- Internet Searching.

The Information Processing laboratory is well equipped with Internet broadband connectivity to conduct practical sessions related to Internet.

3.5.5 DEPARTMENT LIBRARY

The department established a library for its faculty members, students and research scholar in the year 2005. The library is well equipped with classification schedules (CC, DDC, UDC) and cataloguing codes, reference material, project reports, job diary and tour diary reports. Besides the library is also in the process of procuring some source reference material which are useful for the users.

3.5.6 LEARNING RESOURCES

Students, researchers and faculty members are provided with good learning resources. The Central Library has a total collection of around 1000 books including journals and reference material in library and information science. Presently, 4 national and 5 international journals in library and information science are subscribed by the central library.

3.6 DIBRUGARH UNIVERSITY

3.6.1 INTRODUCTION

The Centre for Library and Information Science Studies started BLISc in the year 2005 and MLISc in the year 2007. Both BLISc and MLISc are of one year duration. They are conducted in the Centre for Library and Information Science Studies (CLISS) attached to Dibrugarh University.

3.6.2 COURSES ON OFFER

Bachelor of Library and Information Science (BLISc)

The BLISc course is a one year course. Examination is held annually. 20% Internal Assessment and the rest 80% marks for annual examination

Table 3.6.2(A) Core Papers, Electives and Marks Allotted for BLISc

<i>Paper</i>	<i>Title</i>	<i>Marks</i>
Paper-I	Library and Society	80+20=100
Paper-II	Organization of Knowledge (Theory)	80+20=100
Paper- III	Organization of Knowledge (Practical)	80+20=100
Paper-IV	Reference and Information Sources and Services	80+20=100
Paper-V	Library Management	80+20=100
Paper-VI	Introduction to Information Technology	80+20=100
Paper-VII	Project Work(Including Viva Voce)	40+10=50
Paper-VIII	Computer Practice	40+10=50

Master of Library and Information Science (MLISc)

The MLISc course is also a one year course. Two semester systems are held for the session. Examination is held annually. 20% Internal Assessment and the rest 80% marks for annual examination.

Table 3.6.2(B) Core Papers, Electives and Marks Allotted for MLISc

<i>Paper</i>	<i>Title</i>	<i>Marks</i>
Paper 05	Management of Library & Inf. Systems and Services	80+20=100
Paper 06	(A)Preservation and conservation of Library Materials	40+10=50
	(B)Computer Practice	40+10=50
Paper 07	Research Methodology and Technical Writing	80+20=100
Paper 08	Dissertation and Viva Voce	80+20=100

3.7 D.S COLLEGE, GANGTOK (AFFILIATED TO SIKKIM UNIVERSITY)

D.S. College, Gangtok, affiliated to Sikkim University which is a Central University started Bachelor of Library and Information Science (BLISc) in the year 2008. It was a one year Post Graduate Course. The course structure along with marks allotted to each paper is given in the following table.

Table 3.7 Core Papers, Electives and Marks allotted

Semester –I

<i>Paper</i>	<i>Title</i>	<i>Marks</i>
Paper I	Information Knowledge and Society	100
Paper II	Information Resources and Services	100
Paper III	Basics of Knowledge Organization (Theory)	50
Paper IV	Basics of Knowledge Organization (Practice)	50
Paper V	Basics of Information Technology Applications (Theory)	50
Paper VI	Basics of Information Technology Applications (Practice)	50
Paper VII	Library and Information Centre Management	100

Semester II

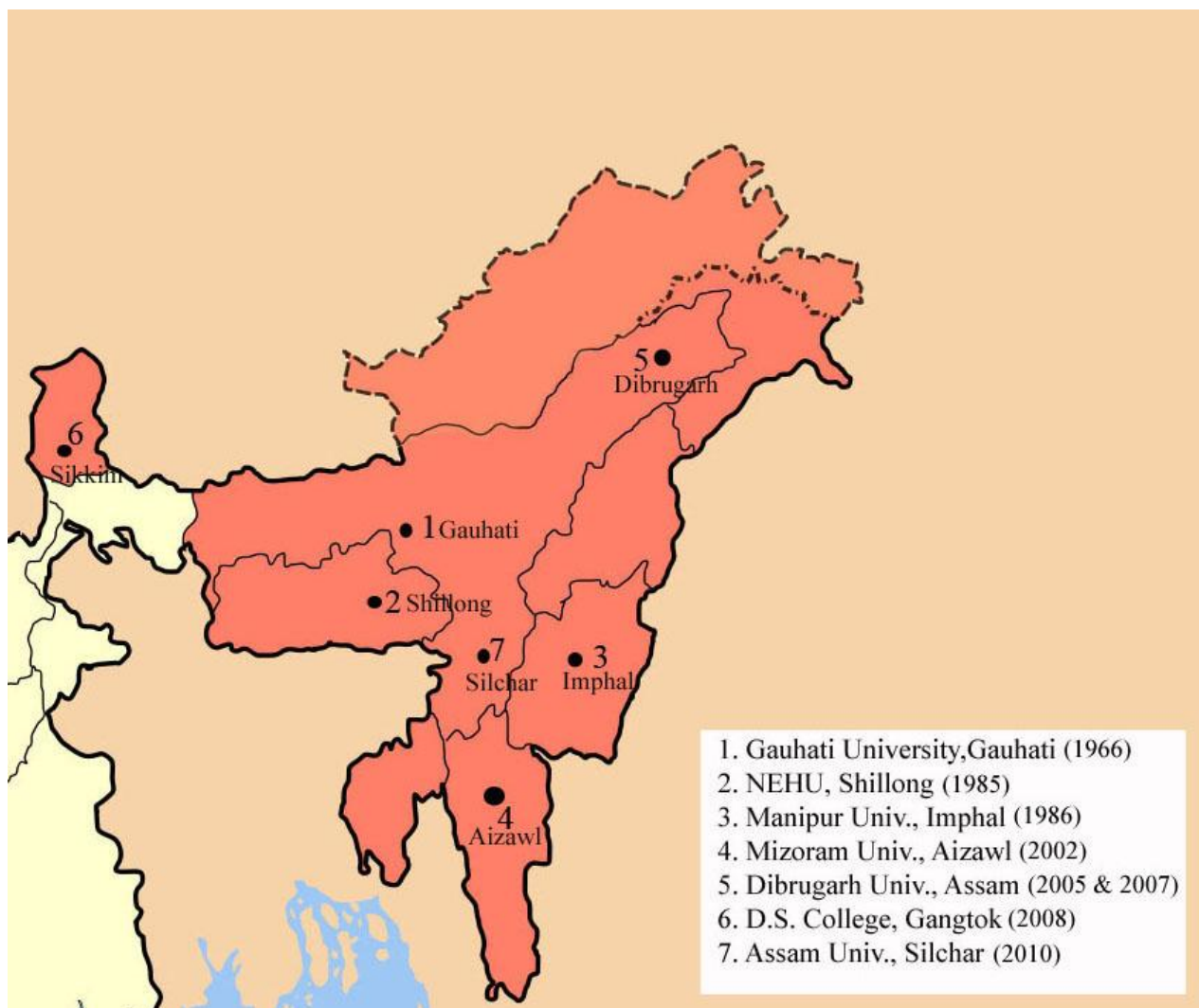
Paper VIII	Knowledge Organization and Information Processing (Theory)	50
Paper IX	Knowledge Organization and Information Processing (Practice)	50
Paper X	Elements of Statistics and Information Metrics	100
Paper XI	Information Technology Applications (Theory)	50
Paper XII	Information Technology Applications (Practice)	50
Paper XIII	Basics of Research Methods	100
Paper XIV	Library and Information Practical Records	100

(Records of Classification and Cataloguing, Report on Internship and Report on Library Tour: 50+25+25)

3.8 ASSAM UNIVERSITY, SILCHAR

Assam University being a Central University started the department of library and information science in the year 2009. Presently, the department has one Associate Professor and two Assistant Professors. The department is contemplating to start two years integrated Masters Degree in Library and Information Science from 2010 academic session. The curriculum and syllabus for the said course is under preparation.

This chapter provided an overview of LIS education in the seven universities of North East Region with a special emphasis on the four universities under study. The following chapter entitled “Professional Competencies Building in the Changing Information Scenario”, has focused on the multi skills required for library and information professionals in the changing information and communication scenario.



Map 3.1: Location of Seven Universities in North East Region

APPENDIX-1

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
GAUHATI UNIVERSITY
CURRICULLUM & SYLLABUS**

**Scheme of Papers:
First Semester**

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration</i>	<i>Total Marks</i>
1.1	Library & Society	20	80	3Hrs	100
1.2	Organisation of Knowledge (Theory) A.Classification B.Cataloguing	A=10 B=10	80	3Hrs	100
1.3	Reference & Information Services and Sources A.Reference Services B.Reference Sources	A=10 B=10	80	3Hrs	100
1.4	Organization of Knowledge (Practice) A.Classification B.Cataloguing	A=10 B=10	80	3Hrs	100

Total marks for First Semester 400

Second Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
2.1	Library Management	20	80	3Hrs	100
2.2	Introduction to Computers A.Theory B.Practice	B=20	80	3Hrs	100
2.3	Information Retrieval Techniques	20	80	3Hrs	100
2.4	A.Organization of Knowledge B. Bibliographical Project & Viva Voce	A=10 B=50	40	2Hrs	100

Total Marks for Second Semester 400

Third Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
3.1	Information and Communication	20	80	3Hrs	100
3.2	Research Methodology	20	80	2Hrs	100
3.3	Information Systems and Programmes	20	80	2Hrs	100
3.4	A. Different Library Systems (Anyone) i. Public Library ii. Academic Library iii. Special Library B. Job Diary & Library Visit Report	60 A=10 B=50	75	3Hrs	100

Total marks for Third Semester 400

Fourth Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
4.1	A. System Analysis B. Management of Information Systems	20 A=10 B=10	80	3Hrs	100
4.2	Library Automation and Networking	20	80	--	100
4.3	Library Software Packages A. Theory B. Practice	60 A=10 B=50	40	2Hrs	100
4.4	Dissertation Work	20 (Viva)	80	--	100

Total marks for Fourth Semester 400

Total marks for the MLISc Course 400+400+400+400=1600

Paper 1.1 : Library and Society

Unit 1 Library: Definition, Objectives, Types and Services

- Unit 2 Library as a social institution
- Unit 3 Role of libraries in changing environment
- Unit 4 Five laws of library science
- Unit 5 Librarianship as a profession
- Unit 6 History of library development in India with special reference to NE India
and Assam
- Unit 7 Library legislation
- Unit 8 Library cooperation
- Unit 9 National and international organizations: national – ILA, IASLIC, RRRLF

International – LA, IFLA, FID and UNESCO: Objectives, Functions,
activities of each organization.

Paper 1.2 : Organization of Knowledge (Theory)

- Unit 1 Library Classification: Definition, need and purpose.
- Unit 2 Formation, Structure and Development of subjects.
- Unit 3 Devices in classification.
- Unit 4 Special Isolates and Common Isolates
- Unit 5 Schemes of Classification
- Unit 6 Notation: Definition, types, structures, quality and function.
- Unit 7 Library Catalogues: Needs, objectives and functions.

- Unit 8 Types of library catalogues
- Unit 9 Subject Headings: Tools and techniques.
- Unit 10 Cataloguing Codes

Paper 1.3 : Reference and Information Services and Sources

- Unit 1 Reference service: Definition, need and scope. Types of reference service.
- Unit 2 Information service: Definition, need and scope: Reference service Vs
Information service
- Unit 3 Kinds of reference and information sources; Evaluation of Reference
Sources.
- Unit 4 Reference Sources: Dictionary, Encyclopedia, Almanacs, Year Books,
Directories, Hand books, Manuals, etc.
- Unit 5 Bibliography: Meaning, Scope, Functions; Types of bibliography;
Bibliographic Control.
- Unit 6 Abstracting and Indexing Services: Meaning, Use, Types; Citation
Indexing.

Paper 1.4: Organization of Knowledge (Practice)

A. Classification

- Unit 1 Classification according to Dewy Decimal Classification

B. Cataloguing

- Unit 2 Cataloguing according to Anglo American Cataloguing Codes (II)
Catalogue of books of Single Authorship, Joint Authorship and Corporate
Authorship, Pseudonymous Authorship, etc.

Paper 2.1: Library Management

- Unit 1 Management
- Unit 2 Planning
- Unit 3 Human Resource Development
- Unit 4 Library Governments, Library Committee, Library Rules
- Unit 5 Collection Development, Library Building and Equipments
- Unit 6 Financial Management
- Unit 7 Reports and Statistics
- Unit 8 Library housekeeping operations and Automation

Paper 2.2: Introduction to Computers

- Unit 1 History of Computer
- Unit 2 Types of Computers
- Unit 3 Components of Computer: Hardware, Software
- Unit 4 Operating Systems: MS DOS, Windows, Application Software.
- Unit 5 Auxiliary Storage Devices
- Unit 6 Word Processing Packages
- Unit 7 Information Technology: Concept and Components
- Unit 8 Networking: Concept and Types, Internet
- Unit 9 Computers in Library and Information Centers: Areas of Automation.

Paper 2.3 Information Retrieval Techniques

- Unit 1 Principles and Theories of Subject Indexing
- Unit 2 Indexing Techniques: Syntactical Problems. Pre and Post Coordinating Indexing, Chain Indexing, PRECIS, Uniterm, Keyword and Citation Indexing, Automatic Indexing.
- Unit 3 Thesauri Design and Development.
- Unit 4 Automated Indexing, Machine Translation, Computerized Abstracting, Natural Language Processing.
- Unit 5 Search Strategies and Techniques: Boolean Logic Problems. Preparation of Query, Search Tools and Search Agencies, Steps in Search Strategy.
- Unit 6 Evaluation of Retrieval Systems.

Paper 2.4 (A) Organization of Knowledge (Practice)

- Unit 1 Classification according to UDC
- Unit 2 Cataloguing according to AACR (II) Cataloguing of Serials and Non Book Materials.

Paper 2.4 (B) Project Work and Viva Voce

Students are required to prepare one project on an assigned topic of present relevance; and required to appear in viva voce examination conducted by the department (30+20)

Paper 3.1 Information & Communication

- Unit 1 Nature of Information: Definition of Knowledge, Information and Data Nature, Characteristics and Properties of Information; Information Explosion; Information and Social Change; Information Science and linkages with other disciplines.

- Unit 2 Information communications; Information cycle: Generation, collection, storage, transmission and dissemination of information; Communication: Definition, Communication theories (Shanon Theory, etc). Scientific Communication; Formal and information channels of communication – invisible colleges, information exchange groups, technological gate keepers, consultants, information brokers.
- Unit 3 Economics of information: Information as commodity and resource; Production and distribution of information; Marketing of information; Knowledge Management; Document Management; Concept, Document Management VS Knowledge Management.
- Unit 4 Information and Knowledge: Knowledge and Society, Dissemination of Knowledge and Information, Modes of formation, Structures and development of knowledge, Development of Scholarship: Factors and Trends.
- Unit 5 Informetrics: Concepts, Scope, Librametry, Bibliometrics and Scientometrics Laws – Bradford, Lotka and Zipf.

Paper 3.2 Research Methodology

- Unit 1 Research: Definition, need and purpose, Type-Basic and Applied; Scientific Methods; LIS Research in India.
- Unit 2 Research Design: Aims and Objectives; Scope and Limitations, Problem Identification, Formation and Statement of the Problem.
- Unit 3 Hypothesis: Definition, meaning, formulation and type, Descriptive, Relational and Explanatory, Null-Hypothesis, verification.
- Unit 4 Methods of research: Survey, descriptive, comparative, historical, Experimental, Case study and Delphi Technique.

- Unit 5 Methods of data collection: Types of data – Primary and secondary.
Methods: Primary data – Questionnaires, interview and observation
secondary data – Historical/ recorded.
- Unit 6 Sampling Methods and Techniques:

Probability Sample: Sample: Random Sampling, Systematic, stratified Non-
Probability sample: Quota, accidental, purposive, incomplete, Cluster and
multi-state sampling, Sample size, bias, error.
- Unit 7 Methods and tools of data analysis: Problem measure, reliability, validity,
measure of central tendency, measure of association correlation co-efficient
of correlation and chi-square.
- Unit 8 Writing research report, structure of report, presentation of finding and data.

Paper 3.3 Information Systems and Programmes

- Unit 1 Information organization as a system: Concept, types and characteristics:
Components of information systems: Libraries, Documentation centres,
Information centres, Data bank, Information analysis centres, Referral
centres, Clearing houses, Reprographic and translation centres – their
functions and services.
- Unit 2 Planning and design of National Information System: INSDOC, DESIDOC,
NASSDOC, SENDOC, CORD, NCSI, NISSAT – their structure, functions
and services.
- Unit 3 Regional Information Systems: ASTINFO, APINESS, SAARC.
- Unit 4 Global Information Systems: UNESCO – PGI, INIS, AGRIS, INSPEC,
MEDLARS, UNIDOC, ENVIS, ICSU.
- Unit 5 Information Products and Services: Concept, Definition, Types with
Examples; Products and Services.

Unit 6 Information products: Institutional and commercial; Information products: vendors DIALOG, STM, Derwent, Data Star, U:MI, Silver Platter, BLDSC, ISI.

Paper 3.4 A Different Library System

(Anyone system of the following)

i. Academic Library System

Unit 1 Role of library in academic institutions

Unit 2 Recent growth and development of University and College Libraries in India.

Unit 3 Library government: Authority, Library Committee, Librarian's Role, Status and Responsibility.

Unit 4 Library personnel, library finance, library services, library building.

Unit 5 Building Library Collection: Selection, Acquisition and Resource Sharing.

ii. Public Library System.

Unit 1 Public library system in relation to mass education.

Unit 2 History of public library movement in India, UK and USA.

Unit 3 Library legislation: India and UK, the model Act.

Unit 4 National and State Library system in India and UK

Unit 5 Library personnel, library finance, library services, library building.

Unit 6 Building library collection: Selection, acquisition and resource sharing.

iii. Special Library System.

- Unit 1 Role of research and special library, relationship with the parent institutions.
- Unit 2 Types and functioning of special library: Government, Research Industrial and Commercial libraries; Newspaper, Map, Record Libraries, Central Libraries at national and regional levels.
- Unit 3 Library government: Authority, library committee, librarian's role, status and responsibility.
- Unit 4 Library personnel, library finance, library services, library building.
- Unit 5 Building library collection: Selection, Acquisition and Resource Sharing.

Paper 3.4 (B) Job Diary and Library Visit Report.

- (i) Student are to prepare job diary by working in the KKH Library or any other library specified by the department to have hands on experiences in every possible unit/section of a library at regular basis.
- (ii) They are also required to prepare a report on the various aspects of few selected libraries of a place outside the state preferably of a metropolitan city.

Paper 4.1(A) System Analysis

- Unit 1 Basic concept, functions of system analysis
- Unit 2 Planning and conducting a system study
- Unit 3 Packaging, repackaging and marketing of information.
- Unit 4 System analysis, evaluation and system study.
- Unit 5 System design.
- Unit 6 Flow Chart, Data Flow Diagram, Gantt Chart, Pert, CPM.

Paper 4.1(B) Management of Information System.

- Unit 1 Management : Concept, definition, nature and purpose. Schools of management, planning library and information centres.
- Unit 2 Personnel Management: Manpower planning, staffing, job analysis, job description, job evaluation, staff recruitment, selection, training and development, Work relationship: supervision, control leadership, motivation and performance evaluation.
- Unit 3 Decision making: Concept. Problems, aids, decision process, Delegation of authority : Accountability, responsibility, guidelines and barriers.
- Unit 4 Financial management: resource mobilization, budgeting methods, PPBS and Zero based budgetary control; Total Quality Control: Concept application in LICs

Paper 4.2 Library Automation and Networking.

- Unit 1 Library automation: Need, purpose and advantages; Areas of automation – Acquisition, Cataloguing, Access to catalogue (OPAC), Circulation and Serial Control.
- Unit 2 Planning for automation procedures, Steps in automation, Hardware and Software selection.
- Unit 3 Bibliographic format : Standards for bibliographic records : ISBD, MARC and CCF.
- Unit 4 Networking and Networks: Concept, need and advantages, Network topologies –star, ring, hierarchical, complete
- Unit 5 Digital library: Concept, use, advantages, design and development; Virtual library: Concept, virtual learning – online learning, interactive technique.
- Unit 6 Internet: Concept, features and services
- Unit 7 Library networking: OCLC, BLAISE, JANET, INFLIBNET, DELNET.

Paper 4.3 Library Software Packages

(A)Unit 1 Software in libraries: features, components and applications

Unit 2 CDS/ISIS, LIBSYS, SOUL, Sanjay, SLIM, OASIS

(B) Practice any two of the above.

Paper 4.4 Dissertation Work

Students are to prepare one dissertation on an assigned topic of present relevance to be submitted during the 4th Semester.

APPENDIX-2

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
NEHU
CURRICULLUM & SYLLABUS**

First Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment Marks</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
101	Foundations of Library & Information Science	25	75	3Hrs	100
102	Organization of Knowledge a. Classification(Theory) b. Cataloguing (Theory)	20	80	3Hrs	100
103	Organization of Knowledge a. Classification (Practice) b. Cataloguing (Practice)	20	100	3Hrs	100
104	Information Services & Sources	25	75	3Hrs	100
105	Introduction to Information Technology	25	75	3Hrs	100

Second Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment Marks</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
201	Library Management	25	75	3Hrs	100
202	Organization of Knowledge a. Classification (Theory) b. Classification (Practice)	20	100	3Hrs	100
203	Organization of Knowledge a. Classification (Practice) b. Cataloguing (Practice)	20	100	3Hrs	100
204	Programming & Software Packages	25	75	3Hrs	100
205	Job Diary Study Tour Report Viva – Voce	50 25 25	---		100

Third Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment Marks</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
301	Universe of Knowledge Structure & Development	25	75	3Hrs	100
302	Library System Analysis & Elements of Statistical Methods	25	75	3Hrs	100
303	Information Users & their needs	25	75	3Hrs	100
304	Information Retrieval Techniques	25	75	3Hrs	100

Fourth Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment Marks</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
401	Information and Literature Sources in any one of the following: a. Humanities b. Social Sciences c. Natural Sciences	25	75	3Hrs	100
402	Any one of the following a. Information System and Services b. Management of Information Services	25	75	3Hrs	100
403	Computer Application in Library and Information Services	25	75	3Hrs	100
404	Project Report/Dissertation on some current problems in Library and Information Science	(including 20 marks for Viva Voce)			100

First Semester

Paper 101: FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE

- Unit 1 Nature and Scope of Library and Information Science; Types of Library and Information Systems including Community Information Centres (CICs) and Digital Libraries.
- Unit 2 Collection Development; Five Laws of Library Science; Information and National Development.
- Unit 3 National and International Information Policies; Library Legislation in India with special reference to North East India; Intellectual Property Rights (IPR).
- Unit 4 Activities and Role of Library and Information Professional Organisations – IFLA, FID, ILA, UNESCO, IASLIC, INFLIBNET; Professional Ethics.

Paper 102 : ORGANIZATION OF KNOWLEDGE (THEORY)

Classification

- Unit 1 Library Classification: Need, Purpose and Principles. Forms and Types of Catalogue.
- Unit 2 Idea Plane: Categorisation of Knowledge, Cannons and Principles and Postulates.
- Unit 3 Verbal Plane: Cannons and Principles.

Cataloguing

- Unit 1 Library Cataloguing: Need, Purpose and Principles. Forms and Types of Catalogue.
- Unit 2 Subject Catalogue: Sears list of Subject Heading, Chain Indexing, Library of Congress Subject Heading (LCSH)
- Unit 3 Structure of AACR II/CCC.

Paper 103 : ORGANIZATION OF KNOWLEDGE

A. Classification (Practice)

Classification of documents by Dewey Decimal Classification Latest Edition and Colon Classification, Latest Edition in the following graded steps:

1. Classification of documents having “ **Basic Subjects**”
2. Classification of documents having “ **Compound Subjects**”.

B. Cataloguing (Practice)

Practical cataloguing of books according to Anglo – American Cataloguing Rules II – 1988 edition with amendments 1999, 2002, with a Sears List of Subject Headings/LSCH in the following graded steps:-

1. Works of personal authorship.
2. Works of shared responsibility.
3. Works of mixed responsibility.
4. Anonymous works.
5. Works of Corporate Authorship.
6. Analysis.

Paper 104 : INFORMATION SOURCES AND SERVICES

Unit 1: Definition and scope of Reference and Information Services. Reference Interview. Qualities, Qualifications and Role of Reference Librarian and Information Officer.

Unit 2: Modes of Reference: Ready Reference and Long Range Reference Services. Enquiry Techniques, Literature Searches. Modes of Delivery: CAS, SDI and FAQs.

Repackaging: Compilation of Current Awareness Lists/ Bibliographies/ Contents Lists/ Press Clippings.

Unit 3: Sources of Information: Types of Reference and Information Sources. Bibliographical Control: National Bibliographies, Subject Bibliographies, Union List, Indexes and Abstracts.

Reference Books: Dictionaries, Statistical Sources, Geographical Sources, Encyclopedias, Year Books, Directories and Reviews.

Web Resources: Subject Gateways.

Unit 4: Environmental Information Sources: Organizations and Institutions.

Paper 105: INTRODUCTION TO INFORMATION TECHNOLOGY

Unit 1 Introduction: Definition, Scope and Objectives.

Basic computer components and computer system concept; input and output devices; Memory and Storage Devices.

Unit 2 Hardware: Motherboard; CPU; RAM; I/O Addressing; Disk – Types and Installations; Partition and Formatting; Power Supply; Video; Sound; Sockets and Connectors.

Unit 3 Operating Systems: Characteristics and Functions; DOS, Windows, Linux, Unix and Windows.

Office Packages: word processor, spreadsheet, presentation tools.

Unit 4 Practical: O/S, Word Processor, Spreadsheet and Presentation Tools.

Second Semester

PAPER 201: DATABASE MANAGEMENT SYSTEM

Unit-1: Introduction: Database System Concept; Database System Architecture; Data Modelling using the Entity Relationship (ER) Model; Enhanced Entity Relationship (EER) & Object Modelling; Record Storage; Primary File Organization and Index Structure for files.

Unit – 2: The Relational Data Model; Relational Constraints; Relational Database Standard; Relational Mapping using Entity Relationship and Enhanced Entity Relationship; Relational Languages.

Unit -3: Object – Oriented Databases Concepts; Object Database Standards, Languages and Design; Object Relational & Extended Database System.

Unit – 4: Functional Dependencies; Normalization for Relational Databases; Relational Database Design; Practical Database Design; Data Warehousing, Data Mining and Metadata; Emerging Database Technologies and Applications.

PAPER 202: ORGANIZATION OF KNOWLEDGE

A Classification

Unit – 1 Notational Plane: Qualities, Types, Canons and Mnemonics.

Unit – 2 Devices: Subject device, chronological device, geographical device, common isolates, super imposition device, and classic device.

Unit – 3 Automated Library Classification.

B Cataloguing

Unit – 1 Shared Cataloguing: Principles and Methods. Consortia, OCLC.

Unit – 2 Bibliographical Formats: MARC 21, ISBN, ISSN, CCF, UNICODE.

Unit – 3 Authority Files.

PAPER 203: ORGANIZATION OF KNOWLEDGE (Practical)

A Classification

Classification of documents by Dewey Decimal Classification Latest Edition and Colon Classification (latest edition) in the following graded steps.

- a. Classification of documents requiring use of “**common sub-division and other auxiliaries**”.
- b. Classification of documents having “**complex subjects**”.
- c. Classification of documents having “**complexities of mixed nature**”.

B Cataloguing

Cataloguing of books according to Anglo-American Cataloguing Rules – 1988 edition with amendments in 1999, 2002 with a Sears List of Subject Headings/Library of Congress Subject Headings (LCSH) in the following graded steps:

1. Serial publications.
2. Non – book material: cartographic material, theses and audio visual material etc.
3. Internet & multimedia resources: metadata including other digital material.

(Students are expected to do computerized cataloguing using MARC/ CCF Format)

PAPER 204: SOFTWARE PACKAGES

Unit - 1: WINISIS

System Overview, system installation, Menus, Windows, Dialog Boxes, Search Language, Formatting Language, Adaption to Local Requirements.

Unit – 2: Practical: Creation and management of Database in WINISIS.

Unit – 3: SOUL (Software for University Libraries)

Overview, Installation, Backup, Administrative Module, Acquisition Module, Catalogue Module, Circulation Module, Serial Module, OPAC.

Unit – 4: Practical: Using Library Software Package: SOUL

PAPER 301: LIBRARY SYSTEM ANALYSIS AND DESIGN

Unit – 1: System Concepts and Information System; System Development Life Cycle; Role of System Analyst.

Unit – 2: Planning and Investigation: Information gathering; Structured analysis tools; Flow Charts, DFD; Feasibility and Cost/Benefit Analysis.

Unit – 3: System Design: Process and Stages; I/O and form design; File Organisation and Database Design.

Unit – 4: Testing, Quality Assurance, Implementation, Maintenance, Project Scheduling, Security, Recovery and Ethics.

PAPER 302: INFORMATION USERS AND THEIR NEEDS.

Unit 1: Information users: information needs and information seeking behaviour; Categories of users including ethnic groups, information transfer.

Unit 2: Models of information needs and information seeking behaviour with special reference to model: Wilson, Belkin, Davis Ellis, Kulthau and Brenda Dervin.

Unit 3: Methodology and evaluation of user studies: quality paradigms. Data collection methods: questionnaire, interview, observation, case study, citation analysis and interpretation of results.

Unit 4: User education: goals and objectives, methodology, media and techniques.

PAPER 303: INFORMATION RETRIEVAL

Unit 1: Fundamentals: information and information retrieval. Nature, characteristic and structure of information retrieval systems. Content analysis.

Unit 2: Indexing languages: concept, theories and methods. Index models: free text/ controlled text indexing, automated indexing systems. Vocabulary control: semantics/ syntactical structure. Thesaurus and its construction.

Unit 3: Principles and practices of searching various information sources. Types of search: Boolean and proximity search, fuzzy search, interactive search etc. Search strategies: querying, interpretation, execution, text searching and feedback. Internet search strategies: web search engines, search tools, Z39.50 and metadata. Presentation and evaluation of search results.

Unit 4: Design and evaluation of information retrieval model. Measurement and evaluation of indexing and IRS: precision/recall. Trends in IR Models.

Laboratory exercises and assignments using web search engines and online systems.

PAPER 304 RESEARCH METHODOLOGY

Unit 1: Research Design: Types of research design; Identification of problem; Designing research proposal.

- Unit 2: Methods: Historical Method; Scientific Method, Descriptive Method; Survey Method and Case Study.
- Data Collection tools and techniques: Questionnaire; Schedule; Interview; Observation, etc.
- Unit 3: Bibliometrics: Lotka's Law, Bradford's Law, Zipf's Law, Citation Analysis, Co-citation Coupling, Bibliographic Coupling.
- Unit 4: Data Analysis and Interpretation: Descriptive Statistics-Measures of Central Tendency; Mean, Mode, Median; tabulation and Generalisation; Measures of dispersion, variance and covariance; Standard Deviation Graphical presentation of data: Chi Square Test, bar, pie-line graphs, histograms etc.
- Statistical Packages – SPSS or Statistica.

PAPER 401: MANAGEMENT OF LIBRARY AND INFORMATION SYSTEM

- Unit 1: Management-Concept, Functions and Principles of Management; Schools of Management Thought – Classical, Scientific, Behavioural, Decision Theory, Contingency Approach, Systems Approach, Organizational Structure.
- Unit 2: Planning – Concept, Need and Types; Management by Objectives (MBO); Decision making; Management Information System (MIS); Total Quality Management (TQM).
- Unit 3: Human Resource Management – Manpower Planning; Job Analysis, Job Description and Job Evaluation; Recruitment Procedures; Leadership; Motivation; Group Dynamics; Communication; Change process; Organizational Manual; Performance Appraisal; Annual Report.
- Unit 4: Budgeting and Marketing – Principles and Types of Budgeting: Line Budgeting, Performance Budgeting, Programme Budgeting, Planning

Performance Budgeting System (PPBS), Zero- Based Budgeting System (ZBBS); Marketing of Information Products and Services; Outsourcing.

PAPER 402 COMMUNICATION TECHNOLOGY AND DIGITAL LIBRARIES

Unit 1: Communication Technology: Fundamentals Basic Telecommunication System: Network Topologies; Types of Network: LAN, MAN, Distributed Network, CD-ROM Network: NAS, SAN; Types of LAN: Ethernet, FDDI, ATM ,Network Components: Cables, Switches, Hubs, Bridges, Repeaters; Transmission Media; Data Transmission Mode; Reference Models.

Unit 2: Digital Libraries: Definition and Objectives; Image Formats, Audio Format, Storage Media Format; OCR Scanners, Digital Still and Movie Cameras; Image Editing Software and Barcode technology.

Unit 3: Basic Features and Tools of INTERNET: Online Information Services; Connectivity; PSTN, ISDN, Leased Line, digital Subscriber Line, VSAT; Email, Engine; Internet Security; Teleconferencing; Video Conferencing. Fundamentals of Web page and Web Designing.

Unit 4: Practical:
CD ROM/ Database Search
Internet Searching
Formulation of Search Strategies for Search Engines and Databases.

PAPER 403: DISSERTATION/ PROJECT REPORT

The students will be asked to write a project/dissertation on the following themes:

1. Literature review of any current topic in library and information science.
2. Conducting case studies and surveys of libraries located in the north east.
3. Designing a database using a library software.
4. Studies related to information retrieval on internet.

5. Any other studies related to library and information science.

PAPER 404 (Optional A):

AGRICULTURAL INFORMATION SYSTEMS AND SERVICES

- Unit 1: Introduction and role of agricultural librarianship, Growth and development of agricultural sciences and agricultural librarianship with special reference to India.
- Unit 2: Identifying information needs of agricultural scientists, students and other categories of information users in the field of agriculture and allied fields.
- Unit 3: Collection development: Principles, policies and procedures. Information sources and services, Important information centres including important national agricultural libraries.
- Unit 4: Evaluation of Agricultural Information Systems; Agris, Agricola, CABI, ARIS etc. Tools and Techniques of agricultural information.

PAPER 404 (Optional B):

COLLECTION DEVELOPMENT

- Unit 1: Need for collection development, Acquisition policy and principles.
- Unit 2: Planning for need based collection development, budgeting and distribution, criteria and methods of selection.
- Unit 3: Sources of collection development: printed media, non-printed media and e-resources.
- Unit 4: Evaluation of various types of sources, models of collection building.

PAPER 404 (Optional C):

KNOWLEDGE DEVELOPMENT, REPRESENTATION AND MANAGEMENT

- Unit 1: Cognitive foundation: Nature, sources and process of Knowledge, Types of Knowledge, Characteristics of Knowledge in general and based on general systems theory.
- Unit 2: Models of development of knowledge. Popper, Kuhn, Lakatos, Feyerabend, Price and Ranganathan.
- Unit 3: Representation: Knowledge representation systems in Library and Information Science and Artificial Intelligence, Modes of Formation of Subjects.
- Unit 4: Knowledge Management: Role of knowledge assets; principles; processes; identifying capturing, selecting, organizing and storing, sharing, applying and creating.

APPENDIX-3

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
MANIPUR UNIVERSITY
CURRICULLUM & SYLLABUS**

Scheme of Papers:

First Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
101	Library & Society	25	75	3Hrs	100
102	Organisation of Knowledge (Classification Theory)	25	75	3Hrs	100
103	Organisation of Knowledge (Cataloguing Theory)	25	75	3Hrs	100
104	InformationTechnology: Basics (Theory & Practice)	50	50	2Hrs	100

Total marks for First Semester 400

Second Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
201	Library Management	25	75	3Hrs	100
202	Knowledge Organisation (Classification Practical)	-	100	3Hrs	100
203	Knowledge Organisation (Cataloguing Practical)	-	100	3Hrs	100
204	Information Services & Sources	25	75	3Hrs	100
205	(A) Journals/Project Work (B) Field Work/ Study Tour (C) Viva – Voce	40 40 20	---		100

Total Marks for Second Semester 500

Third Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
301	Fundamentals of Information Science	25	75	3Hrs	100
302	Information Analysis Repackaging & Consolidation Theory and Practice	50	50	2Hrs	100
303	Information Retrieval Theory and Practice	50	50	2Hrs	100
304	Research Methodology	25	75	3Hrs	100

Total marks for Third Semester 400

Fourth Semester

<i>Paper</i>	<i>Title</i>	<i>Internal Assessment /Practice</i>	<i>Examination Marks</i>	<i>Duration of Examinations</i>	<i>Total Marks</i>
401	Information Technology: Application (Theory)	25	75	3Hrs	100
402	Information Technology: Application (Practice)	20 (Viva)	80	--	100
403	Elective Information System Theory and Practice	50	50	2Hrs	100
404	Dissertation/Project Work	20(Viva)	80	--	100

Total marks for Fourth Semester 400

Total marks for the MLISc Course 400+500+400+400=1700

Semester – I

Paper – 101: Library and Society

Unit – 1 Concept

- Modern Concept of Library and Information
- Contemporary Society and its impact-social
- Cultural, Educational and Technological

- Library and Information Services

Unit – 2 Laws Co-operation, Extension & Types

- Laws of Library Science
- Extension Services
- Library Co-operation – India and United Kingdom.
- Types of Libraries – Public, Academic, Special – their characteristics and functions

Unit – 3 Legislation and Acts

- Library Legislation
- Public Libraries Act – Andhra Pradesh, Karnataka, Maharashtra and West Bengal

Unit – 4 Libraries at different levels

- National Library
- State Central Library
- District Central Library and their functions

Unit – 5 Associations and Their Movements

- Library Associations – International and National – FID, IFLA, UNESCO, ILA and ALA
- Library Movement with reference to India, United Kingdom and United States of America

Paper – 102: Knowledge Organization (Library Classification – Theory)

Unit – 1 Library Classification

Its need and purpose, history of classification, structure of development of universe of subjects – Modes and formation of subjects

Unit – 2 General theory of Classification

Canons and principles and postulates.

Unit – 3 Fundamental categories

Phase, Facet and Intra- Array relationship, Zone Analysis- Sector.

Unit- 4 Analysis

Knowledge Classification and Book Classification, Common Sub-division, Book Number, Devices, Enumerative Vs Analytico- Synthetic

Unit – 5 Classification

Acquaintance with UDC, Comparative study of DDC and CC Schedules.

Paper – 103: Knowledge Organization (Library Cataloguing - Theory)

Unit – 1

Purpose and functions of Library Cataloguing, Forms of Library Catalogue, Physical forms and Inner forms with reference to the Dictionary Catalogue and Classified.

Unit – 2

Normative Principles, Laws, Canons, Kinds of entries – Main and added entries.

Unit – 3

Subject Heading and Chain Procedure, Co-operative and Centralised Cataloguing.

Unit – 4

Methods and rules of filing Catalogue cards.

Unit – 5

Corporate author, Pseudonyms, Periodicals and Comparative study and Classified Catalogue and Dictionary Catalogue.

Paper – 104: Information Tehcnology : Basics

Part – I: (Theory)

Unit – 1 Information Technology

- Definition
- Need
- Scopes and Objectives

Unit – 2 Computer Basic

- (Hardware)/ Computers and their basic components: Storage media
- Magnetic and Optical.
- Input and output devices
- Character codes and its representation.

Unit – 3 Computer Architecture – Organisation of Computer

- Hardware components: PC, LAN: Topologies
- Medium, other components.
- Input and output devices.

Unit – 4 Software

- Operating Systems: Single and multi-users system.
- Basic features of MS-DOS, MS Windows, Windows NT and familiarization with other important operating systems.
- Basic data communication systems: Data transmission. Transmission media – twisted pairs Coaxial cables, Optical fibre, Microwave, Satellite.

Unit – 5 Database Management Software Packages (DBMS) and Networking

- Familiarization with Fox Pro, CDS/ISIS, Ms ACCESS, SOUL and Libsys.
- Networking: Local Area Network, Wide Area Network, Intranet and Internet.

- Computer Information Retrieval Systems: Familiarization with library information retrieval systems (Online Public Access Catalogue, OPAC, CD-ROMS)

Part – II: (Practice)

Unit – 1: Hands on working with MS-DOS Commands and Windows

Unit – 2: Designing the following Documents by using MS-Word, Excel and Power Point.

- Drafting Letters
- Issuing Reminders
- Preparation of Records
- Preparation of Accession Register
- Power Point Presentation.

Unit – 3: Database creation using CDS-ISIS or SOUL.

Unit – 4: Viva-Voce.

Semester – II

Paper – 201: Library Management

Unit- 1: Concept

- Concept of Organisation and Management
- Fundamentals of Library Administration
- Library Rules.

Unit – 2: Administrative works related to various sections

- Library administrative works in various sections of various types of libraries
- Library Technical Services
- Charging and discharging – methods
- Book selection, Book acquisition and Book preparation
- Stock verification, binding and book preservation.

Unit – 3: Staff and other administrative procedure

- Personal Management
- Library Committee
- Annual Report

Unit – 4: Finance and Statistics

- Finance and Library Budget
- Library Statistics
- Library Records

Unit – 5: Building, Furniture & Equipments

- Library Building
- Library Furniture
- Library Equipments.

Paper – 202: Classification Practicals

Question paper to be set by the examiners for Classification of the titles by Colon Classification and by Dewey Decimal Classification.

Unit – 1: Classification of Documents (C.C and D.D.C)

- Classification of documents representing simple subject
- Classification of documents having common isolates
- Classification of documents representing compound subject
- Classification of documents representing complex subject

Unit – 2: Assignment of Book Number

(Using at least one standard Book Numbering System)

Note: C.C and D.D.C are supplied for classification and return.

Paper – 203: Cataloguing Practical

Question paper to be set by the examiners for Cataloguing of the books by Classified Catalogue Code and Anglo American Cataloguing Rules II (AACR – II)

Unit – 1: Cataloguing of Documents

(C.C.C and A.A.C.R – 2)

- Cataloguing of simple documents
- Cataloguing of complex documents.
- Periodical publication

Unit – 2: Subject Cataloguing

- Assigning Subject Headings using at least one Standard Subject Headings

Note: Simple books, Composite books, Pseudonymous author, Corporate author, Multi-volumed books, Reports and Simple periodical, Non-book material.

Paper – 204: Information Services and Sources

Unit – 1: Information Sources

Documentary Sources of Information, Print, Non-Print including Electronics Nature and Characteristics Utility and Evaluation of different types of Information Sources, Non Documentary Sources, Sources of Information: Primary, Secondary and Tertiary Information Sources Internet as a source of Information, Study and evaluation of information sources.

Unit – 2: Information Services

Reference Service: Concept, definition and trends, Reference Interview and Search Techniques Information Services: Concept, Definition, Need and Trends Alerting Services (CAS and SDI) Bibliographic, Referral, Document Delivery and Translation Service.

Unit – 3: Electronic Sources of Information

Electronic Sources: Nature and Types – CD-ROMs, DVD and Multimedia Sources
– Internet Sources and Evaluation.

Unit – 4: Users studies

Information users and their information needs

Unit – 5: Study of information centres

Study of National, International and Commercial Information Centres and their services; Background, their services and products.

Paper – 205: Journals/Project Work and Field Work/Study Tour

Unit – 1: Four journals/Project works are to be maintained

- Knowledge organisation (Classification)
- Knowledge Organisation (Cataloguing)
- Furniture
- Bibliography compilation/Press clipping

Unit – 2: Field work/ Study Tour and Viva Voce

- Candidates are required to prepare job diary by working in the University Library or any other library specified by the Department to have hands on experiences in every possible unit/section of a library at regular basis.
- The job diary is to be submitted by each candidate at the end of the semester. The diary is to be evaluated by the External and Internal Examiners.

Semester – III

Paper – 301: Fundamental of Information Science.

Unit – 1: Information and Communication

- Information: Characteristics, Nature, Value and Use of Information.

- Conceptual difference between Data, Information and Knowledge.
- Communication of Information, Information generation.
- Communication channels, models and barriers.
- Trends in Scientific Communication.

Unit-2: Information Science.

- Definition, Scope and Objectives.
- Information Science as a discipline and its relationship with other subjects.

Unit – 3: Library, Information and Society

- Genesis and characteristics and implications of Information Society.
- Changing role of Library and Information Centres in Society
- Information Industry-Generators, Provides and Intermediaries.
- Unit – 4: Intellectual Property Act, Right to Information Acts.

Unit – 5: Concept, Document Management Vs Knowledge Management.

- Information as commodity and resources.
- Production and distribution of information.
- Marketing of Information
- Knowledge Management.

Paper – 302: Information Analysis, Repackaging and Consolidation.

Part – 1: Theory

Unit – 1: Abstracting

- Abstracting: Types and guidelines in preparing abstract.

Unit – 2: Repackaging and Consolidation

- Content Analysis
- Repacking, formatting, consolidation.

Unit – 3: Information Products.

- Information Products: Nature

- Concept
- Types
- Design and Development and Marketing.

Unit – 4: Trends in Information Analysis, Repackaging and Consolidation.

Part – 2: Practice

Unit – 1: Assigned Abstracting Practice.

Unit – 2: Designed Content Analysis for Abstracting Practice.

Unit – 3: Designed Content Creation in Electronic Form.

Paper – 303: Information Retrieval

Part – 1: Theory

Unit – 1: Cataloguing & Subject Indexing: Principles and Practices

- Principles of Subject Cataloguing: Assigning Subject Headings Using Library of Congress Subject Headings and Sear’s List of Subject Headings etc.
- Models – Assigned and Derived.
- Pre & Post Coordinate Indexing Systems and Citation Indexing.

Unit – 2: Indexing Languages and Vocabulary Control.

- Indexing Languages: Types and Characteristics
- Vocabulary Control, Tools of Vocabulary Control, Structure and Construction of an IR Thesaurus.
- Trends in Automatic Indexing.

Unit – 3: Information Retrieval.

- IR Models, Search Strategies: Manual/Machine, Feedback and Refining.
- Evaluation of Information Retrieval Systems: Projects and Parameters.
- Trends in IR Models.

Part – 2: Practice

Unit – 1: Assigned Indexing Practice.

Unit – 2: Derived Indexing Practice.

Unit – 3: Design and Development of IR Thesaurus.

Unit – 4: Search Methods and Formulation of Search Strategy.

Paper – 304: Research Methodology

Unit – 1: Research and Research Design

- Concept, Meaning, Need and process of Research.
- Types of Research: Fundamental and Applied.
- Research and Research Design: Types of Research Design
- Designing Research Proposal.
- Literature Search: Print, Non-Print and Electronic Sources.

Unit – 2: Research Methods.

- Scientific Method.
- Historical Method.
- Descriptive Method.
- Survey and Case Study Method.
- Experimental Method and Delphi Method.

Unit – 3: Data Analysis and Interpretation.

- Collection of Data by Questionnaire, Interview, Observation and Sampling.
- Presentation of Data-tables, Charts and Graphs.
- Interpretation of Data: Frequency Distribution, Measures of Central Tendency. Analysis of Time Series, Correlation Studies, and Analysis of Variance.
- Use of Statistical Packages.

Unit – 4: Bibliometric Studies

- Bibliometric Studies: Meaning, Scope and Parameters.

- Bibliometrics Laws and their Applications.
- Citation Analysis and Obsolescence Studies.
- Trends in Bibliometrics.
- Informetrics, Scientometrics and Webometrics.

Unit – 5: Report Writing.

- Preparation and Writing of Research and Technical Report.
- Current Trends in Research in Library and Information Science.
- Tools for Technical Writing Style Manuals.
- Guidelines for Research Reporting.

Semester – IV

Paper – 402 Information Technology: Applications

Unit – 1: Library Automation

- Planning and Implementation of Library Automation.
- Automation, In-house Operations : Acquisition, Cataloguing, Circulation, Serial Control, OPAC, Library Management.

Unit – 2: Multi Lingual Bibliographic Databases

- Library Automation Software packages: their study and composition.

Unit – 3: Communication Technology

- Fundamentals of Telecommunication Technology: Media, Mode and Components.
- Network Media, UTP, Optical Fibre, Ethernet, Network Interface Card, Hubs, Routers and Modem
- Network Types and topologies, LAN,MAN,WAN
- Bus, Star, Ring, Token Ring etc.
- Local Area Network – Types and Topologies.

Unit – 4: INTERNET Basic Features and Tools

- Network Based Information Service.
- Connectivity: Dialup, Leased Lines, ISDN, Digital Subscriber Lines.
- E-Mail, SMTP, Wireless, Send Mail, POP3 CK
- Protocols – FTP, HTTP
- Web browser, Netscape Navigator, Internet Explorer.
- Web Servers, Web Tools, Search Engines.
- Internet Security.
- Teleconferencing, Tele – facsimile, Teletex, Videotext.

Unit – 5: Digital Libraries.

- Genesis, Definition, Objectives, Scope of Digital Libraries.
- Image Formats, Audio Formation.
- Storage Media formats – 180-9660 DVD
- Software and Hardware for digital libraries, OCR, Image Editing Software.
- Input Capture Devices, Scanners, Digitals and Movie Cameras.
- Data Warehousing, Data Mining and Meta Data.

Paper – 402: Information Technology: Application (Practice)

Unit – 1: Creation and Maintenance of Databases by CDS/ISIS and others.

Unit – 2: Using of Library Software Package.

Unit – 3: CD-ROM, Online Searching

Unit – 4: Internet Searching

Unit – 5: Library and Information Centre Web Page Design and Creation

Paper – 403: Elective Information Systems

An illustrative list of Elective option is as under. It is not suggestive but illustrative

1. Business Information System.
2. Environmental Information System

3. Biotechnology Information Systems
4. Health Science Information Systems.
5. Archival, Museum and Archaeological Information Systems
6. Legal Information Systems
7. Agricultural Information Systems
8. Social Sciences Information Systems.
9. Industrial Information Systems
10. Rural and Community Information Systems.

Note: The Electives are offered in Semester 4th MLISc as paper 403 with the following broad structure of contents:-

1. Study of the specialized subject/discipline its Structure and Development.
2. Definition, Terminology, Branches and the Landmarks in the subject/disciplines
3. Planning, Design and Evaluation of Information Systems.
4. Database design, creation and development in the area-pertaining to Information Components of the subject, Study of Data Structure, Selection of DBMS and Retrieval Aspects, Content Creation and Development.
5. Information Systems and Networks in the subject/discipline, Study of Information Sources Services INTERNET based Sources and Services.

Paper – 404: Dissertation / Project Work

- Dissertation
- Viva-Voce

Each student shall have to submit a dissertation on a Topic related to Library and Information Science under the supervision of a teacher. The supervisor shall decide the topic of the dissertation in consultation with the student. The dissertation shall be evaluated both by the external and internal examination. The Viva-Voce is to be conducted by the External.

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
MIZORAM UNIVERSITY
CURRICULLUM & SYLLABUS**

Scheme of papers**First Semester:**

Paper	Title	Marks
101-	Foundations of Library and Information Science	75+25
102-	Organisation of Knowledge	75+25
103-	Classification Practical	75+25
104-	Cataloguing Practical	75+25

Second Semester:

201-	Management of Library and Information Centres	75+25
202-	(A)Information Sources and Services	50+25
	(B)Information Sources and Services (Practical)	35
203-	Introduction to Information Technology	75+25
204-	IT Practical and Job Diary	
	(A)IT Practical	65
	(B)Job Diary and Viva – Voce	35

Third Semester:

301-	Information Processing & Retrieval	75+25
302-	Information Technology Applications	75+25
303-	Information Technology Applications (Practical)	75+25
304-	(A)Information Analysis, Repackaging & Consolidation	50+15
	(B) Tour Diary and Viva-Voce	35

Fourth Semester:

401-	Information Systems and Networks	75+25
402-	Electives (Anyone)	75+25
	(A) Preservation and Conservation of Library Materials	
	(B) Agriculture Information Systems and Services	
	(C) Community Information	
403-	Research Methodology	75+25
404-	Project/Dissertation and Viva-Voce	100

FIRST SEMESTER

Paper- 101: Foundations of Library and Information Science

Unit – 1:	Libraries : Modern Concepts, Role and Types Library as a Social Institution Different Types of Libraries : Their distinguishing features and functions Five Laws of Library Science and their Implications Library and Society : Their interaction in the changing context
Unit – 2:	Library Development Growth and Development of Libraries in India, UK and USA Library Legislation : Needs, Features Library Legislation in India with special reference to Mizoram Press and Registration Act, delivery of Books Act and Copy Right Act
Unit – 3	Professional Associations and Organizations Librarianship as a Profession Professional Ethics Professional Associations and their Role Activities of IFLA, ASLIB, ILA, IASLIC & Mizoram Library Association Information Organization : Their Role Activities of UNESCO, NISCAIR, DESIDOC, NASSDOC, RRRLF
Unit – 4	Information : Nature, Characteristics and Scope

	Data, Information and Knowledge: Conceptual Difference
	Growth of Information : Models
	Information Communication : Channels, Models and Barriers
	Information Society : Attributes, Components
	Economics of Information
	National Information Policy : Need, Components and Issues
Unit – 5	Library and Information Users
	Categories of Information Users
	Information Needs and Information Seeking Behaviour : Methods and
Techniques	
	Information Seeking Models: T.D. Wilson, Davis Ellis, Brenda Dervin
	Information Literacy: Definition, Objectives and Programmes
Paper- 102	Organization of Knowledge
Unit – 1	Knowledge Organization
	Universe of Knowledge / Subject: Nature and Attributes
	Different Types of Subjects and their Formation
	Knowledge Classification and Library Classification
	Library Classification: Definition, Needs and Theories
Unit – 2	Classification Schemes
	Features of Library Classification Schemes
	Salient Features of DDC, UDC and CC
	Mapping of Subject in DDC, UDC and CC.
Unit – 3	Notational Techniques and Recent Trends
	Notation : Definition, Types, Functions, Qualities and Techniques
	Concept of Categories, Fundamental Categories, Facet Analysis and
Sequence	
	Design and Development of Classification Schedules
	Recent Trends in Library Classification
Unit – 4	Bibliographic Description
	Catalogue : Definition, Objectives and Functions

Types and Forms of Catalogue

Introduction to Catalogue Codes : CCC & AACR-2

Normative Principles

Standards of Bibliographic Description : ISBD, CCF and MARC- 21,

Dublin Core

Unit – 5

Entry Elements and Filing

Kinds of Entries and their Elements of Description

Rules for Choice and Rendering of Headings in AACR -2

Elements of Bibliographic Description of Non-Book Material (AACR-2)

Subject Headings : Sear's List of Subject Heading, Library of Congress

Subject Heading

Paper- 103 Classification Practical

Construction of Class Numbers representing Simple, Compound, Complex

Subjects according to DDC (Latest available edition) – Marks - 60

Assigning of Book Numbers according to Cutter – Sanborn Author Table –
Marks 15

Paper- 104 Cataloguing Practical

Preparation of Main and Added Entries of Documents according to AACR

– 2 (Latest available edition) having the following items

Single Personal Author

Shared Author and Mixed Responsibility

Corporate Author

Serials

Non-Book Materials (Cartographic Materials, Computer Files, CD and
Video Recordings)

Assigning Subject Heading to Documents according to Sear's List of Subject Heading (Latest available edition)

SECOND SEMESTER

Paper- 201 Management of Library and Information Centres

- Unit – 1 Management : Concept and Principles
Principles of Management: Scientific Management and their Applications to Libraries and Information Centres
Elements of Management Process(POSDCORD)
Total Quality Management
- Unit – 2 Physical Management and Library Operations
Library Building : Site, Selection, Planning
Furniture, Fittings and Equipments : Standards and Specifications
Routines and Work Flow Relating to Different Sections
Elements of System Analysis of Library Operations
- Unit – 3 Human Resource Development
Organisational Structure
Job Description and Analysis : Job – Evaluation
Inter – Personal Relations
Recruitment Procedures
Motivation : Group Dynamics
Training and Development
Disciplines and Grievances
Performance Appraisal
- Unit – 4 Financial Management
Resource Mobilisation
Budgeting Techniques and Methods – PPBS, Zero Based Budgeting etc.
Budgetary Control
Cost Effectiveness and Cost Benefit Analysis
Outsourcing
- Unit – 5 Report Writing and Statistics
Report Writing: Annual Report

	Definition, Scope, Need and Objectives of Computer
	Generations of Computers
Unit – 2	Hardware and Software Components
	Computer Hardware
	Input, Output Devices
	Storage and Memory
	Software: Types and Functions
	Introduction to Programming Languages
Unit – 3	Operating Systems
	Types and Functions
	Study of MS-DOS,UNIX and LINUX
	Windows
	Word Processing Software
Unit – 4	Library Automation
	Concept, Need and Objectives
	Planning and Implementation
	Use of Computer in House Keeping Operations
	Important Library Software Packages
Unit – 5	Database
	Definition and Objectives
	Types of Databases
	Database Structure

Paper- 204 IT Practical and Job Diary

Paper- 204(A) IT Practical

- (i) Hands on Experience of working with MS-DOS Commands and Windows Marks - 15
- (ii) Designing of the following Documents by using MS-Word, Excel and Power Point Marks – 35
- Drafting Letters
 - Issuing Reminders

- Preparation of Records
- Preparation of Accession Register
- Power Point Presentation

(iii) Viva Voce

Marks – 15

Paper- 204(B) Job Diary and Viva Voce

(i) Candidates are required to prepare Job Diary by working in the University Library or any other library specified by the Department to have hands on experiences in every possible unit/section of a library at a regular basis.

Marks – 25

(ii) The Job Diary is to be submitted by each candidate at the end of the semester. The diary is to be evaluated jointly by both the external and internal examiners based on their performance in the Viva Voce.

Marks – 10

THIRD SEMESTER

Paper- 301 Information Processing and Retrieval

- Unit – 1 Subject Representation and Indexing Languages
 Problems of Alphabetical Subject Representation
 Contributions of Cutter, Kisser, Ranganathan, Farradane and Coates
 Characteristics of Indexing Languages
 Recall and Precision Devices
 Controlled Vocabulary and Thesaurus: Structure and Construction
- Unit -2 Indexing Systems and Techniques
 Pre Co-ordinate Indexing System: Chain Indexing, PRECIS, POPSI
 Post Co-ordinate Indexing System: Unit Term
 Title Derived Indexing System: KWIC and KWAC
 Citation Indexing: Science Citation Index
 Automatic Indexing
- Unit – 3 Information Retrieval Systems
 Definition, Types, Components of ISAR Systems

	Operational Stages
	Elements of File Organisation
	Artificial Organisation Intelligence and Expert System
Unit – 4	Information Searching and Media
	Search Methods and Search Strategy : Boolean Search
	On-Line Search Techniques
	Information Searching in Different Media : Print Media, Electronic Media and Internet
Unit – 5	Evaluation of Information Retrieval Systems
	Need and Parameters of Evaluation
	Relevance and Judgement in Retrieval
	Retrieval Performances : Recall and Precision Ratio
	Important Test Results : Cran Field, MEDLARS
	IR Models
Paper- 302	Information Technology Applications
Unit – 1	Communication Technology
	Fundamentals of Communication Technology : Media, Mode and Components
	Telecommunication Technology
	Types of Network and their Components
	LAN, MAN and WAN
	Network Technology: Star, Bus and Ring
Unit – 2	Internet
	Definition, Scope and Objective
	Historical Development
	Internet Architecture
	Internet Services
	WWW, Intranet and Extranet
Unit – 3	Network Standards and Protocols
	Definition, Scope and Need
	Layer of Protocols

- Models : OSI Model
 TCP / IP
 HTTP, FTP and Others
- Unit – 4 Data Base Management System
 Definition, Objectives and Functions
 Types of DBMS and Elements
 Data Base Organization and Searching
 Architecture and Models
- Unit – 5 Digital Library
 Basic Concepts : Definition and Historical Perspectives
 Technical Infrastructure
 Components of Digital Library
 Digital Library Collections : Nature and Policy
 Digital Library Initiatives and Projects
 Intellectual Property Right

Paper- 303 Information Technology Applications (Practical)

- (i) Creation and Maintenance of Database by CDS/ISIS and others
 (ii) Using of Library Software Packages
 (iii) CD-ROM, Online Searching
 (iv) Internet Searching

Paper-304(A) Information Analysis, Repackaging and Consolidation

- Unit – 1 Basic Concepts
 Definition and Scope of Information
 Analysis, Repackaging and Consolidation
 Content Analysis
 Electronic Content Creation
- Unit – 2 Information Consolidation and Products
 Types of Products and their Nature

	Design and Development of Information Products : Trend Report, Review, Proceeding	
Unit – 3	Abstracting Definition, Types and Usefulness Guidelines for preparation of Abstract Evaluation of Abstracts	
Paper-304(B)	Tour Diary and Viva Voce	
	(i) Tour Report	Marks – 25
	(ii) Viva Voce	Marks – 10

FOURTH SEMESTER

Paper- 401 Information Systems and Networks

Unit – 1	Information Systems Definition, Types and Characteristics Information Organizations and Systems Planning and Designing of Information System Evaluation of Information System	
Unit – 2	National Information Programme: ENVIS, BIS, PIS	
Unit – 3	Global Information Programme AGRIS, INIS, INSPEC, MEDLARS	
Unit – 4	Networks Resource Sharing and Networking – Objectives and Scope Features and Characteristics of Library Networks Data Networks – NICNET, INDONET, ERNET Important Library Networks : INFLIBNET, DELNET, CALIBNET, MALIBNET Consortia : UGC, INFONET, INDEST	
Unit – 5	Internet Resources Science and Technology Social Science Humanities	

Paper-402(A) Preservation and Conservation of Library Materials

- Unit – 1 Preservation and Conservation : Overview
 Preservation and Conservation : Need and Purpose
 Historical Development of Writing Materials
- Unit – 2 Preservation of Print Materials
 Books
 Periodicals
 News
 Pamphlet
- Unit – 3 Preservation of Non-Print Materials
 Palm Leaves
 Manuscripts
 Films
 Floppies and Disks
- Unit – 4 Hazards to Library Materials and Control Measures
 Environment Factor (Temperature, Humidity, Water, Light, Air Pollution,
 Smoke, Dust etc)
 Chemical Factors
- Unit – 5 Binding
 Types of Binding of Library Materials
 Binding Material and their Varieties
 Binding Process
 Standards for Library Binding

Paper-402(B) Agriculture Information Systems and Services

- Unit – 1 Libraries in Agricultural Environment
 Role of Libraries in Agricultural Education Research and Extension
 Growth and Development of Libraries in Agricultural and Allied
 Disciplines
 Role of ICAR and National Agricultural Library in Promoting Agricultural
 Libraries and Information Systems

Organisational Pattern of University and College Libraries in Agricultural and Allied Disciplines

- Unit – 2 Management of Agricultural Libraries
Library Governance (Academic and Research Institutions), Its Constitution and Power, Library Authority and Committee
Personnel Management in Agricultural University Libraries and Research Institutions and Centers
Library Finance: Determination of Library finance, Sources of Finance, Budget and Budgeting
- Unit – 3 Planning, Designing and Development
Library Buildings, Planning, Basic Elements of Design, Furniture and Fittings
Standards and Specifications
Collection Development
- Unit – 4 Information Sources, Users and Services
Information Sources in the field of Agriculture and Allied Disciplines – Nature and Type
Indexing and Abstracting Services, CD-ROM and On-Line Databases
Information User – Type and Information Needs
Library and Extension Services
Services to Faculty Members, Scientists and Research Scholars
Information Products and their Users
- Unit – 5 Information Systems and Networks
Agricultural Information System – National and International
Role of National Agricultural Information Centers in India
Resource Sharing at the National, Regional and International Level
Use of Agricultural Databases

Paper-402(C) Community Information

- Unit – 1 Community Information : Overview
Community Information: Definition, Scope and Origin
Need for Community Information in Society

- Role of Libraries in Handling of Community Information
 Community Information Studies in UK, USA and other Countries
 Community Information studies in India.
- Unit – 2 Study of Communities
 Types of Communities : Social Communities, Information
 Communities and Specific Communities
 Choice of Areas and Communities
 Sampling Techniques
 Collection of Information : Questionnaires, Interviews, Other Methods
 Compilation and Interpretation of Data
- Unit – 3 Information Needs
 Information Needs: Definition, Scope
 Types of Information Needs and their Methods of Assessment
 Everyday Information Needs
 Information Sources/Providers: Nature and Characteristics
 Information Needs and User Studies: Recent Trends
- Unit – 4 Community Information Services
 Community Information Services: Meaning, Types and Target Users
 Community Information Centres : Planning, Role of Information Provision,
 Services
 Community Information Services to Specific Communities
- a) Rural, Urban and Metropolitan Communities
 - b) Industrial, Business Communities
 - c) Academic, Research, Institutional and R & D Communities
 - d) Physically, Mentally Disadvantaged Communities
 - e) Children, Old People and Illiterate
- Unit – 5 Community Profiling
 Community Profiling : Definition and Characteristics
 Types of Records to be Maintained and their Usefulness
 Organisation of Local Collections
 Planning and Designing of Community Information Project

Paper- 403 Research Methodology

- Unit – 1 Research and Research Design
Concept, Meaning, Need and Process of Research
Types of Research : Fundamental and Applied
Research Design, Types of Research Design
Designing Research Proposal
Literature Search – Print, Non-Print and Electronic Sources
- Unit – 2 Research Methods
Scientific Method
Historical Method
Descriptive Method
Survey and Case Study Method
Experimental Method and Delphi Method
- Unit – 3 Data Analysis and Interpretation
Collection of Data by Questionnaire, Interview, Observation and Sampling
Presentation of Data-Tables, Charts and Graphs
Interpretation of Data : Frequency Distribution, Measures of Central
tendency, Analysis of Time Series, Co-relation Studies and Analysis of
Variance
Use of Statistical Packages
- Unit – 4 Bibliometric Studies
Bibliometric Studies: Meaning, Scope and Parameters
Bibliometric Laws and their Applications
Citation Analysis and Obsolence Studies
Trends in Bibliometrics
Informetrics, Scientometrics and Webometrics

Unit – 5 Report Writing
Preparation of writing of Research and Technical Report
Preparation of Thesis and Dissertation
Tools for Technical Writing Style Manuals
Guidelines for Research Reporting

Paper- 404 Project Report/Dissertation and Viva Voce

Dissertation	Marks – 75
Viva Voce	Marks - 25

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4.1 Introduction

The emerging knowledge society established and proved the fact that the “Brain Power” is more powerful than economic or defense power of a nation and the major driving force behind this society is Information and Communication Technology (ICT). Application of ICT in Libraries and information centers assumed utmost importance in today’s age of information. The objective of ICT application in libraries is to acquaint and develop skills and competencies of the processes and methods of computerization, networking and digitization of the library management functions and provide effective and efficient service to the users. A fully automated library could be the base and be able to join the library networks and consortia and get the opportunity of access to the library and information resources including databases available in other libraries. With the advent of Internet and World Wide Web, the concept of Digital Library emerged as an effective tool to provide easy and unlimited access with variety and plenty of information resources at less cost. “*Libraries as Gateways to Knowledge*” and its effective and efficient services have tremendous impact on educational, economic and social sectors leading to national and global development.

In a changing library and information environment the professionals have been confronted with a number challenging areas such as Automation, Networking and Consortia, Digital Library, Content Development, Preservation and Management of Digital Resources, E-Learning, Open Source Movement, Information Literacy, Knowledge Management etc. All these changes have compelled the LIS professionals to develop their professional skills and competencies to compete in the national and global job market in the following two areas.

- Information Management Skills (Library Automation, Networking, Design and Development of Information System, Internet, Digitization, Content Development)
- Competencies of Information Professionals (Managing and Organizing Digital Information Resources and Services, Applying Information Tools and Technologies)

To cope up with these challenges as Professional Obligation, both LIS educators and practitioners should play an important role and develop ability or capacity in the creation, organization and dissemination of knowledge in a digital era.

4.2 Issues Confronted by LIS Educators

The schools of library and information studies in general and LIS educators in particular play an important role in design, development and delivery of library and information science programmes in providing appropriate education and training to create appropriate human resources befitting to the changing information scenario and global market. The library and information science educators are confronted with a number of issues that should be reflected while designing a need based curriculum and syllabus in the digital era as explained below.

- ◆ **Academic** issues involved in developing a need based curriculum and syllabus to form a strong theoretical base on the subject there by enriching professional knowledge, in the emerging information and knowledge society.
- ◆ **Management** issues focused on understanding modern management methods and techniques and skills associated with management of digital technologies and communication skills as well,
- ◆ **Technological** issues emphasized on developing a high level of technological competency particularly in an automated, networked, digital/virtual environment and
- ◆ **Legal** issues associated with an increasing awareness among all categories of Library and informational professionals to understand and practice Copyright laws, Intellectual Property Right in a digital environment.

4.3 Professional Trends in Digital Era

The library and information profession both national and international level have taken a sea change which has necessitated to restructure and revamp library and information

science education integrating both knowledge and skills (technology, management and communication). The changes are quite visible like:

4.3.1 Information Society to Knowledge Society

Transformation of society from agriculture based to information and knowledge based is an important dimension and leading towards “Knowledge society”. Information and knowledge considered as essential constituents and endeavors to empower and enrich its people. Knowledge is used as a powerful tool to drive societal transformation. A learning society is committed to innovation and has the capacity to generate, absorb, disseminate and protect knowledge to create economic wealth. “Libraries: gateways to knowledge” and Library and information professionals as knowledge managers are expected to play a vital role in collecting organizing and disseminating information to users at large.

The initiatives of UN at the World Summit on the “Information Society” (WSIS) held in Tunis (15 November, 2005), a programme titled “Connect the World by 2015” aimed to ensure the benefits of the digital revolution reach every country and every part of each country by the year 2015 which is also a bench mark year for achieving the UN Millennium Development Goals. During this occasion the International Telecommunication Union recognized India’s mission 2007: Every Village a Knowledge Center”, as the flagship of the “Connect the World Movement”.

4.3.2 Library Professionals to Information and Knowledge Professionals

Technological advancements and its application in libraries and information centers have changed the information management skills of the professionals. Professional competencies in the emerging areas like Library Automation, Database Creation and Retrieval Techniques, Multimedia Applications, Networking, Design and Development of Library Website and Digital Library, adoption of Formats and Standards (CCF, UNIMARC, UK-MARC, MARC-21, Dublin Core), Content management, Knowledge Management have compelled the library professionals to be reoriented as information and knowledge professionals thereby collecting, organizing and disseminating information to users effectively and efficiently. The informational professional harnesses technology as a critical tool to accomplish goals and not limited to librarian

alone but knowledge manager, information officer, web developer, information broker, content manager etc. The major professional competencies required for information professionals relate to the practitioner's knowledge of information resources, access, technology and management, and ability to use this knowledge as a basis for providing the highest quality information services. The major competencies /skills required for information and knowledge professionals are a) Managing information organizations, b) Managing information resources, c) Managing information services and d) Applying information tools and technologies.

4.3.3 Traditional Library to Digital Library

Growth and development of libraries and application of information and communication technologies have renamed the traditional libraries through functioning, management and services as “Automated Library”, “Electronic Library”, and “Digital Library”. The growth and popularity of “Digital Library” has been primarily for three reasons. A) Access: The unlimited access to information resources by the users anywhere, any time and any format, B) Content: Variety and huge quantity of contents, C) Cost: Eliminating duplication of money, manpower and material.

The Digital Library initiatives undertaken by NISCAIR (Traditional Knowledge Digital Library), Parliament Library, Indian Institute of Technology- New Delhi, Indian National Science Academy (INSA), New Delhi are very much commendable in providing information resources and services to users at large and at times free of cost. This also confirms the Open Archives Initiatives by individual institution in providing free access to information resources.

4.3.4 Library Cooperation to Resource Sharing Library Networks/Consortia

Information explosion, paucity of financial resources, variety of information requirements of the users and problem of space necessitated libraries and information centers to go for resource sharing among the participating libraries. In 1980's a number of Library and Information networks were established namely Information and Library Network (INFLIBNET), Ahmedabad 2. Developing Library Network (DELNET), New Delhi followed by many other local library networks such as Calcutta Library Network, Madras Library Network, Bombay Library Network, Ahmedabad Library Network etc. The objectives of all these networks were supposed to provide

information resources to its clientele through OPAC, Database, Document Delivery and other network based information services.

UGC-Infonet- E-Journals consortium has been set up by UGC to promote the use of electronic databases and full text access to journals by the Research and academic community in the country (<http://web.inflibnet.ac.in/econsortia/faq.htm>) and provides more than 5,000 full text e-journals. The Ministry of Human Resource Development (MHRD) has set-up the Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium (<http://paniit.iitd.ac.in/indest/eresources.html>) to provide e-resources to scientific and technical libraries. National Center of Science Information (NCSI) provides electronic journal gateway service (<http://e-jis.ncsi.iisc.ernet.in/abtframe.htm>) developed as a joint effort by NCSI and IISc library, for IISc researchers. Using E-JIS, a user can select and access from over 10,000 online full text journals. HELINET by Rajiv Gandhi University of Health Sciences, Bangalore, provides the first resource sharing network and e-journal consortium in the medical education. CSIR has also developed its own E-Journal consortium “Access gateway to Global Knowledge” (<http://202.54.99.7/e-journal/ejournalhome1.htm>)

4.3.5 Collection Management to Content Management

Libraries once upon a time emphasized on acquisition/ collection development/ information resource development have turned in to content development in the age of digitization. Libraries today are giving more emphasis on website development and uploading their information resources to provide better access with more contents and less cost. Content development in electronic environment is a challenge for information professionals not only to build up professional competencies but widening scope of information management, identifying information sources and providing effective information services. Content managers/developers make use of this technology to deliver the best services provide the most relevant and accessible resources, develop and deliver teaching tools to maximize client’s use of information and capitalize on the library and information environment of the 21st century.

4.3.6 From Conventional Learning to Web Learning/E-Learning

A dramatic sea change is taking place around the globe with regard to teaching and learning process. The traditional mode of imparting education is being replaced by web based/ online education supplemented by multimedia educational resources. Web based education provides:

- increasing access to learning resources
- improving interactive teaching and learning environment
- increasing student convenience
- reducing educational delivery cost
- developing a scholarship of web-based pedagogy, and
- providing 21st century learning environment, supported by the latest information and communication technologies.

4.3.7 Libraries as Gateways to Knowledge

Establishment of “National Knowledge Commission” is another achievement in this direction. While formally launching the “Knowledge Commission”, the Prime Minister of India (October, 2005) said that it is the” Brain Power” which would be more powerful than military and economic power of a nation to determine a nation’s place in the world now in making. The ability of a nation to make best use of its brain power will shape its place in the world in the present century. Building a knowledge economy and knowledge society was the only way to meet the challenges of Globalization and 21st century. Going beyond universities, colleges and schools, there are other elements of “Knowledge Economy”. Public libraries are an extremely important element of the foundation of a knowledge economy. Think Tanks and specialized institutions are equally important, especially facilitating informed policy making. NKC clearly emphasized that the modernization of libraries is a prerequisite of knowledge society facilitating access to information and knowledge.

4.3.8 Open Access, Open Source and Open Library (O³)

Open access provides opportunities to promote open exchange of ideas and information among the scientific community and society at large thereby removing the limitations of subscription costs ,licensing agreements and copy right.. Open access has led to

institutional repositories and promotes equity. Open source is development technology which offers practical accessibility to a product (information and knowledge). Libraries and open source software promote learning and understanding through the dissemination of information. Open source offers opportunities, but poses a number of challenges for the LIS professionals and for its suppliers. Open library provides free and open access to knowledge.

4.4 LIS Schools to Focus on Skills and Competencies

Capacity building through skills and competencies of library and information professionals is a major challenge. The library and information professionals have to recognize and understand the broad context of the information environment, demonstrated by the ability to:

- understand and interpret the contexts in which information is originated, stored, organized, retrieved, disseminated and used;
- comprehend the legal and policy issues that are associated with,
- visualize future directions and prepare a roadmap to provide the most effective and efficient library and information services to the users in the 21st century.

Skills and competencies need to be developed in the areas like:

☞ **Information seeking**

- understand and investigate how information is effectively sought and utilised;
- identify and investigate information needs and information seeking behaviour of the users community.

☞ **Information infrastructure**

- understand the importance of information architecture to determine the structure, design and flows of information;
- forecast, plan, facilitate and evaluate appropriate resource management to library and information services.

☞ **Information organisation**

- enable information access and use through systematic and user-centred description, categorisation, storage, preservation and retrieval.

↳ **Information access**

- provide and promote free and equitable access to information and client services;
- facilitate the acquisition, licensing or creation of information in a range of media and formats.

↳ **Information services, sources and products**

- design and deliver customised information services and products;
- assess the value and effectiveness of library and information facilities, products and services;
- market library and information services;
- identify and evaluate information services, sources and products to determine their relevance to the information needs of users;
- use research skills to provide appropriate information to clients.

↳ **Information literacy**

- understand the need to develop information skills of the user community;
- facilitate the development of information literacy and the ability to critically evaluate information.

4.5 Generic skills

The generic skills for library and information professionals include:

- effective communication skills;
- professional ethical standards and social responsibility;
- project management skills;
- critical, reflective, and creative thinking;
- problem-solving skills;
- ability to build partnerships and alliances;(Public Private Partnership)
- effective team relationship skills;
- self management skills;
- a commitment to life-long learning;
- relevant information and communications technology and technology application skills;

- appropriate information literacy skills.

As all the areas of library and information practice will continue to evolve and develop over time, the overall framework of core knowledge and skills needs to be able to encompass the changing nature of the profession to ensure an acceptable, adaptable and accountable profession.

4.6 Areas on Priority for Competency Development

LIS schools in India and world over have a clear mandate to create human resources befitting to national and global job market. Some of the emerging areas in which the present and future LIS professionals should develop their competencies are listed below.

- Library Automation and Networking
- Design and Development of Information System
- Library Networks and Consortia
- Design, Development and Maintenance of Library Website
- Digital Library
- Internet and Internet Resources
- Content Development
- Open Archives Initiatives
- Information Literacy
- Knowledge Management
- Institutional/ Knowledge Repository

4.7 Issues Confronted by the LIS Schools in India

Library and information science education in India is confronted with a number of issues and challenges unlike other discipline of studies. These issues and challenges are mainly related to curriculum development, quality assurance, compatibility with global standards, competent faculty, ICT infrastructure, learning resources, financial constraints etc. Some of the issues faces by these schools/ departments of LIS in India are discussed below.

4.7.1 Need for National Accreditation Agency:

For quality assurance and maintenance of standards, there is a need for national accreditation agency for each country to achieve standards of excellence at national and international level. An accreditation body will ensure adopting best practices by developing norms, standards and guidelines for schools of library and information studies to offer LIS courses at par with national and international standard. This will further allow the LIS degree holders of one country to be accredited by another country. Presently a number of such councils are in operation in other disciplines like Medical Council (legal education), Bar Council (legal education), National Council of Teacher Education (teacher education), and AICTE (technical education). A similar national body namely National Council for Library and Information Science is the need of the hour to maintain standards and assuring quality in library and information science education in India.

Although National Assessment and Accreditation Council (NAAC), an autonomous body of the University Grants Commission is responsible for institutional accreditation (Universities and Colleges), has recognized the functioning and assessment of “Library” as an essential component and vital sub-unit in assuring quality in higher education. For this purpose NAAC has developed “Guidelines on Quality Indicators in Library and Information Services: Affiliated/Constituent Colleges”.

4.7.2 Internationalization of LIS Education:

Changes at work place in a digital/virtual environment have compelled library and information professionals to reorient themselves and compete in the global market as well. This has necessitated a radical change in LIS curriculum and syllabus keeping in view the need of information work force required in the international/global market. This will eliminate the wide disparities of LIS education, practice and research between the developing and developed countries. IFLA Education and Training Section is also emphasizing much on issue of equivalence and reciprocal recognition of academic qualifications. The goals of these efforts are to facilitate mobility of students and to increase employability. An emphasis on quality assurance on LIS education internationally could give the opportunity for improving the skills of individual students and to increase the quality of national LIS higher education system.

4.7.3 Need Based Curriculum:

There is a worldwide phenomenon of convergence of library, documentation, information and knowledge areas and a new curriculum design needs to take this fact in to account. An up to date curriculum integrating professional knowledge, skills (managerial, technological and communication) and specializations reflects much on the learners to compete in a national and international potential job market. The appropriate teaching learning pedagogy is planned at this stage to provide and an effective learning environment to the learners.

4.7.4 Competent Faculty:

Faculty members play an important role in capacity building (creativity, innovations, transfer of knowledge and capacity to use high technology). Faculty members as innovators could create innovative organizations, competition in the global market and more over the success of the students considered as testimony of faculty members.

4.7.5 Instructional Technology Support:

The technology which can support the effective delivery of LIS courses including new media technology. The present day Information Science discipline incorporates a variety of software requirements to teach Library Automation, Networking and Internet Technology, Multimedia, Digitization, Content Development and other areas of information management.

Both print, electronic and web based information resources supplement the teaching curriculum, students, faculty members and researchers. The LIS educators require to keep themselves up to date with latest publications including e-books and e-journals available in the subject. Learning resources through Library Website could provide unlimited access to all categories of users with wide variety and less cost.

4.7.6 Continuing Education Programmes:

The schools of library and information studies and particularly library educators need to organize continuing educational programmes to provide latest developments in the profession and practice in the work place. The programme will provide both exposure and develop professional skills to the participants through refresher courses, orientation

programmes, workshops, seminars etc. A rigorous hand on experience aiming at skill development may be undertaken by the schools of LIS as “Training to the Trainers”.

4.7.7 System of Continuous Evaluation:

A mechanism of system evaluation has proved to be an accepted parameter to know the strength and weakness of the professional competencies of LIS educators in the changing information scenario. The faculty members could get the feedback from the management to improve their competencies and cope up with emerging areas of specialization.

4.7.8 Adequate Financial Support:

The quality in imparting higher education and more specifically professional education like library and information science warrants developing appropriate infrastructure/resources (physical, human). Building these resources require adequate financial support to maintain standards of excellence and assure quality in delivering library and information science education.

Conclusion

Schools of library and information studies will continue to face the challenges of digital era. These challenges can be met only when the educators, practitioners and researchers of library and information profession work together and bring qualitative improvement through curriculum which has a great impact on work places. The LIS schools not only to aim at balancing traditional librarianship and technology but to do a lot to make the students exposed and develop expertise on different areas of information and communication technology and its application in library and information centers. The emerging areas of ICT are compelling the library and information schools to revamp LIS education in the country, draw a road map to achieve its mission and prepare a vision for 21st century. UGC in this regard have a very limited role, but many things depend on the individual departments to keep themselves up to date with changing information scenario, understanding the fact that the present national and global job market require a different kind of LIS professionals what it was to provide earlier. Therefore the changing information scenario demands multi skills and competencies of

library and information professionals to cope up and contribute to emerging knowledge society.

The kind of traditional and ICT skills acquired by the pass out students of four universities in the North East region with the availability of physical, ICT, human, intellectual and financial resources are analyzed and findings are drawn in the following chapter entitled “Data Analysis and Findings”.

Based on the discussions, factual positions of LIS education at national level including North East Region, professional competencies required in the changing information scenario in the preceding chapters, the following chapter entitled “Data Analysis and Findings” analyses and interpreted the data received from the respondents and derives appropriate findings.

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5.1 INTRODUCTION

The scholar after identifying the seven universities offering Library and Information Science course in the North East region made an attempt to get the feedback from the MLIS pass out students of four universities namely-

1. Gauhati University, Guwahati.
2. North Eastern Hill University (NEHU), Shillong.
3. Manipur University, Imphal and
4. Mizoram University, Aizawl.

Altogether there were 300 questionnaires circulated to MLISc passed out students out of which 220 responded to the questionnaires. The different components included in the questionnaire are:

1. Distribution of Respondents (University Wise)
2. Category of Respondents
3. Curriculum Weightage for Theory and Practice
4. Skills and Competencies Developed
5. Physical and Documentary Resources
6. Human Resources
7. Financial Resources
8. Learning Resources

5.2 DATA ANALYSIS

Data collected from the respondents are analyzed and interpreted in order to present the factual findings as stated below-

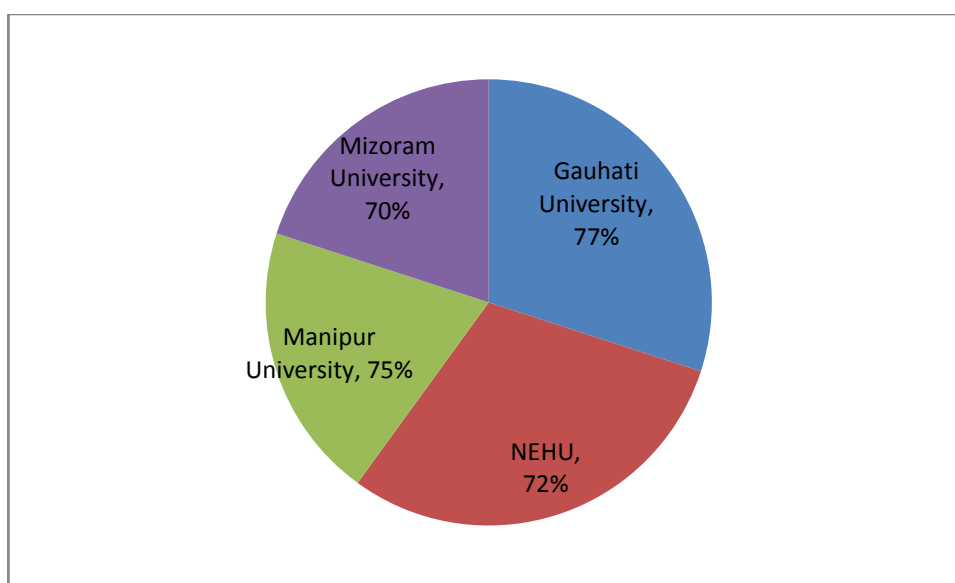
5.2.1 Distribution of Respondents (University wise)

As stated earlier, 300 questionnaires were circulated to the pass out students of four universities i.e, Gauhati University, NEHU, Manipur and Mizoram. Their break up is given in Table-5.2.1 supplemented with Graph-1 for clear understanding.

Table 5.2.1 Distribution of University Wise Respondents.

<i>Sl.No</i>	<i>Name of the University</i>	<i>Questionnaires Circulated</i>	<i>Questionnaires Responded</i>	<i>Percentage</i>
1.	Gauhati University.	90	70	77%
2.	NEHU.	90	65	72%
3.	Manipur University.	60	45	75%
4.	Mizoram University.	60	42	70%
Total		300	220	73%

Graph 5.2.1 Distribution of University Wise Respondents



While analyzing the above table it is revealed that, since Gauhati University is the oldest university to start library and information science course in the year 1966, the number of respondents were more from this university which comes to 77% followed by Manipur university (75%) and NEHU (72%) which rank in first, second and third rank respectively. Respondents from Mizoram University, however, form 70% which is in the 4th rank and it is due to the fact that, the University commenced the course in 2002.

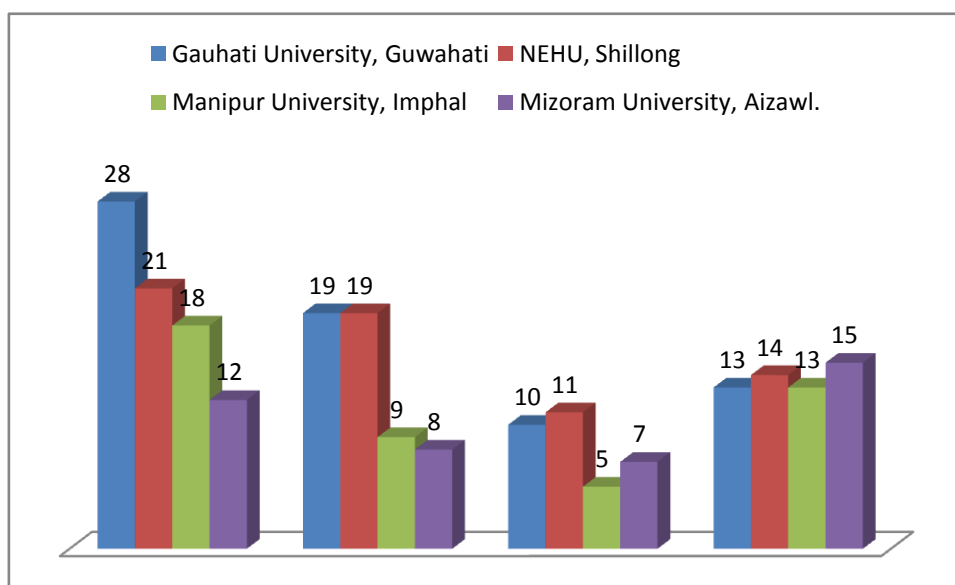
5.2.2 Category of Respondents

The researcher circulated the questionnaires to pass out students of four universities who are presently in different professional assignments. The table stated below provides the details from a sample size of 220.

Table 5.2.2 Category of Respondents

<i>Sl.No</i>	<i>Name of the University</i>	<i>Library Professional (Full Time)</i>	<i>Library Professional (Adhoc/Parttime / Consolidated)</i>	<i>Research Scholars</i>	<i>Students (Still not in employment)</i>
1.	Gauhati University	28 (40%)	19 (27%)	10 (14%)	13 (18%)
2.	NEHU	21 (32%)	19(29%)	11(16%)	14(21%)
3.	Manipur University	18(40%)	9(20%)	5(11%)	13(28%)
4.	Mizoram University	12(28%)	8(19%)	7(16%)	15(35%)

Graph 5.2.2 Category of Respondents



The above table states that in each university, the percentage of full time librarians are more as compared to adhoc/consolidated/part time, research scholars and students still not in job. Since the number of intake is very less in these universities as compared to the universities located in other metro cities, the number of pass out students with the employment opportunities available are comparatively less than the total number of passed out students.

5.2.3 Curriculum Weightage for Theory and Practice

The library and information science curriculum developed by these four universities are the combination of theory and practice. Library and information science course being a professional course is intended to provide sound knowledge of professionalism combining both theory and practice. The table stated below explains the weightage given for theory and practice.

Table 5.2.3 Curriculum Weightage for Theory and Practice

<i>Sl. No.</i>	<i>Name of the University</i>	<i>Whether following UGC-Model Curriculum</i>	<i>Weightage in Theory</i>	<i>Weightage in Practical</i>
1.	Gauhati University	Yes, with modification	60%	40%
2.	NEHU	Yes, with little modification	50%	50%
3.	Manipur University	Yes. As per UGC Model Curriculum	60%	40%
4.	Mizoram University	Yes. With little modification	40%	60%

The above table shows that although UGC Model Curriculum is followed by all the four universities of north east region, many of them have implemented with minor or major modifications. The universities stated above have not been able to give more weightage to practical whereas majority of the universities have given weightage to theory. The changing scenario demands a balance between theory and practice.

5.2.4 Skills and Competencies Developed

Librarianship is a profession which combines “tradition vs technology”. Therefore it is necessary to develop the professional competencies (Traditional as well as ICT skills) for the proper management of libraries and information centres. The professional competencies acquired by the pass out students are explained in the following tables.

Table 5.2.4(A) Traditional Skill

<i>Sl.No</i>	<i>Name of the University</i>	<i>Classification</i>	<i>Cataloguing</i>	<i>Indexing</i>	<i>Abstracting</i>	<i>Literature Search</i>	<i>Bibliographic</i>
1.	Gauhati University	21(30%)	21(30%)	6(8%)	8(11%)	9(12%)	5(7%)
2.	NEHU	19(29%)	19(29%)	6(9%)	9(13%)	7(10%)	5(7%)
3.	Manipur University	15(33%)	15(33%)	4(8%)	5(11%)	3(6%)	3(6%)
4.	Mizoram University	14(33%)	14(33%)	5(11%)	3(7%)	3(7%)	3(7%)

Graph 5.2.4 (A) Traditional Skill

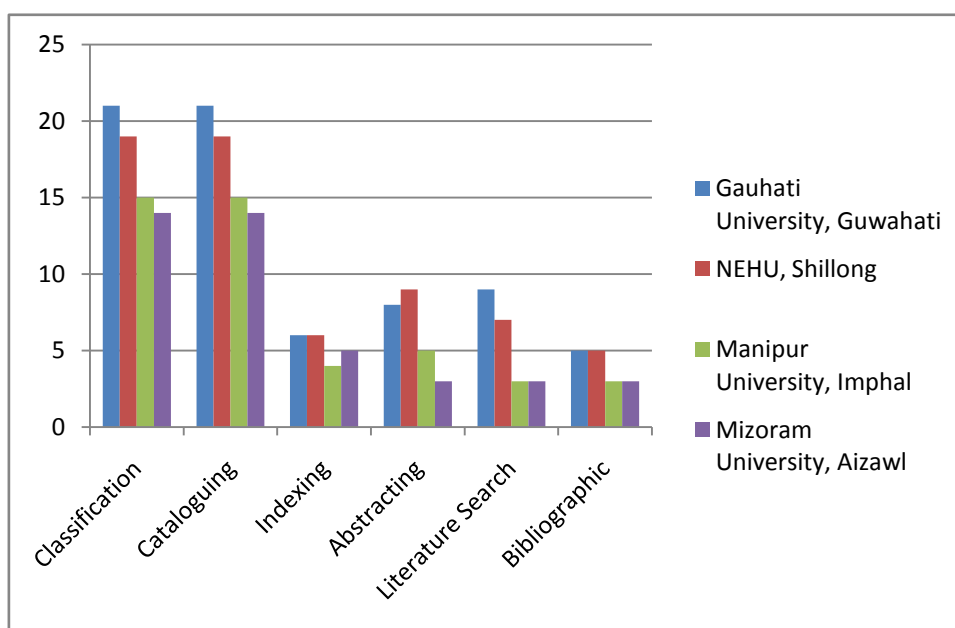
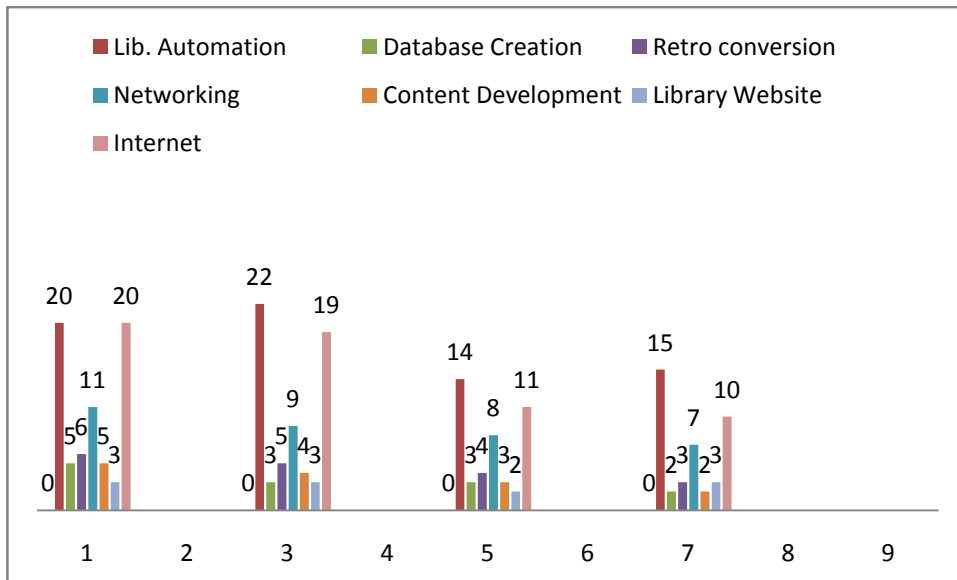


Table 5.2.4(B) ICT Skill

<i>Sl. No</i>	<i>Name of the University</i>	<i>Library Automation</i>	<i>Database Creation</i>	<i>Retro conversion</i>	<i>Net-working</i>	<i>Content Development</i>	<i>Library Website</i>	<i>Internet</i>
1.	Gauhati University	20 (28%)	5 (7%)	6 (8%)	11 (15%)	5 (7%)	3 (4%)	20 (28%)
2	NEHU	22 (33%)	3 (4%)	5 (7%)	9 (13%)	4 (6%)	3 (4%)	19 (29%)
3	Manipur University	14 (31%)	3 (6%)	4 (8%)	8 (17%)	3 (6%)	2 (4%)	11 (24%)
4	Mizoram University	15 (35%)	2 (4%)	3 (7%)	7 (16%)	2 (4%)	3 (7%)	10 (23%)

Graph 5.2.4(B) ICT Skill



As per Table 5.2.4(A), it is evident that there is almost equal percentage of pass out students who have developed classification and cataloguing skills in the four universities. There is very less skill acquired as far as the methods and techniques associated with indexing and abstracting, literature search and preparation of bibliographies are concerned.

Information and Communication Technology (ICT) application in the libraries and information centre is the need of the hour. Table 5.2.4(B) shows that although the pass out students have developed their automation skills and internet searching but lacking in many respect in the areas of database creation, networking, design and development of library website and content development etc.

5.2.5 Physical and Documentary Resources

In order to supplement the LIS education, physical, ICT and documentary resources are essential to developed professional knowledge and competencies of the learners. Besides physical resources which include building, furniture and equipment, ICT and documentary resources provide real technological and academic input in the up skilling

and enriching the competencies of the professionals. The following table depicts the physical and documentary resources available in each department.

Table 5.2.5(A) Physical and Documentary Resources

<i>Sl.No</i>	<i>Name of the University</i>	<i>Building (Rented/Owned)</i>	<i>Furniture & Equipment</i>	<i>Departmental Library</i>	<i>Total No. of collections in Deptl. Library</i>	<i>Telephone/Fax/Photocopier/Other Equipment</i>
1.	Gauhati University	Owned	Adequate	Yes	1285	Telephone – 1 Fax -1 Photocopier-1
2.	NEHU	Owned	Adequate	Yes	Only project report and mlis dissertations	Telephone – 2 Fax- 1 OHP and LCD – 1 Television - 1 Scanner -4
3.	Manipur University	Owned	Adequate	No	Nil	Telephone -1 Xerox – 1 LCD - 1
4.	Mizoram University	Owned	Adequate	Yes	300	Telephone-1 Fax-1 Photocopier-1 Scanner-1 LCD-1 Laptop-1

Table 5.2.5(B) Physical and Documentary Resources

<i>Sl.No</i>	<i>Name of the University</i>	<i>No. of Computers</i>	<i>Library Software Used</i>	<i>LAN Connectivity</i>	<i>Internet</i>
1.	Gauhati University	14	SOUL-CDS/ISIS	Yes	University Internet
2.	NEHU	15	SOUL/WINISIS	Yes	University Internet
3.	Manipur University	15	SOUL	Yes	University Internet
4.	Mizoram University	15	SOUL	Yes	BSNL Broadband

Table 5.2.5(A) shows that all the four universities are located in their respective premises with independent identity. As provided in the questionnaire and through personal interaction, these departments are well equipped with class rooms, adequate

furniture and equipment which include telephone, fax, photocopier machine etc. These departments have in course of time developed departmental library to facilitate easy access to a minimum number of library collections received either through gifts and donations, journals, newsletters, annual reports/departmental profile of different library and information science departments of India and national level organizations as well. Almost all the departments do not have a separate budget for departmental library.

While analyzing Table 5.2.5(B) it shows that ICT infrastructure which include hardware, software, LAN and Internet are essential instructional technology to supplement the curriculum and syllabus thereby developing the competencies of the learners in an automated and networked environment. Almost all the departments of four universities have acquired in course of time minimum number of computers, library software, LAN connectivity and Internet access to the students.

5.2.6 Human Resources

Human resources (teaching staff) are the testimony of success of the department. It is the library educator who can provide academic leadership in terms of experience and expertise in designing a need-based curriculum, teaching, delivering and creating an appropriate learning environment. Educators also play an important role in moulding and motivating the learners to a befitting professional career. The table stated below describes the number of faculty members (regular/adhoc/temporary) in the four universities under study.

Table 5.2.6 Human Resources

<i>Sl.No</i>	<i>Name of the University</i>	<i>Regular</i>	<i>Adhoc/Guest Lecturer</i>	<i>Non teaching Staff</i>	<i>Vacancies</i>
1.	Gauhati University	Professor-2 Reader-1	Guest Lecturer-3	Peon-2	Lecturer-3
2.	NEHU	Reader-2 Lecturer-3	Nil	Steno-1 LDC-1 Peon-1 Cleaner-2	Professor-2 Lecturer-1
3.	Manipur University	Reader-2 Lecturer-2	Guest Lecturer-2	Junior Asst-1 Peon-1	Nil

4.	Mizoram University	Professor-1 Reader-1 Lecturer-3	Nil	Tech. Asst-1 LDC-1 Peon-1 Cleaner-1	Reader-1 Lecturer-2
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5.2.7 Financial Resources

A perennial source of finance not only strengthens the LIS education but also develops the quality of education. Library and information science being a professional course requires adequate funds to impart learning skills, day to day running expenditures and maintenance of equipments as well. Although the central universities are in a sound financial situation, the state universities find it difficult to maintain quality of LIS education. Out of the four universities under study, three universities are central universities namely NEHU, Manipur University and Mizoram University and Gauhati University is a state university. There are different types of grants received from UGC and other sources for the management and maintenance of LIS courses. These grants are provided in different heads like salaries and allowances, infrastructure development, procurement of audio visual aids, learning resources, maintenance of equipments etc. The following table provides the budget allocation on each head for the four universities under study.

Table 5.2.7 Financial Resources

<i>Sl. No</i>	<i>Name of the University</i>	<i>Annual Budget</i>	<i>Library Budget</i>	<i>Maintenance</i>	<i>Developmental Grant/Contingencies</i>
1.	Gauhati University	Part of University Budget	Not fixed	20,000/-	Nil
2.	NEHU	Part of University Budget	2.5 lakh	Nil	1.5 lakh
3.	Manipur University	Part of University Budget	1 lakh	No specific budget	Not fixed
4.	Mizoram University	Part of University Budget	2 lakh (Books & Journals)	No specific budget	1 lakh

5.2.8 Learning Resources

Library resources (books and journals)/information resources/intellectual resources/learning resources supplement the curriculum and syllabus for the success of the academic endeavour of the students. Students' community depends largely on these resources and gets an opportunity to access to academic world. These learning resources make them professionally sound in enriching their knowledge and exposing themselves in the recent trends and developments in LIS education at national and international level. The resources procured or acquired by the four libraries are stated below.

Table5.2.8 Learning Resources

<i>Sl.no</i>	<i>Name of the University</i>	<i>Total collection (Books)</i>	<i>Journals Subscribed (National/Int.)</i>	<i>E-Journals</i>	<i>Dissertation/Theses</i>
1.	Gauhati University	3,000	UGC-Infonet LIS Journals	25 (UGC-Infonet)	Ph.D-15
2.	NEHU	7,000	National-10 Intl-12	25 (UGC-Infonet)	Ph.D-10
3.	Manipur University	2,000	National-10 Intl - 2	23(UGC-Infonet)	Ph.D - 13
4.	Mizoram University	1,000	National-4 Intl- 5	19(UGC-Infonet)	MPhil - 7 Ph.D - 2

A structure questionnaire designed for the purpose is provided in the Appendix -5. The list of senior library and information professionals interviewed and interacted formally and informally is provided in the Appendix-6.

5.3 Findings

Based on the factual data analysis and interpretation, the following findings are drawn.

1. Most of the pass out students are employed in academic (school, college, university), public and special libraries. Mobility of students from one state to another state was also observed during interaction with the students which restrict them to accept employment in other metro cities and corporate sectors.

2. All the four universities have adopted 2 years integrated MLIS course and UGC Model Curriculum either partially or substantially modified.
3. Universities under study are focusing more on traditional skills of knowledge organization (classification, cataloguing, indexing, information sources) etc and less weightage on ICT skills like automation, networking, digitization, website development, open source software, OCR technology etc.
4. As it was observed that non-implementation of ICT skills is due to ICT infrastructure and faculty members with technology back ground.
5. Even if the departments have IT laboratory, still they lack in the full version of integrated library software, open source software, networking and Internet infrastructure, Internet speed and access.
6. Except NEHU and Mizoram University, who have the minimum and reasonable number of Faculty members (1-Professor, 2-Readers, 4-Lecturers), the other two universities do not have the minimum number of faculty members which is affecting the teaching programme at post-graduate level. Even if the universities have teaching positions, they are not filled up in time. Therefore number of faculty members required for a post graduate department of library and information science are either not available or not filled up.
7. Although the four universities have accommodated their departments in their respective premises, still these departments are facing the problems of space like classrooms, faculty rooms, IT laboratory, departmental library, research scholars' room, seminar room etc. Adequate space can only provide an effective teaching and learning environment.
8. Departments lack teaching aids and AV materials like LCD, Laptop, Scanner, Television, Audio/Video Cassettes etc.
9. All the departments do not have compulsory curriculum stipulated study tour which can expose the students to visit and gain onsite experience of the advanced libraries in the country and this should be the part of the curriculum.
10. Job Diary/ Library Training are also not followed strictly by all the departments and should form part of the syllabus. One full semester should be devoted to undertake this practical exercise by the students.
11. The departments do not have a uniform support of non-teaching staff which include steno, clerk, technical assistant, lab attendant, peon etc.

12. Developing a good collection of learning resources (Books and Journals) is inhibited by budget constraints and to subscribe more number of foreign journals. Although UGC-Infonet provides a good number of Journals in LIS, the problem of Internet connectivity, access and speed create problems all the time for students and faculty members.
13. A regular annual budget is not provided by the University for the Department, except NEHU and Mizoram University which follow the system of Department allocation, Manipur University and Gauhati University do not have such provision. These two universities get contingency expenditure with a meager amount and not on a regular basis. A regular budget provision is essential to meet the contingencies like stationery, maintenance of equipments both consumables and non-consumables.
14. Development grants allocated by UGC through different five year plans are not allocated to the department either by UGC or concerned university. This being a substantial amount, the department can plan to introduce new courses, additional faculties, infrastructure and procurement of library resources to supplement both running and programmes planned for the future.
15. However all the departments are struggling their best to maintain the professional standard, learning outcome and contribute to teaching, learning and research environment in the interest of the department, university and profession as well.

The scholar made a detailed study on different aspects of LIS education in the north east region based on the present trends and developments at national and global level. The following chapter provides conclusions and suggestions on the research topic under study.

QUESTIONNAIRE

Research topic : **Library and Information Science Education in North-East Region: A Critical Study.**

Name :

Present Address with E-Mail :

Category(Passed out student/Teacher/Research Scholar/Library Professional)

Name of the University last studied :
(BLIS/MLIS)

Please state briefly about the LIS Curriculum of your University.

Name of the courses - Theory Practice

Skills/Competencies developed after completion of study

Traditional Skills

a)Classification Skills

b)Cataloguing Skills

c)Indexing

d)Abstracting

e)Literature Search

f) Bibliography

ICT Skills

a)Library Automation

b)Database Creation

c)Retro Conversion

d)Networking

e)Content development

f)Design and Development of Library Website

g)Internet.

Physical and Documentary Resources Available in the Department.

Building – Rented/Owned

Furniture and equipment

Department Library

Total No. of Collections

Telephone/Fax/Photocopier

No. of Computers

Library Software

Networking Infrastructure

Internet

Human Resources

Regular Faculties: Lecturer, Reader, Professor

Guest Lecturer/Part-time lecturer

Non-teaching staff

Financial Resources

Annual Budget

Library Budget

Other Development Grants

Contingencies.

Learning Resources

Total collections available in the University Central Library (Library and Information Science Collections) -----

No. of Journals Subscribed -----

Dissertation/Thesis -----

E-Journals in LIS/E-Resources subscribed by Central Library -----

Keeping in view the advances in Information and Communication Technology, please suggest the future development of LIS education befitting to the national and global job market.

Date:

Signature

Please send the filled in questionnaire to Ms. Lalngaizuali, Research Scholar,
Department of Library and Information Science, H/No Y-133, Ramhlun South, Aizawl,
Mizoram, Pin 796001.

List of Senior Library and Information Science Professionals Consulted (North East Region)

1. Dr. Th. Madhuri Devi Associate Professor & Head Dept. of Library & Inf. Science Manipur University, Imphal.	2. Prof. N.K. Lakhkar Head Dept. of Library & Inf. Science Gauhati University, Guwahati.
3. Dr. Th.Khomdon Singh Librarian I/C Manipur University Library, Imphal.	4. Dr. M. Moses Naga Reader & Head Dept. of Library & Inf. Science NEHU, Shillong.
5. Dr. Th. Purnima Devi Associate Professor Dept. of Library & Inf. Science Manipur University, Imphal	6. Dr. Bikika Laloo Reader Dept. of Library & Inf. Science NEHU, Shillong.
7. Dr. H.S. Chakrabarty Librarian I/C Tripura University Library, Agartala.	8. Dr. R.K. Ngurtinkhuma Sr. Lecturer (Selection Grade) Dept. of Library & Inf. Science Mizoram University, Aizawl.
9. Dr. R.N. Mishra Lecturer Dept. of Library & Info. Science Mizoram University, Aizawl.	10. Prof. A.S. Chandel Former Professor & Head Dept. of Library & Head NEHU, Shillong.

6.1 CONCLUSIONS

The role and perception of libraries and information centers continue to change in the 21st century. It is therefore necessary to evaluate the effectiveness of library and information systems in the changing scenario. The changing scenario calls for skills and competencies beyond the daily operational skills. Therefore the schools of library and information studies play an important role in creating human resources thereby providing appropriate education and training. This is evident from the study undertaken by the scholar that library and information science education has to go a long way and there is a need to revamp and improve the professional skills of the teachers, students, researchers and staff to face the new challenges. Although there are many library and information science departments grown over the period of time but hardly the attention has been paid towards infrastructure and manpower development.

Since, University Grants Commission (UGC) is instrumental in developing model curriculum in library and information science but many schools are lagging behind in terms of physical and ICT infrastructure, human resources (teaching staff) and financial constraints. As it has been suggested by many respondents to go for a need based curriculum, it is equally important to make the teachers up to date which has an impact on teaching and learning. Teachers are the testimony of success. This can only be achieved through career oriented courses like Refresher Course, Orientation Programmes organized by Academic Staff Colleges and supported by University Grants Commission (UGC). Besides the curriculum and syllabus, it is essential to provide focus on ICT skills, communication skills, E-publishing, web-designing, digital information sources and services. A close link and coordination are very much essential among the LIS educators, practitioners and researchers. Departments should undertake different types of training programmes with training modules to familiarize and develop hands on experience on the different components of ICT. This is the high time that the Ministry of Human Resource Development with close coordination with UGC and NAAC should think for establishing a national accrediting agency in library and information science unlike NCTE, AICTE, MCI, BCI so that it could ensure qualitative development of library and information science education which has a great impact on its services.

Future Avenues for Research

Today's library and information professionals are confronted with a broad range of challenges and opportunities to improve the effectiveness of their organizations, to respond better to the information needs of their communities, and to provide leadership in the information environment. Innovative, original and scientific research in library and information science not only increases the quality of services but solves the practical problems of library and information profession. The emerging areas of research in an electronic and digital environment have posed serious challenges to library and information profession paving a way to entirely transform and meet the challenges. More number of Research Fellowship need to be awarded by UGC, CSIR, DRDO, ICSSR. Some of the well established LIS departments having required infrastructure may be recognized as Advance Research Center. Library and Information Science being an established discipline of study has not only focused library and information science education at undergraduate and post-graduate, it has gone beyond this level by offering M.Phil and Ph.D programme. Already the researchers have been carried out on the different areas of library education and library services but the growth, development and popularity of ICT in general and internet technology in particular has widened the scope of research. Many researchers around the world including India are engaged in evaluating internet/web resources, web mining, library website development, website usability, content creation, development and management of digital resources including its preservation, evaluation of search engines, information literacy, e-learning, virtual reference, copyright and Intellectual Property Right (IPR) etc. These researches already carried out or research in progress has scientifically brought innovative solutions to the practical problems of librarianship. Research under progress shall also contribute a lot in bringing innovative and original ideas for qualitative improvement of library and information science education in India and abroad.

This research topic undertaken by me paved the way to come across many academic and professional issues confronted by library and information science education in the country and more specifically in the north east region and in the process I gained experience to contribute to my academic and professional endeavour.

6.2 SUGGESTIONS

Based on the feedback received from the respondents, the following suggestions are made for the qualitative improvement of library and information science education in the north east region and national level as well. Suggestions are made by the senior library and information professional of the country and north east region including my own supervisor so as to bring it before the appropriate national bodies in future as follow up action and implementation.

1. Objectives of LIS Education

The successful pass out students working in different libraries and different capacities including senior library and information professionals of north east region opined that LIS education should be planned and developed in a more realistic and objective manner. LIS education should not only meet the immediate needs but the future needs. The scope and coverage of LIS education should be at par with national and global standard. Respondents also suggested that introduction of Masters course and its syllabus should be based on market survey. The vision of new and already established departments and mission of the MLIS course should aim at creating appropriate human resource in the country.

2. Curriculum and Syllabus

The LIS curriculum designed by the departments need to be a need based curriculum befitting to the national and global job market. Although UGC is responsible to prepare a model curriculum (latest-2001), either this is adopted fully/partially or not at all. To the extent possible the curriculum should reflect 50:50 ratio of theory and practical components with clear emphasis on Librarianship and ICT components.

A need based curriculum should include library automation, networking and Internet, Information System and Retrieval, Content development, Digital Library, Design and Development of Library Website, Use and Evaluation of Web Resources, Knowledge Management, E-Publishing , Copy Right and Intellectual Property Right in electronic environment. A need based and qualitative curriculum can only designed with help of Educators, Practitioners and Researchers. The syllabus should also be designed in such a manner to benefit the UGC-NET and SLET aspirants. Some of the respondents also made special emphasis on Open Source Software, resource generation/mobilization,

outsourcing, personality development and leadership which may form the part of the syllabus.

3. Human Resources

Faculty is the testimony of success of the students. Trained, specialized faculty with up to date knowledge and skills could deliver teaching and learning more effectively. To achieve the standards of excellence sound professional knowledge, up to date content and good communication skills are the three essential characteristics of a good teacher. The faculty members should be open to self evaluation and accountability

One of the major targets that we have to achieve is to make our profession more attractive to lure and induct best brains in to it. Teaching and Learning must be laboratory and library oriented. Faculty and student exchange programmes among the leading universities of national and international level shall allow both teachers and students be exposed to latest trends and developments. In the changing information environment, web based education is an added advantage which all the teachers and students should be motivated to access, store and retrieve vast amount of information pertaining to their area of teaching and research.

4. Physical/ICT Resources/Teaching Aids

Physical resources not only include building, furniture and equipment, more important is ICT infrastructure. A well equipped information processing laboratory with computing and network infrastructure including Internet connectivity facilitate practical to be undertaken by the students. Adequate ICT infrastructure need to be developed in each school to supplement teaching and learning. Teaching aids include library software, digital library software, LCD, Laptop, scanners, printers etc.

5. Skills and Competencies

The skills and competencies expected from LIS learners are broadly grouped in to following categories.

- a) ICT Skills: The changing library profession in to information profession requires ability to handle sophisticated technology including networking and Internet skills.
- b) Information Management: The ability to collect, access, store, retrieve and disseminate information to users.

- c) **Communication Skills:** Effective and interactive communication skills of the LIS professionals add value to the library and information centers to cater the potential users. Good communication skills not only make users to understand library services, but an effective means of marketing library and information services.
- d) **Leadership Skills:** The curriculum should also include the ability to develop leadership skills of the LIS professionals to carry forward the plans and policies of the libraries and information centers in 21st century. To nurture, encourage and reflect intellectual leadership capacity by focusing on student-centered and practice in teaching learning is the need of the hour.
- e) **Seminars and Colloquia** should form part of the curriculum and syllabus to improve the communication skills of the students.

Traditional skills of Librarianship need to be revamped to suit the digital environment.

6. Library Internship/Apprenticeship

LIS educators strongly felt the introduction of internship/apprenticeship as compulsory component MLIS course varying from 3-6 months. This will provide an opportunity to each and every student to expose themselves various management techniques of a library including ICT application in libraries. Further understanding the practical librarianship, each student can make a choice of his/her career path by developing knowledge and skills in the most emerging areas of LIS profession and demand from the national and global job market.

7. Information Resources

Inadequacy of both print and electronic resources in the form of latest books, journals, reports, monographs inhibit the academic and research development. Majority of schools of library and information studies in the country are today confronted with financial problem to procure these leaning resources. Peer reviewed national and international journals, research and reference books , guides and manuals and other primary sources of information resources be procured by university libraries to supplement qualitative teaching and learning in LIS courses.

8. Continuing Education

Seminars, conferences, workshops, symposiums refresher courses , specialized training programmes at regular intervals may be conducted .This will provide a platform to educators and learners to expose themselves the latest trend and developments in LIS education and research .Specialized training programmes in collaboration with NISCAIR, NCSI, DRTC, DESIDOC, NASSDOC, DRTC, INFLIBNET, RRRLF, British Council, American Center could provide opportunity to develop skills in digital library, open source software, institutional repositories , information management, information literacy etc

9. Need for a National Accreditation Agency

LIS experts have a serious concern for maintenance of standards or assuring quality in LIS education. Experts have viewed that unlike other national accreditation agencies such as AICET (Technical Education), NCTE (Teacher Education), Bar Council of India (Legal Education) Medical Council of India (Medical Education), there should be a similar national accreditation body for maintenance of standards in LIS education.

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