

Library & Information Science Education and Job Market Expectations in Contemporary Digital Environment

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Abstract

The Information Communication Technology (ICT) has the greater impact on the Library and Information Science (LIS) profession. The fast changes in the ICT have changed the traditional libraries into information hub of the institution. The online digital library resources, services, and complex networked infrastructure of the libraries require the library professionals to equip themselves with new competencies and skills in order to meet the job market expectations and fulfilling the changing needs of library user community. The paper discusses structured professional courses and other programmes in the context of emerging job market expectations from LIS professionals. How far the present LIS education system is able to fulfill these expectations and meet the challenges of the profession.

Keywords: Education, Library and Information Science Education, Job Market Expectations, Information Communication Technology (ICT).

1. Introduction

In India Library science is an established discipline now at par with other social science disciplines in the university education system. Library science is an interdisciplinary subject incorporating inputs from various disciplines like the humanities, law and applied science in order to study all the functions of Libraries, Information Centres, Information Analysis Centres, Documentation Centres, organization, preservation and dissemination of information resources, storage and retrieval of information etc. There is no generally agreed distinction between the terms Library Science, Librarianship, Library and Information Science (LIS) and Information Science and to a certain extent these terms are interchangeably used, perhaps differing most significantly in connotation. The most often used term is Library and Information Science (LIS). Most of the Library and Information Science professionals consider it as only a terminological variation. It is pertinent to mention here that Information and Communication Technology (ICT) has deeply integrated with the discipline of Library and Information Science.

2. Current Scenario of LIS Education

The first library science school in India was established in 1911 at Baroda state, with the initiative of Maharaja Sayajirao Gaykwad, King of Baroda state. The first systematic teaching programme in Library Science was started in 1929 as a certificate course under the auspices of Madras Library Association in the collaboration with the Madras University with the

initiative taken by Dr. S. R. Ranganathan. The credit of various Diploma, Graduate, Post-graduate and Doctoral programmes in Library and Information Science discipline started later on, may be attributed to him.

Presently various Library and Information Science Departments are well established in Indian Universities. These departments are offering Library and Information Science degree programmes like Bachelor of Library and Information Science (BLIS), Master of Library and Information Science (MLIS), Master of Philosophy (M.Phil.), Doctor of Philosophy (PhD). It is being observed that there is no uniformity in the syllabus of these degree programmes. Moreover some schools have not yet updated their syllabus according to the present requirements. Besides the regular degree programmes offered by the established universities, NISCAIR offers a two years integrated course in Information Science known as Associateship in Information Science which is considered equivalent to MLIS. Similarly the Documentation Research Training Centre (DRTC), Bangalore also offers a two year M.Sc. programme in Library and Information Science. These courses are technically much advanced as compare to the traditional LIS courses. It is to be noted that Indira Gandhi National Open University (IGNOU) keeps the syllabus of all its LIS courses improved and updated according to the changing professional needs.

3. Role of University Grants Commission (UGC) in Promoting LIS Education

UGC plays a significant role in keeping the LIS professionals fully prepared to manage libraries in digital environment. UGC appointed a Library Committee in 1957 under the chairmanship of S. R. Ranganathan to give advice on various aspects of LIS discipline including the training of Library professionals. The Commission appointed a Review Committee in 1961 under the chairmanship of S. R. Ranganathan to make recommendations on standardization of syllabus, course contents, course duration, examination system, qualifications of teachers etc. in the LIS discipline. The UGC has set up a special panel in July 1977 on library science to advice commission regarding measures for improvement of standards, facilities for teaching and research and development of interdisciplinary and multidisciplinary programmes. In 1985 The UGC appointed another library committee for further improving standards of LIS education. In 2001 UGC took the initiative for standardising course curriculum of LIS discipline by developing a model curriculum.

4. New Face of Librarians

Libraries adapt to the recent advancements in Information Communication Technology (ICT) very fast for rendering ICT based resources and services to their clientele. In order to fulfill the user expectations for ICT based services more and more libraries are gradually transforming into Digital Libraries from the traditional libraries. Digital Libraries are the libraries without wall, accessible to the user any time anywhere. The ease of access to library resources and services makes digital library systems to be preferred over the traditional library system. The user expectations from digital library system are ever increasing. The librarians need continuous learning to meet these rising expectations. In the current digital environment LIS professionals are bound to perform new sets of roles and responsibilities by acquiring new skills and competencies. In this context some of the new roles and responsibilities of LIS professionals have been discussed.

Information Manager: The role of librarians is not limited only to procure organize & disseminate traditional library resources but, they have to analyse, describe and organize the

online digital resources such as e-journals, e-books, etc., provide access to these resources through web sites, manage complex digital infrastructure, deal with IT professionals. In this way library professionals are required to be fully aware of the key aspects of new advancements in ICT. Librarians perform multifarious tasks in the changed digital environment where they function more like Information Manager rather than traditional librarian.

Network Manager: The substantial increase in online digital library resources and services have made it necessary for the libraries to have complex digital infrastructure in the form of Library Network comprising of various servers including web servers, switches, computer systems, Network Attached Storage (NAS), high bandwidth Internet connectivity etc. integration of library network with parent Institutional Network / Campus Network, Wireless Network and third party resource network, consortia network, compliance of the network to communication standards and protocols like Transmission Control Protocol/ Internet Protocol (TCP/IP), Z39.50, Open Access Initiative protocol for Metadata Harvesting (OAI-PMH). Therefore library itself being a digital network is integrated, connected or communicating with other larger Information Networks. Therefore many times librarians have to perform the responsibility of Network Managers.

Knowledge Manager: Due to the enhancement of the library services in the last few years librarians have expanded their area of expertise to provide digital information. The library professionals are the most appropriate persons for Knowledge Management of the supporting organization. Librarians can be the Knowledge Managers who can take the complete responsibility for imparting training for the organization creating contents, content delivery model and so on. The Knowledge Management refers to creating value to the firm by facilitating access to high quality information and by networking people and their ideas together using the technological infrastructure.

5. Need of LIS Professionals in the Digital Era

In the present digital environment job market requirements may be categorised according to the various types of the libraries and information centres like Academic Libraries, Special Libraries, Public libraries, Consultancy Organizations, Media Libraries, Libraries established in scientific organizations and industries etc. to meet their information needs.

Academic Libraries: Academic Libraries are categorised as School Libraries, College Libraries and University Libraries. The job market requirement in academic libraries for the LIS professionals necessarily includes computer literacy so that they can perform all the computer based operations independently. It also includes both theoretical as well as practical knowledge about different types of Library Automation Software packages like SOUL, LibSys, KOHA etc. In the University Libraries job market expectations include skills for digitalization of libraries, independently using various software packages related to digitalization and content management like D-Space, E-prints, Greenstone etc. In the university libraries the professionals should be independently able to search the information in networked digital environment.

The LIS professionals in University Libraries should have information literacy skills so that they can further transfer such types of skills to the library users. Information literacy is a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate and use effectively the desired information." Information literacy is

increasingly important in the contemporary digital environment due to rapid technological changes and proliferating information resources. Because of the escalating complexity in this environment, users are exposed to abundant and diverse information sources in academic studies, at their workplace and in their personal life.

In the earlier times, the university libraries were merely providing instructions for the effective use of the library. Afterwards Library orientation programs were introduced for the effective use of the library in which they orientate the library users about locating different library resources, use of catalogue or OPAC and different types of library services. In the Agricultural Universities of India, there is a provision for a regular compulsory course for the students related to the tools and techniques of information retrieval. It includes the methods of retrieving scientific information from various information resources in both electronic and print format available in the library.

University Libraries have designed specific kind of information literacy programmes to educate and orientate their users, so that they can recognize, locate, evaluate and effectively utilize the desired information. These types of programs may be in the form of instructions, lectures, demonstrations, audio visual material, multimedia contents, self-learning materials, web tutorials etc. Such materials may be made available for users by hosting on institutional websites. All these programs are required to be designed and developed to educate and orientate University Library readers. Modern ICT plays a pivotal role in such kind of user education programs.

The LIS professionals must be competent enough theoretically as well as practically in imparting information literacy skills. They should be knowledgeable in specific areas such as online digital resources, subject gateways, various types of search engines, search strategies needed for retrieving specific piece of information. They are further able to evaluate the currency, relevancy and authenticity of information retrieved. In addition to this the University Librarians, Deputy Librarians and Assistant Librarians must have enough managerial, administrative, technical and inter personal competencies.

Special Libraries: Special libraries are generally the subject specific libraries for fulfilling the information needs of parent organisations like ICAR, CSIR, DRDO, ICMR, AIIMS, ISRO etc. Their collection and services are basically focused on the specific subject areas in which the parent institution has specialised. Such Special Libraries perform the information analysis and consolidation work in particular subject areas and therefore sometimes referred as Information Analysis Centres. The job market expectations for such types of libraries include expertise in data mining, information consolidation and packaging, information marketing etc. These library and information centres sometimes act like a referral centres and clearing houses.

Public Libraries: Public Libraries are categorised as libraries meant for fulfilling the day to day information needs of general public. Public Libraries have been established in various states and union territories of India. These libraries function as information hub for the common people providing access to vast and varied information sources both print and electronic format. The special competencies required for handling such libraries include skills in handling software packages for digitalization of manuscripts etc., skills in preservation and conservation of old documents, skills in designing and hosting websites, designing different kinds of web forms, Bulletin boards, discussion forums and list servers, having the expertise in designing library maps and floor plans and skills in providing access

to digital and print sources of public interest. Modern public libraries provide real time digital reference service and act as virtual reference desk.

Library Networks: In India various library networks have been established time to time such as DELNET, CALIBNET, ADINET, INFLIBNET etc. In all these library and information networks the job market expectations from LIS professionals include expertise in database designing and management, content development using HTML, XML, expertise in different kinds of bibliographical data standards like CCF, MARC-21 etc. for bibliographical data management.

Media Libraries: The job market expectations in such type of libraries as one should have expertise in indexing and abstracting service manual as well as computerised indexing, CD-ROM, Web-based indexes and databases. In storage and retrieval of information, Manual as well as Digital reference service, Internet resources and their evaluation etc.

Libraries of Government Establishments: Libraries have been established in Ministries, Parliament, Central Sector Library, State Legislative Libraries, Planning Commission and PM office etc. The job market expectations for such type of libraries include expertise in providing computerised Current Awareness Service (CAS) and computerized Selective Dissemination of Information (SDI) service, provision of manual reference service and digital reference service, provision of Electronic Document Delivery Service, etc.

Libraries of International Organizations: Various Libraries and Information centres have been established in the International Organizations like UNESCO, WHO, UNO, World Bank, British Council etc. The job market expectations in these organizations include that one should have expertise in Digitalization of information resources, Internet Information resources, Evaluation of Internet Information resources, Digital reference service, Electronic Document Delivery Service, Content Development using HTML, XML, etc.

Libraries of Corporate Sector: Business Houses in Corporate Sector like Infosys, Reliance, Tata Consultancy Services etc. have also established Libraries and Information Centres. The job market expectations for such type organizations include that one should have expertise in information analysing and consolidation of information of corporate interest The information regarding market and products establishment of production units, the feasibility study including availability of raw material, manpower availability and inputs of surrounding environment etc.

Knowledge Organisations: The organisations exclusively devoted to knowledge management provide Abstracting & Indexing services in professional manner on commercial scale like Chemical Abstracts, Biological Abstracts, Index Medicus and CABi etc. The firms like Elsevier, Springer, Informatics etc. provide access to their huge online database archives with a user friendly search interface. The job market expectations include expertise in computerised analysis of contents and computerised preparation of abstracts while in indexing services one should have expertise in computerised analysis of contents and computerised preparation of indexes. As we know various databases provider firms are established as Informatics, Science Direct, and Springer etc. The job market expectations for these database provider firms as one should have expertise in compiling databases of different particular areas of specialization by using different types of library softwares, in addition to this they should have comprehensive knowledge about different kinds of subjects in which they are providing the databases and also have comprehensive knowledge about

Importing and exporting data and also transmission of data in CCF, MARC-21, etc formats.

Library and Information Science Schools: The job market expectations for these schools are as one should have ICT expertise and its applications in libraries and information centres, information literacy skills and competent in teaching research methodology. They should have background of research related to Library and Information Science.

Libraries of Academies: Libraries and Information Centres have been established in training centres or academies of banks like SBI, PNB, RBI, and academies of other administrative services like IAS, IPS, IFS, NDA academies of armed forces like IMA etc. The job requirements in these libraries include expertise in library automation, internet information resources, digital reference service etc.

Digital Library Projects: Various digital library projects are running all over the country, the job market expectations for such type of projects should be competency in handling software packages for digitalization like Green stone and D-Space, etc., competency in assigning appropriate keywords/Metadata to digitalized documents.

6. Job Market Expectations

It is apparent from above discussion that the job market expectations for LIS professionals in any type of library may be summarised as competencies in handling Integrated Library Management software (ILMS) packages, digitalization software packages. Institutional Digital Library (IDR), Content Management system (CMS) software. Expertise or competencies in imparting information literacy skills, searching specific information in networked and digital environment, expertise in information retrieval through various search engines, Subject Directories, Subject Gateways etc., expertise in Information Architecture evaluation and marketing, web designing and hosting, Information dissemination & communication, expertise in Copyright, Digital Rights and other licensing issue . He should have sufficient knowledge of vast information resources and services acting as a gateway to Information channels.

Librarians are working in complex networked digital environment which is continuously changing with the advancements ICT. Continuous learning is therefore pre requisite for LIS professionals to keep abreast of new tools & techniques and teaching skills are necessary for further transferring this knowledge to library users through Orientation Programs and User Education programs. Librarian has to face multifarious challenges dealing with top administrators of the organisation, technical experts, library staff, faculty, scientists, students and other users at another end. It requires besides professional and technical skills strong managerial and interpersonal skills along with the skills for written and verbal communication.

7. Conclusion

The libraries are basically fulfilling the information needs of their parent organisations. The libraries of most of these organisations are in the process of automation and digitization. Therefore the library systems of most of these organisations are of hybrid nature following traditional as well as modern ICT based technologies. It is hereby concluded that Library and Information Science professionals have great value for their libraries if they are equipped with new skills and competencies required to manage libraries of their respective organisation

in the contemporary digital environment. The new skills and competencies must commensurate with the job market expectations discussed. The present teaching and learning pattern of library and information science education needs to be overhauled in this context. LIS professionals of any type of library and information centres are working in a complex, networked digital environment. The skills and abilities needed to work in a complex digital library system require LIS professionals to be well versed with modern ICT based skills along with managerial skills, communication skills and leadership qualities. The changing user expectations organisational goals in the context of fast changing ICT have made the job of LIS professionals more challenging requires continuous learning and teaching. The vision, commitment and conviction amalgamated with the skills and competencies discussed helps to achieve the objectives of digital library in the stipulated period of time.

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