Information Technology Components in Library Information Science Curriculum

Jayanna R.

Project Assistant,   Mysore University Library, Mysore

Manjula K.

Assistant Librarian, Mysore University Graduate Library, Maharaja's College Campus, Mysore

Abstract:

The study intends to ponder over the impact made by the information technology in library and information science education .Precisely it attempts to find out the extent of IT content in LIS curriculum in Bachelor Degree and Master Degree programmes and the extent of training required for teachers to teach that content.

Key words: *Information technology, LIS curriculum*

Introduction:

The end of 20th Century has witnessed tremendous shift in the nature and function of the libraries and information centers worldwide. This is due to unimaginable progress in computing and telecommunications. Computers and optical storage devices have dramatically changed the way in which we can store, process and retrieve information. Television, fax, e-mail and networking allied with growth in telephone, cable and satellite links have even more drastically changed the way we access this information. Due to these developments, the delivery and management of information has entered a new era, which is characterized by a vast array of electronic information resources brought to information users by computer and telecommunication technology.

The paradigm shift in the fundamentals of the library and information science (LIS) profession poses great challenges to the professionals. To cope with these challenges, the future information professionals should be well qualified and equipped with optimal combination of knowledge and technical skills and attributes for survival in the new information society. The future information professionals should acquire expertise in management tools cataloguing, classification, thesaurus construction, research techniques, retrieval methods, presentation, quality control, searching the internet database and CD ROMs communication skills, writing and presentation skills, graphics, data analysis, business skills, financial planning , project management, public relations and marketing the human personnel skills, customer service techniques, the inside knowledge of organizational culture, strategy planning etc. Imparting all these subjects in the profession would redefine the curriculum and teaching methodology of LIS education.

The present age is therefore rightly called the age of Information Technology (IT), especially Information and Communication Technology (ICT). Recent developments in IT have revolutionized the whole world. No area of sphere is untouched from this miracle. It has also revolutionized the education systems. The entire process of teaching, learning and knowledge delivery has become somewhat easy or somewhat complex. The field of librarianship has also undergone sea change due to the application of IT. Technological change in libraries over the past few years resulted in some shift of responsibilities and roles of librarians.

Need for the Study

LIS schools in India are offering various courses at bachelor and master degree level, including doctoral programmes in library and information science. One can see a gradual evolutionary trend in these programmes in terms of curriculum, teaching and evaluation on tracing its historical development. The course contents have also been continuously updated noticing the changes in the library functions and services. Application of information technology to the library service has paved the way for introducing IT based curriculum for LIS courses.

Since the past two decades, information has become an indispensable commodity for technological growth and human development. Noticing this trend, library and information centers have started providing information service up to the expectations of the academicians, scientists, researchers and technocrats. In this venture of extending quality information service, libraries and information centers inevitably have to adopt information technology mainly to capture, analyze, preserve and disseminate information overcoming the time and distance barriers. Accessing information at any time, and from anywhere has become the essential needs of library users and the librarians as information gate keepers has to develop capabilities and skill to render the service.

Considering the above developments in the sphere of library and information science, of late, educational institutions and universities started giving prominence to LIS education. The purpose is to meet the need of technical human resource to establish and extend information services in libraries, by adopting digital technology. Development of library and information centers and LIS education is like two sides of a coin. Both of these consider the changing needs of the society and adapt Information Technology with the main intention of providing quality information services through the well trained professional staff with higher capability and performance. Need based quality education and training to handle information services, especially of the digital information services has become the purpose of LIS departments in the recent times.

LIS departments in universities are offering various courses at bachelor and master degree levels, including doctoral programmes in library and information science. The course contents and the topics in the syllabi have also been continuously up-dated noticing the trends and changes in the library functions and services. Application of information technology to the library services has paved the way for introducing IT based curriculum for LIS courses. Day-by-day, the percentage of IT components in the curriculum is increasing. This necessitates the up-dating of IT content in the curriculum of LIS education and the conduct of regular training/orientation courses for faculty. Thus, the present study is necessitated to address the questions like to what extent IT components have been incorporated in the curriculum of LIS programmes at different levels? Whether teachers required training to teach IT component and to what extent?

Objectives:

The present study aims to know the extent to which the Library and Information Science Schools have attempted to incorporate IT related issues in LIS education at different levels –Bachelors and Masters degree levels.

The specific objectives of the study are –
- ➢ To find out the extent of IT content in LIS curriculum in Bachelor Degree and Master Degree programmes.
- ➢ To find out the extent of up-to-date and need based IT curriculum and reasons for not

Up-to-dating IT components of the curriculum.

- ➢ To study whether library and information science teachers need training in handling IT related papers including practical sessions
- ➢ To study the extent of training needed for teachers to handle IT practical sessions

Sampling Details

Altogether, 96 LIS departments offering various courses in Library and Information Sciences were identified and the heads of these Departments (96) were considered as sample for getting responses on IT components in LIS curriculum. After repeated reminders and personal visits, the researcher has been able to get response through the questionnaires from 77 out of 96 LIS departments. Thus, the sample for the study consisted of 77 departments of LIS all over India.

Scope and Limitations:

The scope of the study was limited to the LIS departments of various universities in India which are offering bachelor and masters' programmes in Library and Information Science. The subject scope is restricted to the IT content in the LIS curriculum in the courses offered by LIS Schools at Bachelor and Master Degree levels.

Methodology:

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

In the second stage, the investigator prepared one questionnaire for heads of LIS departments offering LIS courses, to collect primary data about LIS curriculum, the IT content therein and training requirement for teachers. This questionnaire was distributed to the heads of departments and got the responses. Along with the responses from the heads of the departments, copies of the latest curricula were also obtained from all these departments to know the details of IT related papers, as well as, traditional papers offered for BLISc and MLISc.programmes. The data collected like this were analyzed and interpreted in the light of the objectives stated. After the completion of the analysis, the finding were drawn and presented here in this paper.

Findings of the Study

1. *Extent of IT content in LIS curriculum in Bachelor Degree and Master Degree programmes.*

Analysis of the curricula of BLISc and MLISc. Programmes from 77 departments revealed the following points;

BLISc Level: Only fundamental papers of LIS were emphasized. Not much on IT aspect on Information Technology is being offered in both theory and practicals. However, certain fundamental aspects of IT applications (theoretical only) have been included in the two papers,

- Information Systems and Services in only 12 departments (30.77%)
- Information Retrieval System in only 7 departments (17.95%)
- In other departments, certain fundamental aspects of IT are included in the paper dealing with "Indexing and Abstracting Services" (IRS).

As the knowledge is constantly growing in LIS field, it is necessary to include and educate the students with all the fundamental aspects of the subjects   within a span of 10 to 11 months.   Therefore, inclusion of exclusive IT paper becomes a new addition and there will be lack of time to cover such of these additional papers. Hence, at the bachelor degree level, IT related aspects are not being taught as exclusive papers, but some of the IT related aspects are included as topics within traditional papers.

MLISc. (1 Year) Level: Taking into consideration the exposure of students to the traditional papers or fundamental aspects of LIS at bachelor's degree level, advanced IT papers are offered for MLISc course. Here, few papers deal with IT applications in library and information services, such as "Information Retrieval System", "Marketing Information Products and Services" and "Advanced Cataloguing". Among elective papers, only few LIS departments offer IT related papers, such as Application of Information Technology, Networking, Internet Search Strategies, Multimedia Applications, and Marketing of Information Products and Services.   Only 3 departments out of 39 offer exclusive elective paper concerned mainly with IT. The rest of the departments have included few of the IT related topics in their elective papers.

MLISc. (2 Years) Level: Out of 77, 10-30% of the departments offer IT related papers such as Information Systems and Services, Information Retrieval System and Marketing of Information Products and Services.   However, these LIS departments offer elective papers which are mainly IT based papers. Only 20% of the elective papers deal directly with Information Technology aspects. It is also pertinent to note that 24 LIS departments, representing 63.16% offer IT related papers as their elective papers. Therefore, it is clear that a great majority of the LIS departments offer at least one exclusive IT based elective paper for MLISc course.

Further, it is found that 6 common IT related papers indicated as essential areas in which practical exposure and training is needed for students to be considered as candidates with employable ICT skills are being offered at BLISc and MLISc. Levels and the details are given in the following table 1.

Table 1: Percentage of LIS departments offering common IT related papers

SL no	Essential IT related papers	MLISc (1 year)	%	MLISc (2year)	%	BLISc (1year)	%
1	Basic Computer Applications	08	21.62	**29**	76.32	31	79.49
2	Advanced ICT for LS	29	78.38	27	71.05	07	17.95
3	Library Automation	04	10.81	13	34.21	03	7.69
4	Internet and Web Resources	02	5.41	06	15.79	00	00
5	Web Design and E-publishing	01	2.70	08	21.05	00	00
6	Digital Library System	00	00	06	15.79	00	00

A great majority of the departments representing 79.49% offer the paper, Basic Computer Applications for BLISc course.   For one year MLISc course, 78.38% of the departments offer Advanced   ICT for Library Services and 21.62% offer Basic Computer Applications taking into consideration the students who are from arts background will not be having any exposure to computer skills.   Further, for two year MLISc course 76.32% of the departments offers Basic Computer Applications with the same intention. However, 71.05% of the departments have included Advanced ICT for library services in their curriculum. It is also clear that 34.21% of the departments and 21.05% of the departments offer as per their syllabi the papers, Library Automation and Web Design / E. Publishing, respectively for 2 year MLISc course.

With this, it is clear that for BLISc course departments offer Basic Computer Application and for MLISc courses there are exclusive papers that deal with IT aspects covering the needs of IT wing of the modern technical libraries.

In the case of master degree programme of two year duration, there are relevant IT related papers such as, Application of Information Technology to LIS, Internet Technology and Web Resources, Networking and Data Communication, Marketing of Information product and Services, and Digital Library System. These papers will make the students study in depth, the IT aspects that are expected while discharging the duties or handling the services in the IT wing of modern libraries.

Among the electives papers offered for master degree programme, it is pertinent to note that 24 LIS departments offer IT related papers like Information Technology for LIS, Digital Library System, Web-design and   Electronic Publishing, Information Search Strategies, Networking and Multimedia Application. The percentage of departments offering IT related papers account for 63.16%.

2. *Extent of up-to-date and need based IT curriculum :*

Table2: Response relating to the extent of up-to-datedness of IT based curriculum

SL.NO	Extent	No of Depts.	Percentage
1	>75 percent	41	53.24
2	51-75 percent	28	36.36
3	26-50 percent	08	10.38
4	<25 percent	00	00
	Total	**77**	**100.0**

Responses regarding the extent of up-to-date and need based IT components in the curriculum (table 2) indicated that the IT components included in the LIS curricula of about 50% of the departments up-to-date and need based to the extent of greater than 75%. Whereas it needs to be up-dated to a moderate / greater extent in nearly 50% of the departments.

In respect of the relevancy of curriculum to practical situation in libraries, it is encouraging to note that 89.3% of the respondents have given positive response. The LIS syllabus being taught at the universities really has relevancy to the practical or professional work in libraries. Only 15 respondents representing 10.7% opined that there is no relevancy between what is being taught in LIS departments to what is being practiced in the libraries.

3. ***Reasons for not up-dating, IT components in the LIS curriculum:***

Table 3: Reason for not up-dating IT components of the curriculum

Sl. No.	Reasons Response>>	Highly		Moderately		Slightly	
		No.	%	No.	%	No.	%
1	Lack of competency among students	9	11.7	62	80.5	6	7.8
2	Lack of interest among teachers	8	10.4	60	77.9	9	11.7
3	Lack of competency among teachers in IT field	3	3.9	58	75.3	16	20.8
4	Lack of needed infrastructure and budget	20	26.0	47	61.0	10	13.0
5	Authorities assign lower priority	22	28.6	47	61.0	8	10.4

In Table 3, the reasons for not up-dating the IT components in LIS curricula are listed in the descending order of their extent. Majority of the department heads have expressed that all the five reasons are found to be contributing factors to the moderate extent for not up-dating the IT components in LIS curricula.

4. ***Training requirements of teachers:***

Table 4: Training requirements of teachers handling IT related Papers, including practical sessions

SL.NO	Response	No of Depts.	Percentage
1	Yes ,training is required	63	81.8
2	No, training is not required	14	18.2
	Total	**77**	**100.0**

More than 80% of department heads have opined that training is required for teachers to handle IT related papers. According to them, training has to be given to the teachers in order to handle practical sessions effectively. The teachers have to get up-dated in the subject covering the recent advances. Only 14 (18.2%) Heads of the Departments have expressed that no training is required to their teachers; they are up-to-date and good in handling IT papers. It can be inferred here that the need of training is expressed in majority of the departments.

5. **Extent of training needed for teachers to handle IT practical sessions**

Table 5: Extent of training needed for teachers to handle IT practical sessions

SL.No	Extent of Training	No of Dept.Heads	Percentage
1	Intensive	22	34.9
2	Moderate	32	50.8
3	Little	09	14.3
	Total	**63**	**100.0**

Table-5 depicts the extent of training needed by the faculty to handle IT practical sessions. It is clear from the table that 34.9% of the staff working in the departments needs intensive training. Further, 50.8% of the Head's of the Departments feel that their faculty members need training to a moderate extent, whereas only 14.3% of the Heads of the Departments feel that their faculty members need training to a little extent. However, it is clear now that a great majority of the LIS teachers need training either to a moderate or higher extent. The percentage of teachers who really need training account for 81.8%. It is further elicited from majority of department heads that regular training programmes or workshops be organized for teachers in the area of 1) IT application to LIS 2) Use of automation software 3) Database management (RDBMS / Oracle)

4) Web design and E-publishing 138 5) Access to E-journals and digital libraries 6) Creation of blogs and 7) The basics of hardware and networking/ system security.

Conclusion:

Basically, it is the faculty who deliver quality education and training in LIS departments. The knowledge and skills of teachers, comprehensiveness of the subject covered, interaction with students, regularity in teaching, systematic presentation of the subject contents, communication skill, including the method followed and teaching aids used are the criteria which determine the quality of teaching. Therefore, it is

recommended to organize training programmes or workshops of 4 week duration on the IT related areas of LIS. The UGC, Academic Staff Colleges, individual universities, and professional associations may organize such of these training programmes periodically noticing the need and the specific areas of IT applications. It is also desired to obtain feed-back from the faculty trainees for evaluation of the effectiveness and usefulness of training and to apply corrective measures, if there are any deviations and lapses. Now-a-days, institutions are expected to adopt quality procedures and standards, by undergoing quality assessment, periodically.   From the ultimate analysis, the LIS departments are expected to create "customer delight"- going beyond the expectations of the LIS students and parents (stake holders) and create delight among the customers.

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