

Health Science Information System in the Curriculum in LIS Schools in North Indian Universities

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ABSTRACT

Information has gained importance in every sector of societies and health sector is not an exception. Health science professionals need information for conducting their activities related to human care, academic and research pursuits, thus providing library and information support to the health professionals has gained importance. Different health science information systems are associated with health-related institutions like medical colleges, hospitals etc. For managing these information systems on professional and scientific lines, library professionals play an important role. Realising the importance of LIS professionals in health sector, departments of library and information science have introduced different specialised papers. Health science information system is one such specialisation introduced in the library and information science discipline with the aim to produce competent professionals with sufficient skills, knowledge and attitude for managing the libraries and information systems in the health sector. The different components of the curriculum of health science information system is the focus of the present paper. Challenges posed to health science information professionals by the changing information landscape are also highlighted.

Keywords: Health science, library and information science, curriculum, information technology, competencies

1. INTRODUCTION

The institution known as library is very old, as old as our modern civilization and its history is interwoven with the history of civilizations itself. Yet its nature, scope, operations and services have not always been what they are today. It began as a repository to conserve what was recorded in a format called clay tablet. These formats changed from time to time with the development of other formats settling finally with print on paper as book and later journals, patents, etc. were added. Of late digital and cyber-media is almost replacing print media in publishing books, journals and others. Libraries as social institutions have been serving end users by identifying, selecting, acquiring, organising, preserving and disseminating of information. In the past libraries were regarded as store houses and custodial houses for the documents focusing more on preservation of document than use of document. Ranganathan labelled these ancient libraries as concentration camps for the documents¹. However, with advances in educational, political, economic, technological, social, commercial and like other sectors of the societies, information gained importance and is regarded as fuel in the overall

progress and prosperity of the societies. Information and knowledge are now regarded as power that can have its effects on the economics, politics and like other sectors of the societies. Libraries thus gained importance and were established in different sectors of the societies. With the passage of time, it was realised that a single library cannot fulfil the information needs and requirements of the all the people, thus different types of libraries came up with the following nomenclatures:

- Academic libraries
- Public libraries
- National libraries, and
- Special libraries

Developments in the universe of knowledge have gradually affected different facets of libraries. Organisation of resources, operations and services provided by libraries began to grow complex. With the increasing complexity of different facets of libraries and information centres, the need for competent and capable professionals was felt by the authorities of these libraries, thus emerged the concept of establishing library and information

schools for generating human resources equipped with appropriate knowledge and skills necessary for managing the libraries and information centres. LIS schools started imparting different courses in the discipline of library and information science. Some of the courses are:

(a) Bachelor of Library and Information Science (BLIS)

This is a one-year degree course conducted by universities after students graduate with a basic degree. However, in some colleges, LIS is offered as an optional subject at the Bachelor of Arts level. For this, the students opt for LIS as one of the optional papers, along with other optional papers in social sciences or the humanities.

(b) Master of Library and Information Science (MLIS)

It is a post-graduate course offered after BLIS with duration of one year. However, many of the universities, which were initially offering BLIS and MLIS truncated courses, have now switched over to a two-year integrated MLISc course.

(c) Postgraduate (PG) Diploma Course

PG courses in some selected LIS areas of specialization are offered at the university level as a one-year course, e.g., PGDLAN and PGDM offered by IGNOU and BHU, respectively.

(d) Associateship in Information Science

Since 1964, the Indian National Scientific Documentation Centre (INSDOC now NISCAIR) New Delhi is offering Associateship in Information Science (AIS).

(e) MPhil Programme

This programme is offered with the intention of developing research oriented personalities.

(f) PhD Programme

This is an advanced level research programme being offered after the completion of MLIS or MPhil degree in library science. The general qualification for admission is MLIS.

2. SPECIALISATION IN LIS SCHOOLS

To produce skilled manpower for the libraries and information centers, concept of specialisation is now in vogue in the discipline of LIS. In India University Grants Commission (UGC) is taking care of higher education including the discipline of LIS. Authorities at UGC² have published a Model Curriculum in LIS in 2012. In this model curriculum, the concept of specialised information systems has been introduced as one module among the

seven modules. Some of the specialised information systems as enumerated by UGC model curriculum published in 2001 are:

- Health information system
- Business information system
- Agricultural information system
- Social science information system
- Environmental information system
- Legal information system
- Industrial information system
- Archival, museum information system
- Biotechnology information system
- Rural information system

The general objectives of these specialised information systems are to:

- Understand the structure and development of the subject/discipline.
- Prepare specialised professional manpower in the subject/discipline for handling information related activities.
- Provide in-depth knowledge and specialised skills in handling documentary and non-documentary sources in specific field of knowledge.
- Enable the students to design and develop information system in new/emerging areas/disciplines
- Explore feasibility of application of information technology and related aspects in their implementation.

3. HEALTH SCIENCE INFORMATION SYSTEM

Health-related information has gained importance in the contemporary world for enhancing and improving the health conditions of the human population. Lack of access to information remains a major barrier to knowledge-based healthcare. The development of authoritative, reliable, relevant, accurate, up to date and timely information can be represented as a system that requires cooperation among a wide range of professionals including healthcare providers, policy makers, researchers, publishers, information professionals, indexers, and systematic reviewers³.

Healthy societies depend upon so many factors like availability of infrastructure in the health-related institutions like hospitals, competent and capable medical professionals and paraprofessionals, etc. Availability and accessibility to authoritative, reliable, relevant, accurate, up-to-date and timely information is playing a very important role in enhancing the

quality of care in any society. People involved in the health sciences like doctors, nurses, technicians; pharmacists etc. all are in need of information at every stage of their activities in order to perform their jobs efficiently. Realising the importance of information in the health sector, different libraries and information centers has been set up, in order to ensure right information to the right person at the right time. Thus, Health Science Information System (HIS) has gained importance in the present information landscape. The HIS can be defined as “a set of components and procedures organised with the objective of generating information which will improve healthcare management decisions at all levels of the health system”⁴. However, functioning of HIS upon the library and information professionals working in these places.

4. OBJECTIVES OF THE STUDY

Present study is carried out with the following objectives:

- To know the response of LIS schools towards HIS
- To know the contents of the HIS being taught in LIS schools
- To suggest some measures for improving the quality of HIS in LIS Education.

5. SCOPE OF THE STUDY

Scope of the present study is limited to the LIS schools situated in Northern India. There are about 24 LIS schools in Northern India offering different courses in LIS.

6. METHODOLOGY ADOPTED

In order to achieve the objectives of the study multi-pronged methodology has been applied. To know the inclusion of different facets of health

Table 1. LIS departments with health information system

S. No.	Name of institution	Health information system adopted	
		Yes	No
1.	University of Kashmir	√	
2.	Jammu University	√	
3.	Guru Nank Dev University		√
4.	Punjab University	√	
5.	Punjabi University		√
6.	Kurukshetra University	√	
7.	Delhi University	√	
8.	Aligarh Muslim University	√	
9.	Lucknow University		√
10.	Banaras Hindu University		√
11.	IGNOU		√
12.	NISCAIR		√
13.	BBAU Central University	√	
14.	Jammia Millia Islamia		√
Total		7	

information system in the curriculum of LIS schools a questionnaire was framed and distributed among the LIS schools in Northern India. Besides questionnaire, contents of the curriculum adopted by these LIS schools have been analysed in order to achieve the objectives.

7. DATA ANALYSIS AND DISCUSSIONS

Questionnaires were distributed among all the 24 LIS departments in Northern India. However, only 14 LIS departments responded. Thus the response rate is 58.33 %. Data collected from the LIS departments in Northern India reveals that there are seven departments that have included Health HIS in their curriculum (Table 1).

Table 2. Major components of HIS curriculum

S. No.	Curriculum content	Kashmir University	Jammu University	Punjab University	Kurukshetra University	Delhi University	Aligarh muslim University	BBAU central University	Total
1.	Health Sciences: Concept, Scope and Development	√	√	√	√	√	√	√	7
2.	Health Information organisations: National and International	√	√	√	√	√	√	√	7
3.	Health Information Resources	√	√	√	√	√	√	√	7
4.	Information Vocabulary Control Tools	√	x	√	√	√	√	√	6
5.	Health Information Systems	√	√	√	√	√	√	√	7
6.	National and International Library and Information Support to	√	√	√	√	√	x	√	7
7.	Management of Health Information System	√	√	√	√	√	√	√	7

7.1 Findings

Major components of the health Information System as enumerated in the curriculum varies from department to department as is evident from Table 2. From the Table 2, it is evident that there are seven broad topics included in the curriculum. Taking different contents of these major topics into consideration (Table 3), following observations are evident:

(a) Health sciences—Concept, scope and development

Almost all the departmental curriculum has highlighted the concept and growth of health science in world in general and India in particular. However, one department (Delhi University) has included national policies in health and family welfare in its curriculum.

(b) Health-related organisations

Many governments and non-governmental agencies are involved in health-related activities and are generating tremendous amount of information in health sector, in India and outside. Some of them are:

- Indian Council of Medical Research (ICMR)
- Medical Council of India (MCI)
- Tata Memorial Centre (TMC)
- Health Information Systems (HIS), USA
- American Health Net (AHN)
- UK Council of Health Informatics Professions

- Council on Health Research for Development (COHRED), Switzerland
- National Institute of Health (NIH), US.

(c) Health information resources

Some of the categories of information sources enumerated in the curriculum are:

- Primary sources of information
- Secondary sources of information
- Electronic and internet-based resources of information.

(d) Information vocabulary control tools

Some of the tools included in the curriculum are:

- MeSH (Medical Subject Heading)
- HIDDEL (by MEDCIRCLE)
- Meta thesaurus (by NLM)

(e) Health science information systems

A number of information system both discipline oriented as well as mission oriented have come into existence at national and global level. In health sector also a number of such information systems are existing. To give exposure to students about different health related information systems, LIS schools under the scope of the present study have included following information systems in the curriculum:

- Medline
- WHOSIS
- Entrez
- Brenda

Table 3. Curriculum content

Contents	Kashmir University	Jammu University	Punjab University	Kurukshetra University	Delhi University	Aligarh Muslim University	BBAU Central University	Total
Health Science Libraries and their Development	√	√	√	√	√	√	√	7
Information Policies in Health and Family Welfare	x	x	x	x	√	x	x	1
National Promoters	√	√	√	√	√	√	√	7
Library Organisation	x	x	x	x	√	√	x	2
Collection Management	x	√	√	x	√	√	√	5
Financial Management	x	x	x	x	√	√	x	2
Service Management	x	x	√	√	√	√	√	5
Human Resource Management	x	x	x	x	√	√	√	3
Information Seeking Behavior of Health Science Professionals	√	√	√	√	x	x	x	4
Information Technology Application in Health Science Libraries	√	√	√	√	√	√	√	7
Health Science Information System	√	√	√	x	x	x	√	4
Internet as a Source of Information	√	√	√	√	√	√	√	7
Resource Sharing and Networking	x	x	x	√	√	√	√	4

(f) Library support to health science

In health sector there exist a number of libraries wholly and solely devoted to the acquisition, processing, preservation and dissemination of health related information. These libraries are not only in India but also in other countries of the world. In order to provide sufficient knowledge to the students about these different libraries, LIS curriculum has included following libraries:

- National Library of Medicine (USA)
- National Medical Library (New Delhi)
- WHO Library

(g) Management of health information system

The curriculum included the following library management components:

- Collection Development and Management' adopted by five departments
- 'Financial Management' adopted by only two departments
- 'Human Resource Management' included by three departments
- 'Service Management' included by five departments
- 'Library Organisation' accommodated by only two departments.
- 'Resource Sharing and Networking' adopted by four departments.

7.2 Discussions

It is evident from the findings that curriculum adopted by LIS schools is intended to produce professionals with sound and sufficient competencies so that they can play a very important role in the management and handling of resources and services in the HIS. Competencies regarding collection management, service management, financial management, human resource management, knowledge about different categories of information sources, knowledge of leading libraries in the health sector both at national and global level are the foundations for providing effective and efficient information to the consumers of health information.

Curriculum adopted by these LIS departments is not homogeneous and there are clear differences in the curriculum content. Prevailing curriculum in the LIS schools have not introduced the latest technological aspect like Web 2.0. Social networking tools which can be exploited by the health science information professionals for keeping their clientele up-to-date and well aware about the latest information generated

in the health sciences. Web 2.0, with its flexibility, low cost and potential for collaboration and sharing would seem to offer ideal opportunities to enhance the provision of information to healthcare deliverers and recipients alike. Technologies are changing with fast pace and librarians, information professionals are supposed to keep track with these developments. Library and information professionals are having this responsibility to make their users acquainted with these new technologies through information literacy programs. How to conduct these information literacy programmes must be known to the library and information professionals. Thus information literacy should be given enough space in the health science curriculum by concerned authorities. It is also suggested that advanced training in health librarianship is to be introduced in all the universities in LIS curriculum as an optional course to cater and strengthen the specialised discipline.

8. CONCLUSIONS

Health information system has been recognised an essential component in providing quality health care services in a society. Managing these HIS is the responsibility of the professionals who deal with different aspects of information. The LIS schools are having responsibility to revise the HIS curriculum regularly to delete obsolete topics and accommodate the most relevant emerging topics. While framing the curriculum, expert advice from the real practitioners (Health Science information professionals) should also be given due consideration. Developments taking place in the health science information at the global level may also be tracked and the positive points if any should be accommodated accordingly in the curriculum. It is because pass outs from the LIS departments are supposed to face challenges in the wake of emerging technologies and other factors not at the national level but also at the global level.

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