

TECHNOLOGY IMPACT ON INNOVATION AND TRANSFORMATION OF LIBRARY & INFORMATION SCIENCE EDUCATION AND ITS NOMENCLATURE

Dr. Joginder Singh
Sr. Assistant Librarian
University of Jammu

Abstract: *This article explores the impact of technology on innovation and transformation of LIS education and changing in nomenclature of the discipline 'Library science' to 'Library and Information Science'. This article discusses not only the changes in the discipline of 'Librarianship' but also focuses on changes in the paradigm shift of Library education from library contents to information contents. All over the world there are many differences on the renaming of Library schools. Most of LIS teachers at Northern Indian Universities and Institutes suggesting the nomenclature of 'Library and Information Science' as recommended by the Curriculum Development Committee 2001 of University Grant Commission. The renaming of Library education up to 1980 totally changed from 'Library' to 'Library and information Science' or 'Information and library'. The IFLA (International Federation of Library Associations and Institutions) conducted a global study in 1991 on the image and status of librarians. The study concluded that 82% of the survey respondents were convinced that the librarian's profession suffered from low status.*

Index Terms - Library and information science education, Innovation of LIS education, Library and Information Science Nomenclature, Renaming of Library Schools and Transformation of LIS education.

1. INTRODUCTION

In the 21st century knowledge has been recognized as the key driving force and LIS education underwent vast changes due to social, economic, and technological advancement and impact of this technology has made substantial role on innovation and transformation of Library and Information Science education and its nomenclature. The advent of Internet and Information Communication Technology stepped up flows of digital information and practice of library services in digital environment. According to Missingham (1999) the approach of the new millennium indicated that it would be the age of 'wired' citizens and workers where all trends aim at the expansion of bibliographic services, licensing and consortia agreement, delivery of information to scientists' desktops, full-text electronic publishing and linking from databases and library catalogues. "Technological innovations in LIS began with the adoption of 'mechanization' in indexing and information retrieval techniques. Today it has entered into the era of 'virtual library' using digital technology. In the process of these contemporary changes are incorporated into the educational curriculum and course contents. The LIS professional has a greater role to play in content management in the IT environment. Bill Gates had identified the Computer, communication and content as ruling the information technology era" (Asundi & Karisiddappa, 2004). Earlier LIS schools produced qualified library staff to perform duties assignment to them, whereas the new approach required LIS professionals to educate learners in techniques of librarianship and becoming accomplished practitioners. As education in general and training of library personnel in particular are at a turning point, library education needs to be oriented towards a rapidly changing

society. Presently professional education of library personnel towards achievement of the highest wisdom in promoting utilization of modern techniques and knowledge for the benefit of mankind is a major concern (Bhargava, 1988: 65). Kathleen (1988) argues that rapid change in library and information science caused educators to propose significant revision to course content and program directions so significant that some LIS schools are introducing new degrees and changing their names.

2. REVIEW OF LITERATURE

Studies on transformation of Library and Information Science education and changing in renaming of the discipline 'Library science' have been conducted to examine it from various perspectives of education. Technology is a major aspect that directly impacted upon the LIS education and its nomenclature. The literature review covers all aspects of this paper as follows:

All these innovations impacted upon library services making modern libraries completely different from traditional libraries in all spheres of their functioning. Similarly information needs and information seeking behavior changed rapidly in the electronic environment (Mahapatra, 2006).

Revolutionary changes the world over affected the IT sector and LIS education along with its curriculum. The advances in information handling tools demand newer roles of a librarian. The renewed challenge for LIS schools is to revamp their facilities and course curricula to transform themselves into institutions that educate and train professionals competent enough to create a stir in the market. They can substantially contribute to the management of knowledge intensive work, knowledge based services, dissemination of information and creating a niche for themselves and their services (Malhan, 2009: 57).

Anderson (2004) discussed that the libraries all over the globe are now responding with adaptability, creativity and flexibility. Indian librarians of today serve in a society which is actually in flux. Librarians and information professionals in India are now experiencing both excitement and anxiety as a result of the sweeping societal changes.

The advent of ICT and Computer Science brought metamorphic changes in information products, information seeking behaviour of users, and overall information organization. ICT introduced new structures and mechanisms to organizing and making information efficiently and instantly available to users. This is aided by a variety of technological inputs like Hypertext, Multimedia, virtual reality etc. The internet has made it possible to communicate and share large volumes of information across the world, in minimal time (Mahapatra, 2006: 1).

3. OBJECTIVES

The main objective of this article is to examine the impact of technology on innovation and transformation of LIS education and its nomenclature. Some of the objectives of this paper are mentioned below:

- (i) To find out the trends in LIS education responsible for changes in LIS education.
- (ii) To identify the existing factors responsible for renaming the discipline of 'library and information science'.
- (iii) To study and review the literature related to impact of technology on innovation and transformation of LIS education and changes in nomenclature of LIS education.
- (iv) To identify the nomenclature recommended by the LIS teachers at North Indian Universities.
- (v) To identify the factors responsible for changes the nomenclature of the 'Library Science' to 'Library and Information Science'.

4. METHODOLOGY

This study includes an assessment of the review of literature related to impact of technology on LIS Education and nomenclature used for LIS discipline. The data was collected from 28 LIS schools from seven states such as Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh and Rajasthan

and two Union territories (Delhi and Chandigarh) of Northern India to know the view points and recommendations of teachers and students regarding renaming adopted for LIS programme at LIS Schools.

5. FINDINGS AND DISCUSSION

5.1 Renaming of “Library and Information Science School” should be as “Knowledge Science School”

In the 1970s Library Science changed its nomenclature ‘library’ to ‘information’. The professional status and education programme received global attention because of internationalization of information (UGC Model Curriculum, 2001: 76, 78). Saracevic (1999) is among the researchers who believed in isolation of information science from librarianship. Traditionally the profession of Library was known as Librarianship but IT and Management have made a major impact on the development of the LIS as a discipline and its changed nomenclature. The nomenclature of LIS education is directly affected by the discipline of Information Technology. Library science was traditionally placed under Social Sciences, but presently it is included in the pure sciences, Arts, Humanities and Social Sciences etc. According to Durrance (2004) the renaming of Library education up to 1980 totally changed from ‘Library’ to ‘Library and information Science’ or ‘Information and library’. Syracuse University was the first ‘information school’ by not only including information in the nomenclature of the LIS education, but also becoming the first school to drop the name ‘library’ entirely from its nomenclature of the course (Roknuzzaman, 2012). Galvin (1995) pointed out the issue of ‘the L word’ is one further status issue peculiar to the information field. In 1991, the International Federation of Library Associations and Institutions (IFLA) conducted a global study on the image and status of librarians. The study included an ongoing review of accessible literature, analysis of existing data and surveys conducted among members of library associations all over the world. The study found that 82% of the survey respondents were convinced that the librarian’s profession suffered from low status. It also showed that 74% of the respondents believed in the correlation between the type of the library the practitioner was working in and the social status the practitioner enjoyed. Finally, it was concluded that a new title should be given to the profession to give it a facelift and librarianship does not solve the problem completely (Prins & De Gier, 1992). There was a gradual shift in emphasis from “libraries and librarianship” to “information” (Bell, 2002). According to Alimohammadi and Sajjadi (2007) more than 98.5% of library schools in Canada, the USA, and the UK have changed their names, and that less than 45% have changed completely their titles from the traditional forms, e.g., librarianship, library science, and library studies, to the newer ones. The USA uses ‘Library and Information Science’ or ‘Information Science and Library’ nomenclature. Library and Information Science developed into a full fledged profession developing with its fundamental theories, philosophies and practices. These basic aspects achieve the goal to provide ‘right information, to right user, at right time, in right form’ through these technological tools. Purely as a Management subject, Library science is concerned with how knowledge is represented, stored through technology, how it automatically processes through artificial intelligence, and how it is organized outside the library in the globally spread system through internet. Some scholars also favour the designation of Librarian to Information Manager. Alimohammadi (2007) in his study presented some of the names of the library schools in the USA are: Library and information science/s (19); Library and Information studies (11); Information (5); Information Studies (5); Information and Library Science (3); Information Sciences (3); Communication, Information and Library Studies (1); Informatics (1); Information and Computer Sciences (1); Information and Media Studies (1); Information Management (1); Information Resources and Library Science (1); Information Science and Learning Technologies (1); Library and Information Management (1); Library Science (1). But in the UK, full time undergraduate courses in Librarianship, have decreased with only four, graduate and 16 masters level programme with four programme having ‘Library’ as part of their title. According to Alimohammadi (2007) names used for Library schools in the UK are: Information studies (3); Information Management (2); Information Science (2); Business Information (1); Computer and Information Sciences (1); Computing (1); Information and Library Management (1); Information and Communication Studies (1); Information and Communications (1); Information and Media (1). Ebrami also proposed the idea of “knowledge science” for the first time in his book, ‘Understanding Knowledge Science’. He provided a well-

structured and detailed discussion about the history and function of the library as the repository of human knowledge and as a communication tool. He argued that “library and information sciences” should be renamed as “knowledge science”, because librarians are in fact manipulating knowledge which is the concomitant product of information processing in the form of information careers/containers, and not just information (Ebrami, 1977).

5.2 Changed the Names of LIS Schools but Unchanged Course Components

Most Indian Universities and institutions have changed the names of their Library Schools to ‘Library and Information Science’ without giving adequate representation to infrastructure facilities and information science contents in LIS courses run by these LIS Schools. Library school’s course descriptions and course titles of LIS education do not necessarily reflect much of what happens in a course. While most courses were designated as Library and Information Science, there is little or no components of information science in these LIS programme. The course contents are also not reflecting anything of the emerging employment opportunities in the corporate sector. The emerging themes, such as information literacy, knowledge management, e-learning, ICT applications, use of networks have not been adequately integrated in the LIS curricula. In fact there is lack of consistency between LIS education and Practice Industry (Singh & Wijetunge, 2006). Students responses taken from North Indian Universities summarizes in Table 1 shows that LIS course name is matching with the course contents taught in the respective LIS School. Mostly 65.2% of the students states that LIS course name is matching with the course contents taught in the LIS Schools, whereas 33.4% respondents have different opinion regarding nomenclature matching with the LIS course contents taught in their respective department.

Table 1: LIS course name’s matching with the contents taught in the LIS Schools

Is LIS course name matching with the contents taught in the LIS Schools?	Frequency	Percent
No	334	33.4
Yes	652	65.2
Didn’t respond	14	1.4
Total	1,000	100.0

Result shows that majority of the respondents opined that LIS course name is matching with the course contents taught in the LIS Schools.

5.3 Nomenclature used for LIS Schools at North Indian Universities and Institutions

India has till now used Library Science or Library and Information Sciences as the subject titles. According to Alimohammadi (2007) names used for Library schools in India out of a total 75 schools there were Library and Information Science (60); Library Science (8); Information Science (4); Computer and Information Sciences (1); Documentation and Information Science (1); Library Automation and Networking (1). The renaming from library science to information management is still a controversial problem (Chu, 2001). Meng's view is that, compared with those in the West, Indeed, “some schools have not changed their educational objectives and curriculum systems, but are eager to change their names. The point is that not all library schools are prepared to change into information management. Libraries need LIS education, and LIS education should train professionals for libraries and information centers because many schools of former library and information science dropped the term “library” from their titles. We must find a good solution on how to change while keeping library science education alive. Some schools have not changed their educational objectives and curriculum systems, but are eager to change their names”. Yu Vingdi, a former director of a university library, also shocked by the overnight renaming LIS education (Yu and Chu, 1998). Lin (2007) discussed current status of LIS development in East Asian countries of Taiwan, Korea, and Japan. Here the

library and Information Science (LIS) development in East Asian countries had been through stages of Library Science, Library and Information Sciences (Studies), Information and Library Sciences (Studies), Information and Communications. Currently, School of Information is a trendy title. Out of 28 LIS Schools in North India, 85.7% or a majority has been named as Department of Library and Information Science to their LIS School. Whereas, 3.6% each has been named separately as School of Social Sciences, LIS Programs (IGNOU), Dr. S.R. Ranganathan Institute of Library and Information Science (Bundelkhand University), Dr. Zakir Hussain Library, Department of Library & Information Science (Jamia Milia Islamia University), Department of Information Science (Kumaun University Nanital), and Education and Training Division (NISCAIR).

Table 2: Name of the LIS School

Name of the LIS School	No. of LIS Schools	Percentage
Department of Library and Information Science	24	85.7
School of Social Sciences, LIS Programs	1	3.6
Dr.S.R. Ranganathan Institute of Library and Information Science	1	3.6
Dr. Zakir Hussain Library, Department of Lib. & Inf. Sc.	1	3.6
Department of Information Science	1	3.6
Education and Training Division	1	3.6
Total	28	100.0

Result shows that majority of LIS Schools are following the nomenclature 'Library and Information Science' for LIS Schools at Northern Indian Universities and institutions. But Table 2 also shows, almost all the LIS Schools adopted the single nomenclature 'Library and Information Science' instead of 'Librarianship' or 'Library Science'.

5.4 Nomenclature Recommended for LIS Education

At Northern Indian Universities LIS course in its initial stage was called the Librarianship, but later on after Independence most LIS schools in North Indian Universities were called 'Library and Information Science' or 'Information Science'. The data analysis as shown in Table 3 shows that 54.5% were in favour to change LIS nomenclature and whereas 43.1% were not in favour to change LIS name and rest of 2.4% did not respond to this question.

Table 3: Change of Nomenclature of LIS education (Students Responses)

Are you in favour to change Nomenclature of LIS?	Frequency	Percent
Yes	545	54.5
No	431	43.1
Did not respond	24	2.4
Total	1,000	100.0

Result shows that majority of the students were not satisfied with the nomenclature assigned to Library and Information Science education and they want to change the nomenclature of Library and Information Science.

Some of the course contents related to other disciplines such as Computer Science, Management, etc adopted in LIS curricula. These changed nomenclatures would be introduced to reflect the changing information landscape and changed focus areas of LIS Schools. The Table 4 shows the nomenclature suggested by the Library and Information Science teachers and students a good number 60.9% of teachers and 47.7% of

students were recommended 'Library and Information Science'. While 6.5% of teaches and 9.6% of the Students recommended 'Library and Communication', whereas 6.5% of teachers and 9.2% students recommended 'Library and Information Management', followed by 'Information Science' mostly 8.7% of teachers and 5.6% of students, 'Knowledge Resource Management' majority 15.2% of teaches and by 4.2% students, 'Management and Information Science' 2.2% teachers and by 0.2% students, 'Library Automation and Digitization'; 'M. Tech. (Library and Information Science)': 'MBA (Library and Information Science)' only by 0.1% students each.

Table 4: Recommended Nomenclature for LIS Education

What should be the nomenclature of the department?	Teachers Responses		Students Responses	
	Frequency	Percent	Frequency	Percent
Library and Information Science	28	60.9	477	47.7
Library and Information Management	3	6.5	96	9.6
Library and Communication Technology	3	6.5	92	9.2
Information Science	4	8.7	56	5.6
Knowledge Resource Management	7	15.2	42	4.2
Management & Information Science	1	2.2	2	0.2
Library Automation and Digitization	0	0	1	0.1
M.Tech. (Library and information science)	0	0	1	0.1
MBA (Library and information science)	0	0	1	0.1
Did not response to this question	0	0	232	23.2
Total	46	100	1,000	100

Results show that majority of students at Northern Indian Universities and Institutes are in favor to adopt "Library and Information Science" nomenclature to their LIS programs as recommended by the Curriculum Development Committee of UGC, but another side some of the LIS teachers were in favour to change the name of 'Library and Information Science' to 'Knowledge Resource Management' and 'Information Science'.

6. CONCLUSION

Library schools are suffering from insufficient infrastructure facilities, inadequate manpower and lack of quality research. In India the main emphasis was laid on traditional aspects such as classification, cataloguing, Library management, information sources and services dominated the LIS curricula. It is difficult to define library sciences since long with the coming of the information age, it was believed that libraries would be coming to an end and library science would virtually disappear. However, this viewpoint was criticized severely by many librarians and others because renaming was only in form what is required is changing the LIS educational course content. This is also because the educational objectives of library schools in training professionals for the information industry, not just for libraries (Chu, 2001).

REFERENCES

- Alimohammadi, D. (2007). Renaming the librarianship in an age of cyber. In Malik, S. and Swain, N. K. (Eds), *Librarian to Cybrarian: A Transformational Approach to Librarianship*, in press.
- Alimohammadi, D., & Sajjadi, M. (2007). What our schools are named? An investigation among information leaders. *The Journal of Information and Knowledge Management Systems*, VINE, 37 (4), pp. 532-546. Retrieved from <http://www.emeraldinsight.com/0305-5728.htm>
- Anderson, C. (2004). *The long tail*. In N. Varaprasad keynote address: Singapore's vision of the 21st century library service. Singapore: National Library Board.

- Asundi, A. Y., & Karisiddappa, C. R. (2004). *Curriculum requirements for IT and electronic information environment: perspectives on a macro-structure*. In Information Technology applications in libraries: a textbook for beginners, edited by M. Mahapatra & D. B. Ramesh, pp. 1, 590.
- Bell, F. (2002). Democratization of South African LIS education: some causes and effects. *Library Journal* 52, pp. 55-66. Retrieved from <http://www.emeraldinsight.com/0305-5728.htm>
- Bhargava, G. D. (1988). *Recent trends in education for librarianship*. In Singh, Sewa (Ed), Librarianship and library science education: a collection of essays in honour of Dr J. S. Sharma, Ess Ess: New Delhi, p. 57-65.
- Chu, J. (2001). The renaming of library schools in China and the effects. Retrieved from http://www.mcup.com/research_registers. *New Library World*, 102 (1166/1167), 274-277.
- Durrance, J.C. (2004). Competition or convergence? Library and information science education at a crossroad. *Advances in Librarianship*, 28, 171-198
- Ebrami, H. (1977). Understanding Knowledge Science, Iranian Library Association, Tehran. In Alimohammadi, D., & Sajjadi, M. (2007). What our schools are named? An Investigation among the Information Leaders. *The Journal of Information and Knowledge Management Systems*, VINE, 37 (4), pp. 532-546. Retrieved from <http://www.emeraldinsight.com/0305728.htm>
- Kathleen De La Pena McCook, Lester, J., & Eberhart, G. (1988). Keeping the Library in Library Education. *American Libraries* 29, (3), pp. 59-63.
- Lin, C. P. (2007). *LIS development and challenge in East Asian Countries of Taiwan, Korea, and Japan*. World Library and Information Congress: 73rd IFLA General Conference and Council, Durban, South Africa. Retrieved from <http://www.ifla.org/iv/ifla73/index.htm>
- Mahapatra, G. (2006). LIS education in India: Emerging Paradigms, challenges and propositions in the digital era. *Asia-Pacific Conference on Library & Information Education & practice* (pp. 1-5). Singapore.
- Malhan, I. V. (2009). Exploring the opportunities in the emerging information environment for transformation of LIS education, *Ibid*, pp. 11-65.
- Meng, G. (1995). My views on LIS education. *Library and Information Service*, 1, 36-9. In Chu, J. (2001). The renaming of library schools in China and the effects. *New Library World*. 102 (1166/1167), pp. 274-277.
- Prins, H., & De Gier, W. (1992). Image, status and reputation of librarianship and information work. *IFLA Journal*, 18, 108-18. Retrieved from <http://www.emeraldinsight.com/03055728.htm>
- Rocknuzzaman, M. (2012). Changing paradigms in library education: from library science to information science to knowledge science. *The Eastern Librarian*, 23 (1), 1-23. Retrieved from <http://www.banglajol.info/index.php/EL>
- Saracevic, T. (1999). Information science. *Journal of the American Society for Information Science and Technology*, 50 (12), pp. 1051-1063. Retrieved from <http://www.emeraldinsight.com/0305-5728.htm>
- Singh, J., & Wijetunge, P. (2006). Library and information science education in South Asia: Challenges and opportunities. *Asia-Pacific Conference on Library & Information Education & Practice*. Singapore.
- University Grants Council. (2001). *UGC model curriculum: Library and Information Science*. New Delhi: UGC, *Ibid*, pp. 1-83.
- Yu, M., & Chu, J. (1998). Our views on renaming of the library schools. *Library and Information Service*, 7, 48-51.