LIS EDUCATION IN E-LEARNING ENVIRONMENT: PROBLEMS AND PROPOSAL FOR BANGLADESH

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Introduction: E-learning as an advanced system for learning through Information Communication Technologies (ICTs) is becoming an engine of innovation in education. In LIS education, it is becoming popular day by day due to its applicability and recognized as a suitable mode of education. This system also changes the library and information services, changing the role of information professionals and unwrap a new vista for effective and efficient environment for library education.

Method: In order to provide a detailed analysis of the literature on e-learning in LIS education many webliographic sources were consulted. Current situation of e-learning in Bangladesh, documentary sources and direct observations are the major methods of this article.

Result: This study examines the LIS education in e-learning environment and its implications in other areas. This study also gives an overview of e-learning education systems in Bangladesh and finds out problems of e-learning in LIS educations in Bangladesh. To reach information superhighway and face the e-learning environment, Bangladesh needs a proposal to acquaint with this system. It provides a proposal to apply distance and e-learning modes adopted by different LIS institutions in Bangladesh. This article also makes some recommendations for implementing the proposal.

Conclusion: In 21st century, learning mode is increasingly relying on various forms of electronic delivery and communications. E-learning is now widely used to promote distance education in an effective way. Bangladesh needs an immediate dedicated decision to ensure an appropriate e-learning environment in LIS education.

Prologue

Networked based modern technologies such as the internet and World Wide Web are dramatically changing education, learning and teaching style as they enable people to access and use of information more conveniently. It offers high-quality learning resources, exchanging information and makes learning groups virtually. As the use of internet is rapidly increasing day by day and people takes it as part of life, it means that internet based learning form of education and training is becoming easily accessible and increasingly important. The term 'e-learning' is used in a variety of ways that is often used interchangeably with terms such as online learning, Computer-based Learning (CBT), Web-based Training (WBT), Online Resource-based Learning (ORBL), Networked Collaborative Learning (NCL), Computer Supported Collaborative Learning (CSCL) and others. Probably, library and information

science is the most effective knowledge field that are collaboratively retrieving, disseminating and educating people through e-learning system. It is making a tremendous impact on individual library and information workers, their services and the information profession. As a developing country like Bangladesh, this learning system is truly absence in the LIS education field. Only Bangladesh Open University (BOU) is conducting the learning system through distance learning and open learning system. Bangladesh University of Engineering and Technology (BUET) is also planning to launch e-learning in their course curriculum

Literature review

Several studies on the topics were made before which are listed below to support the background of the study. (Bassoppo & Temba, 2006) writes an article on 'Evaluating eLearning: A Front-end, Process and Post Hoc Approach' where examines e-learning from three related perspectives, two of which address the planning and administration of online courses and final phase explores several reliable and valid approaches to online measurement and testing methods. (Meyen, E. L, Aust, R. & Gauch, J. M., 2002) discusses on 'e-learning: A Programmatic Research Construct for the Future' this paper addresses the need for a conceptual approach to researching, e-learning instructional design and the technologies employed as a basis for e-learning. (Bhattacharya, 2002) 'Special Issue on E-Learning Prospective in Asia Pacific' This article discusses the differences between communities of practices and quasi-communities; the convergences of distance education, on-campus learning, and e-learning in Australia; a framework for the implementation of situated online, collaborative, problem-based activity; the emerging trend of knowledge management through e-learning in Indian higher education; adaptively through the use of mobile agents in Web-based student modeling; and science and technology courses via e-learning in Africa. (Satoru, Bhattacharya & Kanji, 2003) wrote an article entitled 'ICT Implementation and Online Learning in Japan' where the implementation of information and communications technology (ICT) in education and online learning in Japan has been discussed. Although there have been ambitious research and development efforts, the use of ICT and online learning has not been particularly appreciated at large numbers of schools in Japan. However, a project called E-Japan Strategies is now underway to emphasize the educational use of ICT and progress in the implementation of ICT in schools. Moreover, a new curriculum that puts emphasis on the use of ICT will have powerful inducements to educate students with a certain level of knowledge and skills. A suggested model for online learning in education is also discussed (Cameron, 2002) 'Distance Education, On-Campus Learning, and E-Learning Convergences: An Australian Exploration' where the writer discusses, in an Australian context, an integrated rather than add-on model of e-learning convergences. This model applies to both distance education and on-campus online courses, reflects the use of information and communication technologies. (Hedberg,. J & Ping, L.C., 2004) 'Charting Trends for E-Learning in Asian Schools' discusses numerous schools in Asia are implementing innovative strategies to ensure the success of electronic learning. Three issues that are critically important for the success of these initiatives relate to the design of learning tasks, support and resources in the learning environment, and reorganization of methods of communication. (Alam, Kabir & Elizabeth, 2006) 'E-learning in Bangladesh: implementation and evaluation of a pilot project' this article reports on e-learning initiative at Bangladesh University of Engineering and Technology (BUET). This paper describes the constraints and design framework to overcome those obstacles. It also presents an evaluation of the pilot project and future plans in this regard.

Methodology

Data in relation to this study was gathered through the web of f the university departments that offer library and information science courses.   The study is based on primary data through a

questionnaire, interviews and observations. E-learning on LIS education is also found in the form of articles in the professional, national, international journals and books that have been used as secondary source. Literature search was also predominantly done by different notable websites, library portal and other virtual sources.

Objectives of the study

The objectives of the study are focused on the following issues:

a. To know the concept, forms of e-learning and facilities offered by e-learning in LIS education and services.
b. To know the distance learning education system and existing LIS education system in Bangladesh.
c. To identify the problems of e-learning in LIS education and make a proposal for the introducing e-learning LIS education system in Bangladesh.
d. To recommend a number of activities to implement the proposal plan and future development of e-learning in Bangladesh

Concept of E learning

The term e-learning has a variety of meanings, and is often used interchangeably in literature with learning technology, educational technology or machine-assisted learning. Simply speaking e-learning is;

I. Learning facilitated and supported through the use of information and communication technologies.
II. Education offered using electronic delivering methods such as CD-ROMS, Video Conferencing, websites and e-mail. Often used in distance learning program.
III. Learning that is accomplished over the Internet, a computer network, via CD-ROM, interactive TV or Satellite broadcast.

However, generally three forms of e-learning are available and are using in different institutions. These are namely; web-based training, supported online training and informal e-learning (Mason, 2002). The following table summarizes the key characteristics of these approaches are:

Table 1: Three forms of e-learning

Web-based training	Supported online training	Informal e-learning
Content-focused	Learner-focused	Group-focused
Delivery-driven	Activity-driven	Practice-driven
Individual learning	Small group learning	Organizational learning
Minimal interaction with tutor	Significant interaction with tutor	Participants act as learners and tutors
No collaboration with other learners	Considerable interaction with other learners	Multi-way interactions among participants

Therefore, following above discussion, it can easily get an idea about e-learning. In general it can say that the term e-learning used to describe education and training supported and delivery through online networks or internet and all it components. At present, the new term Virtual Learning Environments (VLEs) are used in institutions to support e-learning.

Implications of e-learning in LIS education, services and library professionals

In the present age of information highway, e-learning opens a new hope and aspiration in LIS education, services and professions. Library and information services are currently involved in rapid changes as a result of:

· pressure for increased productivity and accountability
· demand for new services
· increased demand for 24 hour/seven-days-a-week services
· opportunities offered by e-learning

The development of these new services and activities is often associated with changes in the organizational structure such as the convergence of the library, ICT and medical staff, or the expansion of the information service to include educational development, training and or e-learning. Library and information workers in organizations that use virtual learning environments, e.g. colleges and universities, are likely to be involved with them at a number of different levels:

I. Strategic level

· development of organizational learning and teaching strategy

· decisions about the selection and purchase of VLEs (Virtual Learning Environments)

II. Operations level

· managing and advertising the VLE, e.g. configuring the system, providing learning spaces for developments, programmes or tutors

· managing and administering copyright and other intellectual property issues

III. Teaching and learning

· setting up and establishing specific e-learning environments such as design of site, design and development of materials, uploading of materials, identification of web links and organizing staff.

· training staff and students in the use of the VLE, and also providing technical help and support

· e-tutoring, either as a co-tutor on an academic or vocational program, or tutoring their own programmes.

Besides these, it is having an impact on individuals in the following areas:

New Opportunities: E-learning offers new opportunities for library and information professionals to develop their knowledge and skills in a wide range of areas.

Acquiring information skills: Sometimes e-learning activities involve traditional information knowledge and skills, and to get involved in working in a new ways with new groups of people. E-learning makes the information workers more confident and competent in the use of ICT.

Roles and responsibilities: Information professionals are developing new roles and responsibilities within library and information unit through e-learning. In addition, many library and information workers have moved out of the information unit and are now managing learning centers, educational development centers or learning materials units.

Different professional collaboration: In many organizations e-learning means that library and information workers are working together in new ways other professional groups, e.g. subject specialists, educational developers or ICT specialists. However, in some respects it is giving flexible opportunities that reduces time, money and traveling hassle.

LIS education in Bangladesh

Library education means educating the students for being qualified librarians or information scientist through organized instruction and ICT based training. The country has almost fifty years of education history. The country has a education system of certificate course to PhD in LIS. The different levels of LIS education in Bangladesh are of the following categories:

Table: 2 Library educations in Bangladesh

SL	Name	Year of starting	Number of institutions
1	Certificate courses in LIS	1952	1
2	Postgraduate Diploma in LIS	1959	12
3	B.A. (Hons') in LIS	1987	3
4	M.A in LIS	1962	3
5	Masters of Philosophy	1976	2
6	Doctor of Philosophy (PhD)	1979	2

Source: (Islam & Chowdhury, 2006). & updated information collected through observation, questionnaire and unpublished report.

Table 2 shows that a certificate courses in librarianship was commenced by the librarian of Dhaka University Library in 1952 that was not continued after conducting one session. Then the Library Association of East Pakistan (Former part of Bangladesh) started certificate course and now it is no more. Only University of Science and Technology (USTC) one of the oldest private university offers certificate course in LIS education to create library assistant for medical libraries. In case of post graduate diploma, twelve numbers of institutions are offering one year post graduate diploma courses under National University. In addition, Darul Ihsan University of Bangladesh (a private university) started one year postgraduate diploma course in library and information science in 2004. Only two public universities Dhaka and Rajshahi are now offering four-years integrated (Hon's) courses in Library and Information Science. It is also worth noting that in Dhaka University the department name has been changed as Information Science & Library Management (ISLM) in 2001. Only one private university of Bangladesh namely Uttara University introduced four-year B.A (Hon's) courses in Library and Information Science but it didn't continue due to various constraints. Another private university (Royal University) is also planning to introduce the course in future. Dhaka and Rajshahi University is also offering M.A, M.Phil and PhD degree as both of the university is playing a leading role in spreading library education in Bangladesh. In addition, Dhaka University is offering two years M.A (evening) programmes for the professional and Lalmatia Girls' college started two-years master degree program under the National University of Bangladesh.

E-learning and LIS Education in Bangladesh

In Bangladesh, e-learning was first introduced as early as 1960s and the significant progress has been done after the establishment of the Bangladesh Open University (BOU) in 1992 as the first and only national distance learning university. BOU has been offering a variety of formal and non-formal academic programmes from certificate to Masters levels using print, TV, audio broadcasts, audio-cassettes and face to face tutorials as the media of delivering its academic courses (Sadeq, 2003). Besides BOU, a private dual mode institute named Asian University of Bangladesh has also been offering some formal academic programmes through distance mode. However, its contribution to Distance Education (DE) is very small compared to the BOU. Considering the rapid expansion of computer and internet in Bangladesh after 1998s, it is now appropriate time to consider inclusion of some interactive ICTs i.e. e-learning in delivering course materials of BOU or other institutions to promote distance education in Bangladesh.

Bangladesh has weathered some 37 years after independence, but it has been unable to achieve remarkable development to deploy ICT facilities in the field of library and information services. Poor ICT infrastructures and lack of funding are the main hindrances to develop our library services. Some of these libraries are using computers for library management and internet facilities inside the libraries are remain very low. Modern concepts of virtual library, digital libraries are absence of these libraries. In 1986 after the introduction of CDS/ISIS by UNESCO some libraries start automation projects using this software. The oldest and largest library in the country, Dhaka university library is now using GLAS (Graphical User Interface Software) and introducing barcode system for library operations and services. Among 21 public and 54 private universities, only few of them started using computers for automated library services (UGC, 2006).

Though the distance learning concept is familiarized by Open University, but in case of LIS education it is absolutely absence in the country. Among 20 numbers of LIS institutions, no one is offering distance education in the country. It is not possible for the all LIS institutions in Bangladesh to provide e-learning education system due to the different constraints. The major challenges and issues of introducing e-learning LIS education in Bangladesh are discussed below.

Major Challenges

Limited Internet connectivity, inadequate computer and communication infrastructure make it difficult for universities and institutions to access and download full text databases and other key resources. However, followings are specific arena that makes obstacle to introduce the system.

Lack of finance: The major challenges in improving e-learning LIS education is the lack of finance. It is not possible to make any resource available without appropriate financial support.

Inadequate Infrastructure: Generally, the universities, institutions are conducting LIS education in Bangladesh, which are not adequately, established with well furnished computer laboratory and library facilities because the administration does not feel any need to provide computer lab facilities, library facilities, communication equipments, other information science components and necessary infrastructures required for LIS departments. E-learning requires a certain investment in hardware, software, and support staff.

Lack of Knowledge and Training: One of the main constraints of e-learning systems is that students do not know how to use the particular information technology. Much more attention will be required in the future web based training that will be delivered over the internet using the non propriety www server and client technology. Despite the increase in number of institutions offering distance programs, little is known about the teaching practices that contribute to effective online course design and delivery.

Insufficient Contact Classes: Being a practical oriented course, LIS education required computer training and practical classes for classification and cataloguing with personal contact between teacher and student, but the number of days for contact classes are very limited.

Lack of High quality teaching Staff: Most of the LIS institutions have senior teachers of old age and they are not ready to accept the changing nature of the subject. Few departments have skilled fresh faculty but they stand as juniors and work under pressure of seniors. Experienced regular teachers are not much involved in the distance education program.

Lack of Evaluation: There is no mechanism of assessing teaching effectiveness and quality of study materials of distance learning program courses. Students' evaluations of teaching will help to provide instructors and course designers with feedback about the quality of their efforts.

Curriculum and duration of LIS courses: Curriculum of BLISc and MLISc are not uniform among the LIS institutions. However, one of the problems with e-learning in Bangladesh is the lack of course content, especially outside the mainstream focus areas of IT education, English-language content, and tutorial-like courses.

Absence of accreditation body at National Level: There is lack of accreditation agency in Bangladesh like the ALA Committee on Accreditation in USA, The Institute of Information Scientists (IIS) and the Library Association (LA) in U.K to ensure reasonable standards and quality of output in the LIS education like nomenclature, curricula and essential resources.

Lack of supporting policy at National Level: There is pressure to have quality assurance in LIS programs but the government hasn't implemented any policy at national level that may support LIS Education..

Lack of a global Perspective: There is a lack of coordinated and effective programs of international studies in Library and Information Science Education in Bangladesh to future oriented programs that are clearly defined in the mission, goals and objectives of e-learning.

Lack of IT proficiency. In a developing country like Bangladesh, library and information science (LIS) professionals are facing severe shortage of ICT facilities and mentor for LIS education. There are certain specific problems that act as deterrents to the library education of Bangladesh to adopting modernization i.e., low computer literacy among students of LIS; lack of basic knowledge of hardware and software among working professionals; and inadequate funds for purchase, installation and working with computers in school, college, public libraries and universities.

Implementation plan for formation of e-learning in LIS education in Bangladesh.
As in the perspective of Bangladesh full phase e-learning system is not possible to introduce all LIS education institutions, therefore it will be wise to introduce LIS education through distance learning method in less ICT facilitated institutions in different phases. There are some elementary differences between online courses with that of distance learning courses. Three phases implementation plan may be made for formation of e-learning system in LIS education:

Implementation plan

Phase One

It will be highly ambitious for formation of e-learning in LIS education system in Bangladesh at this moment, because of our limited infrastructure facilities and resources. But it is very much interested to form this system for the greater interest of our own existence in the global education system. It must admit that the problems are too hard to expensive. In this case, dept. of Information Science & Library Management (ISLM) of Dhaka University have to take the leading role to implement the e-learning education in LIS courses. This department will engage all other universities and institutions to draw, design and prepare a work plan for the implementation of e-learning in LIS courses.   As the department have own computer lab with internet facilities, multimedia projector, modern seminar library, updated course curriculum, highly qualified faculty along with computer science background, it will be easy for the department to introduce e-learning in LIS education. Like many other universities in the world, the management body also thinks about online courses of Library and Information Science. Management body should make a prototype course for library and information science followed by the study of online course running by five famous universities in US.

  I.   Indiana University-Purdue University, Indianapolis
  II.   Indiana State university
  III.   Southern Connecticut University
  IV.   Drexel University
  V.   University of Illinois (Hatua, 2006)

Before design a syllabus for e-learning in LIS education, it needs to examine the existing courses of LIS education of Dhaka University. These are;

Table: 3 Syllabus of Information Science & Library Management (ISLM), DU

B.A Honours (Four Years Integrated)		
Course No.	Name of Courses	
BISLM 101	Foundation of Information and Library Studies	
BISLM 102	Organization of Information	
BISLM 103	English Languages	
BISLM 104	Bengali Languages	
BISLM 205	Information Sources and Services	
BISLM 206	New Technologies and Current Trends in Information Systems	
BISLM 207 (A)	Social Organizations	

BISLM 207 (B)	Records and Archives Management
BISLM 208 (A)	Information Resources Development
BISLM 208 (B)	Information Production, Marketing and Public Relations
BISLM 209 (A)	Writing , Editing and Publishing
BISLM 209 (B)	Socio-Political History of Bangladesh
BISLM 310 (A)	Indexing and Abstracting
BISLM 310 (B)	Applied Statistics
BISLM 311	Information Science Communication and Documentation
BISLM 312	Automation of Information Institutions
BISLM 313 (A)	Database Design and Applications
BISLM 313 (B)	Hardware Maintenance and Troubleshooting
BISLM 314	Management Theories and Systems
BISLM 415 (A)	Organization of Knowledge (Theory)
BISLM 415 (B)	Organization of Knowledge 2 (Theory)
BISLM 416	System Analysis and Design
BISLM 417	Information Networking and Resource Sharing
BISLM 418	Research Methodology
BISLM 419	International and Comparative Librarianship
	M.A Curses
ISLM 501 &501(A)	Advanced Classification (Theory) & Practical
ISLM 502 &502 (A)	Advanced Cataloguing (Theory) & Practical
ISLM 503	Internet Studies and Web Design
ISLM 504	Information Retrieval Techniques
ISLM 505	Library Systems and Services
ISLM 506	Library Software Packages : Design & Applications

Source: (ISLM Syllabus, 2005)

Each university offers the online courses as per it policy and looking present market demands. So before designing LIS courses in the perspective of Bangladesh, management needs to keep in mind the market needs, tentative student background, quality of teacher and placement. By looking at the present changing scenario of library field, it needs to design a modern syllabus for library and information science. The major courses of the universities regarding e-learning in LIS education has been out lined from respective website of each universities.

I. Library Science Fundamentals
II. Library Technical Processing
III. Collection Development
IV. Managing Information Organization
V. Database Management
VI. Information Architecture and Retrieval Systems
VII. Network Information Systems & Library Automation
VIII. Content Management
IX. Information Resources Services and Customer Care
X. Digital Library and Library Software
XI. Human Computer Interaction
XII. Grant Methods for Educators and Librarians
XIII. Information Architecture for the Web

The above courses of five famous universities in USA are almost similar to the ISLM courses in the University of Dhaka. Besides these, the new courses which are absence should be included into the ISLM courses for e-learning in LIS system.

Phase Two

E-learning in LIS education may be launched immediately by the other university and institutions which have less ICT facilities than Dhaka University. These institutions (those are offering diploma, certificate course, Masters in LIS) may started distance learning or open learning LIS education programmes through their existing facilities. Mode of teaching is almost affordable for distance learning. Mixed mode uses several media methods such as CD-ROM, radio-television and audio-video cassette At least, in this way it will be served LIS education to the doorsteps of learners irrespective of place and time. Participants of phase one may take part in dialogue for sharing their experience gained in phase one. Prepare recommendations for implementation of plan in phase three.

Phase Three

Phase one and phase two may be implemented in phase three with all ICT facilities and ensure dissemination of information through e-learning environment with reduced cost but maximum benefit. Keep an eye on the total implementation plan, review it and need to take steps for further improvement of e-learning in LIS education in Bangladesh, if required.

Major recommendations

In order to achieve this plan, management have to ensure the following necessaries:

Arranging seminar: ISLM, Library Association of Bangladesh (LAB), UGC (University Grants Commission) and other LIS institutions have to arrange seminar, conference to make awareness of e-learning LIS education in Bangladesh.

Building a committee: Inviting participants from the three communities (i) professional librarians (ii) interested faculty researchers from library and information sciences, computer science and engineering and related fields, and (iii) chief operating officers and making a operational committee.

Updated syllabus: The syllabus at all levels should be updated. It is strongly felt that the courses at Masters level should be included more e-learning based courses. Faculty members should have a solid understanding of the major principles of online course design before they attempt to put a course together.

Modern ICT facilities: All LIS institutions in Bangladesh should have acquired the needed infrastructure for imparting practical training e.g. well-equipped information and communication technology laboratory with equipments such as PCs, Modems, CD-Drives, Printers, scanners, and multimedia kits along with broadband Internet facility and latest library management software i.e. LIBSYS, Alice For Windows, VTLS, GLAS and SOUL etc.

Patronization of UGC: The University Grants Commission should appoint an Advisory Committee, with faculty representation from all leading LIS institution, to be involved in all major decisions relating to the design of the curriculum, teaching methods, choices of e-learning equipment, software and evaluation.

Policy formulation: A national policy has to be formulated for LIS education in distance mode in the changing context of librarianship in modern Bangladesh. The policy should emphasize the need for practical training and necessary infrastructure requirement. The UGC is supposed to be the most suitable organization to take up formulation of such a policy.

Accreditation: It is very essential to establish some professional agency at the national level, which can undertake the work of accreditation in LIS curricula, nomenclature and standards in Bangladesh.

Conclusion

At present age, information needs are changing and demands of this profession are also varying. This is the time to think intensely about the new syllabus for Library and information

science. Simultaneously, e-learning is now the global scenario and it should not avoid. As a developing country like Bangladesh, it is hard to design a new courses and new e-learning LIS education system but not impossible. Lots of issues and challenges are involved with this task but as soon as it put forward, it will overcome all those problems. Hope the proposed plan among LIS education institutions will make a new opportunity and make the LIS education in Bangladesh competent for the world.

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