E-Learning: Tools and Techniques in LIS Education

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Abstract

E-Learning is the convergence of the Internet and learning. The learning can be on any level, say elementary school, college or corporate and or can be imparted through the library as a central facility. E-Learning gives companies and individuals advantages over the competition in the market. This is because the learning that is provided electronically is cost- effective, and can be available to anyone, anywhere, anytime, and gives flexibility to the learner in terms of timings and pace of learning. The present paper covered the tools and techniques of LIS education and work of e-learning.

Keywords: E-Learning, LIS Education, Information Communication Technology, Open Source software, Internet.

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INTRODUCTION

According to Mandal, M. and Panda, K. C. (2006) he says E-Learning along with its criterions. Distinguishes e-learning from e-learning. Explains lucidly how there is a paradigm shift from the traditional system of learning. Components of e-learning include: (I) content delivery in multiple formats: (ii) management of the learning process: and (iii) a networked community of learners. Trainer content developers and experts E-Learning provides (a) taster learning at reduced costs: (b) increased access to learning recourses: and (c) clear accountability for all participants in the learning process.

E-Learning offers recourses, exchanging information, and working in learning groups. E-Learning also has a great impact on individuals as well as LIS activities and services. This is because of the increased use of Information and Communication Technologies (ICT) and web based learning technologies, which create opportunities for the provision of new services and recourses to customers. The basic tool for accessing a virtual classroom is a Personal Computer (PC) with access to Internet and basic skill of using ICT tools and technologies[1].

MEANING OF E-LEARNING

The term 'e-learning' is used in a variety of ways by different authors, and the literature shows that it is often used interchangeably with terms such as online learning, computer based learning (CBT), Web Based Training (WET), Online Resource-Based Learning (ORBL), Networked Collaborative Learning (NCL). But the usage of 'e-learning' has been widely accepted and appears in literature. Therefore, throughout the paper the term 'e-learning' has been applied for above all terms.

The CIPD (Chartered Instituted of Personnel and Development) has defined the term e-learning as "e-learning involves learning that is delivered, enabled or mediated, by electronic technology, for the explicit purpose of training and education. It dose not include standalone technology-based training such as the use of CD-ROMs in isolation".

The Robin Mason (1998) describes the three forms of 'e-learning' on the basis of some characteristics namely, Web-based training, supported online learning, and informal e-learning. The bellow given table 1 summarizes the key characteristics of these approaches.

In addition to the above definitions, one can understand more precisely and accurately the meaning of 'e-learning' on the basis of its activities and processes as given below:

- Use of interactive learning packages involving text, graphics, audio, video and animation.

Table 1: *Forms of E-Learning*

Informal e-Learning	Supported Online Learning	Web-Based Learning
Group-focused practical-driven organization training.	Learner focused activity driven small group training.	Content focused Delivery-driven Individual Learning.
Participants act as learners and tutors.	Significant interaction with tutor.	Minimal interaction with tutor.
Multi-way interactions among participants.	Considerable interaction with other learners.	No collaboration with other learners.

- Delivery of an integrated programme where much of the learning is through online activities supported by Communication tools.
- Enhancement of programme by providing additional support, e.g. using synchronous and asynchronous communication such as e-mail discussion groups, chat rooms and video Conferencing, newsgroups, polling.
- Enhancement of traditional programmes by providing access to additional resources and information (Vashisth, C.P. and Satija, M.P., 2004)

DEFINITION OF E- LEARNING
- "E- Learning is the convergence of learning and the internet". - Bank of America Securities.
- "E- Learning is the use of network technology to design, deliver, select, Administer and extend learning".
- "Internet enabled learning that encompasses training, education, just-in-time information and communication".
- "Learning facilitated and supported through the use of Information and Communication Technology".
- "Learning that is accomplished over the internet a computer network via CD-ROM, interactive TV, or satellite broadcast".

CHARACTERISTICS OF E- LEARNING
Remote Learner-Teacher
In the e-learning environment, the learner and the teacher need not to travel to a common physical location for the purpose of education. They can be away from each other, yet achieving the goal of education through technological means.

Learner Centered
E-Learning can be personalized to the learner, or as it is called customized to the needs of the learner, unlike the classroom- based learning the e-learner can choose his/her learning module.

Course Material
The course material is made available in the electronic formats; most of the time online. The course material is made interactive by in built exercises, simulations etc. It is made more understandable by the use of animation. Being in electronic format the course material can be updated quickly.

Multimedia Nature
The course material being in electronic format can be in textual, audio or video format. A typical course material can combine all these features.

E-Communication
All notices, announcements regarding admission, submission, examination, results etc. are sent through Internet/are made available on websites. As the administrative work is carried out online it becomes fast and accurate.

Use of Internet
Counseling/ educational instructions based services such as, blogs, chat-rooms, peer and expert discussion groups, e-mails etc. The online courses also provide links to useful resources on the Internet and Internet. Internet empowers both the learner as well as the instructor.

Anywhere Learning
E-Learning provides remote access to learning facilities through the ICT. As such the e-learner can learn from the place of his convenience, even from home, office, white traveling, or literally from anywhere. In the globalize world the work style in changing. People are expected to work from anywhere and anytime. The e-learning suits to this philosophy.

Anytime Learning
The time is not a constraint to the e-learner, one can learn anytime that suits his schedule. It is truly 24 X 7 learning system.

Just in Time
The E-Learning adopts the philosophy studied in e-learning is one the thinking that such and such knowledge; skill may be needed in future. On the country the e-learning is arranged to developed skills, which are needed at the particular time.

Multiple Collaborations
In e-learning there emerge Multiple Collaborations, i.e. teacher-student, student-student as well as a teacher-teacher. Multiple collaborations also Includes collaboration between the content development experts and the technology people.

Learner's Active Participation
E-Learning is impossible without active participation from the learners. If the learner dose not responds to the initiatives of the teacher the learning purpose remains unattained.

Facilitates Lifelong Learning
Being self-paced e-learning can develop skills in the e-learners which can be useful to him for lifelong learning. (Kumbhar, Rajendra. 2009)

BENEFITS OF E-LEARNING
E-Learning has a number of advantages over classroom learning (e-learning). Mark Rosenberg aptly remarks in his book. "E-Learning: strategies for delivering knowledge in the Digital Age".

Thus, some of the noteworthy benefits of E-Learning are mentioned here.

Anywhere Anytime, Anyone
Learning is made available to people 24 hours a day, seven days of a week and 365 days a year around the globe. This makes E-Learning convenient for students since they can lean at any time and at any place.

Substantial Cost and Times Savings
E-Learning eliminates the need for students and librarians to specific geographical locations for the purpose of education. This brings considerable saving on the time and cost of travel that would otherwise have been incurred heavily in conventional learning models.

Innovative and Interactive Learning
E-Learning allows different learning styles of different students and librarians and fosters cognitive learning through a variety of interactive exercises. Cognitive learning leads to better understanding and recall of knowledge.

Improved Collaboration
E-Learning enables stronger and more meaningful collaboration on a one-to-one, one-to-many, and many-to-one basis, involving both students and teachers and librarians.

Career Oriented
E-Learning acquires skills required in the job market. Thus, jobseekers get jobs quickly. While employed students, librarians get empowered to rise in their career, or even change careers, if interested.

Just–in Time Access
E-Learning makes learning easy for busy students, and librarians, because they can have access to interactive, self-paced, multimedia training. Anytime, and anywhere, at work, home, or even while traveling.

Self –Paced Learning
E-Learning fasters self-paced learning whereby students can be Learn at a speed that suits them.

Allows Learning to Be Broken Down into Units
E-Learning courses are constituted of "Learning Objects", which allows learning to be divided into discrete learning units.

CONSTRAINTS AND LIMITATIONS OF E- LEARNING
Although e-learning has a number of advantages, it is not at all free from pitfalls and limitations. E-Learning is a means and not an end. E-Learning must be linked to improve service outcomes. Some of the basic

constraints which E-Learning system encounters are discussed hear under:

Level of Interactivity
There is not ample scope for interaction between the students and the content developers/ course designer, particularly when the number of users is large, diverse, and geographically scattered.

Strong ICT Infrastructure and Adequate Bandwidth Support
The institute offering E-Learning system should possess strong Computer and Communication technology support and sufficient. Internet Band- width to make the mission successful or else, all the efforts will go in vain as limited bandwidth creates problems in downloading.

Budget Constraints
E-Learning system involves a huge budget. The institutes interested in E-Learning systems should plan it properly for successful E-Learning applications.

Attitudinal Constraints
This is another limitation that hinders the success of E-Learning. The success of E-Learning depends upon the attitude of the teachers of academic institutions to go for E-Learning.

On the above highlights of advantages and disadvantages of e-learning, my opinion is that 'e-learning' is not going to replace the face-to-face learning techniques. But certainly, it is rapidly becoming on important additional delivery method by providing opportunities to those people where the other alternative in not available. Similarly e-learning offers an important method of enhancing support activities of learning for face-to-face programme.

E-LEARNING TOOLS AND TECHNOLOGIES
Wenger and Bradley have discussed the following e-learning tools and technologies and classified them into three major categories:

Virtual Communication Tools and Technologies
The virtual communication tools and technologies are increasingly becoming important tools of e-learning, as they enable information professionals to exchange information and ideas, work together on a common theme or issue, an also work in a collaborative term. This is a well-established aspect of library and information professional practices that virtual communication tools and technologies are widely used in libraries and information centers as a means of communicating with users, and they provide an important channel for LIS professionals to communicate with their libraries and customers. The tools and technologies that are included in this category are as follows:

- E-mail (Electronic mail)
- Discussion Lists
- Newsgroups or use Net
- Bulletin Board
- Polling
- Web forms
- Instant Messaging
- Chat or Conferring
- Internet Telephony
- Video-conferencing
- Virtual World

Integrated Learning Environment Tools and Technologies
These are web-based learning environments that provide a range of tools and facilitates for learners. These tools are considered as 'one-stop shop' for learning and teaching and available in two basic forms namely.

- Web-based learning portals.
- Virtual learning environment

Web-based Learning portals
A learning portal that provides access to a wide range of e-learning facilities and resources, including web-portals, e-journal portals, support, guidance, virtual communication and also administrative tools. A learning portal generally contains the following items of information such as:

A. Learner Management System
- Student enrollment and collection of fees.
- Student tracking e.g. usage and progress.
- Student outcomes.

B. Web-based Training Material
- Virtual communication tools
- Developed software
- Access to information and learning resources.

Web Based Training Material Tools and Technologies

The web based training material tools can be used for e-learning in a variety of following situations:

- As a standalone learning experience used by a learner working independently.
- As a package interested within a face-to-face programme.
- As a means of providing additional practice on a special skill or theme.

ROLE OF LIBRARIES IN E-LEARNING

Library resources and services are indispensable to any academic institution as a primary knowledge resource for study, teaching and research. Library adopts new information systems and services with the emergence of new and better information technologies. Library is considered as provider of central facilities in any academic institution. It has become the institutional access points for digital knowledge resources such as online journals, learning resources and e-learning materials. In the changing scenario, the faculty and instructors have begun to adopt e-learning strategies as a part of their teaching programmes and the library has a positive role to play to collect, organize, and disseminate learning, resources to complement the teaching and learning process[1].

OPPORTUNITIES OF E-LEARNING TO LIS PROFESSIONALS

The ICT based last two decades are withies to the role played by the library and information science professionals in design and development the LIS tools and technologies, e-learning programmes, ICT based course contents, and software. World Wide the LIS professionals are involved in developing new roles and responsibilities within libraries and information centre. E-Learning offers new opportunities for library and information science professionals to develop their knowledge and skills in a wide range of area of job market such as to establish e-learning centre, managing integrated learning system, create develop and maintain integrated learning system, create, develop and maintain websites, organize learning material contents, establish and manage e-learning programme,

support and guide e-learners and also use ICT skills in the management and maintenance of the ICT – side of e-learning. However, many of these activities involve traditional information skills (e.g. the design and development of e-learning materials and e-tutoring) for some LIS professionals it offers an opportunity to develop their knowledge and skills and to involve in working in new ways with new groups of people. It also offers new development opportunities for individuals and access to a wide range of learning opportunities. E-Learning also offers new opportunities for library and information science professionals to work from their destination at anytime as individually or in a group. One of the big factors of e-learning that it provides flexible opportunities that reduce time spent in traveling or away from the work place or home[1].

LIST OF E-RESOURCES

There are a large number of publishers who deals in E-Books, E-Journals and other course materials in science, Technology and Engineering subjects. Two leading publishers of e-Books, E-Journals are:

i. Elsevier India Pvt. Ltd - Referred Engineering on engineering village? Book series, and online journal.
ii. Springer (India) Pvt. Ltd. – a comprehensive digitized book collection and online journals.
iii. Electronic resources become the format of choice for academic library patrons as they offer to day's users many opportunities that were not available to predecessors. The advantages of electronic resources often suggested include:

1. International reach
2. speed of communication
3. Unlimited Capabilities
4. Reduced cost
5. Convenience
6. Search ability
7. Linking

Electronic journals offer a solution for some of the problems facing the management of the academic journals today. They are space saving, enhance the speed of communication, provide powerful searching tools, immediate access to desktop and provide facilities such as

integrated text. Hypertext links and multimedia that the printed journals cannot offer[1].

IMPLICATION OF E-LEARNING IN LIBRARY AND INFORMATION SCIENCE PROFESSION

Many library and information centre particularly in the western countries are involved in supporting and providing e-learning programmes to the library and information workers. The implication of e-learning in the library and information science profession as a whole can be studied two fold:

Implication of E-Learning for Individual Library and Information Professional

The e-learning has an impact in the following areas:

- New learning opportunities
- New employment opportunities
- Development of new skills
- New roles and responsibilities
- Tele working
- Internet working

Implication of E-Learning for Library and Information Centre

The library and information services are greatly affected due to the induction of information and communication technologies in accessing, designing, processing and disseminating information and various factors as given below:

- Drastic cuts in resources and escalating the prices of publications
- Pressure of increased productivity and accountability.
- Electronic information delivery
- Importance of virtual communication tools
- Demands of new services
- Opportunities offered by e-learning

The libraries and information centre of worldwide have responded to these challenges and also improvise their roles and responsibilities within their organization through developing new tools and technologies for meeting the increasing information needs and services of their users. The provision of funding to support e-learning programmes such as help desk technical

support, and also virtual support using e-mail, virtual reference desk, bulletin board and chat rooms, etc. are playing a significant role in e-learning and teaching[2].

EXAMPLES OF E-LEARNING IN LIS EDUCATION

Librarians can work with faculty members, students, or the IT specialists in the pre-authoring stage of the e-learning process for the selection and evaluation of learning materials. They can also help with the Metadata schemas for the content management or towards information library modules involving organizing metadata for online resources or training in information seeking, assessment, evaluation. And consolidation of resources, plagiarism, copyrights, and the digital rights management issues with respect to the duplication and usage of digital learning material.

The drive towards e-learning requires libraries to Adopt to the needs of the increasing online user population. System developers and librarians together should provide a mechanism that would support the e-learning initiatives and the environment. The creation of technical standards and specifications would be the immediate task ahead in near future.

- IIT Libraries-Resources & Services provided in the e-learning are digital library, institutional repository, e-resources, e-print archives, OPAC.
- IIM Libraries- provided for the OPAC, e-resources, DL /IR, Ask a librarian, e-print Archives.
- IFIDR, Mumbai- DLIIR, OPAC, e-library, CMS, e-resources.
- University of Hyderabad – Ask a librarian, DL, e-Resources, OPAC Library.
- NCL Information Center- e-print Archives/IR, E-Resources, OPAC
- NIT Library, Calicut - DL, e-Resources, OPAC
- Indian statistical Institute Library – DLIZE, e-Resources (Database/Journals).
- Bangalore University Library – Ask a Librarian, e-Resources, OPAC.
- Raman Research Institute Library- DL/IR, e-Resources, OPAC[3].

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OPEN SOURCE SOFTWARE FOR E-LEARNING

Open-source software is computer software for which the source code and certain other rights normally reserved for copyright holders are provided. This permits users to use, change, and improve the software, and to redistribute it in modified or unmodified from.

The free software movement was launched in 1983. In 1998, a group of individuals advocated that the term free software should be replaced by open source software as an expression which is less ambiguous and more comfortable for the corporate world.

The open source table comes out of a strategy session held in Palo Alto in reaction to Netscape's January 1998 announcement of a source code release for Navigator.

The free software foundation, started in 1985, intended the word 'free' to mean freedom to distribute and not freedom from cost. The open source Initiative was formed in February 1998 by Eric S. Raymond and Bruce Perens[4]. With at least 20 years of evidence from case histories of closed software development versus open development already provide by the Internet developer community.

Moodle

The world Moodle was originally an acronym for which is mostly useful to programmers and education theorists. It's also a verb that describes the process of lazily meandering through something. As such it applies both to the way Moodle was developed, and to the way a student or teacher might approach studying or teaching an online course anyone who uses Moodle is a Moodler.

Moodle was created by Martin Dougiamas, a Web CT administrator at Curtin University, Australia, who has graduate degrees in computer science and education. Dougiamas started a Ph.D. to examine "The use of open source software to support a social constructionist epistemology of teaching and learning within Internet – based communities of reflective inquiry". Although how exactly social constructivism makes Moodle different from other learning platforms is difficult to show, it has been cited as an important factor by Moodle adopters. Other Moodle adopters, such as the open university in the UK, have pointed out that Learning Management Systems can equally be seen as "relatively pedagogy- neutral".

The word Moodle is actually an acronym for Modular. Object-oriented Dynamic Learning Environment, although originally the M stood for "Martin's", named after Martin Dougiamas, the original developer. "Moodle" is a protected trademark. Only Moodle partners get the right to use the trademark. Only Moodle their services like Moodle Hosting, Moodle customization etc.

Moodle has been evolving since 1999. The current version is 1.9.7., which was released in November 2009. It has been translated into 80 different languages. Major improvements in accessibility and display flexibility were developed in 1.5 currently; the work is going on to release Moodle 2.0. As there are no license fees or limits to growth, on institution can add as many Moodle servers as needed. The open university of the UK is currently building a Moodle installation for their 200,000 users. It is often known for individual departments of institutions to use the unlimited feature, such as the math's department of the University of York[5].

Moodle is a software package for producing Internet- based courses and Web sites. It is a global department project designed to support a social constructionist framework of education.

Moodle is provided freely as open sources software. Basically this means Moodle is copyrighted, but that you have additional freedoms. You are allowed to copy, use and modify Moodle provided that you agree to provide the source to others; not modify or remove the original license and copyrights, and apply this same license to any derivative work http://docs.mooodle.org/en/about moodle.

Features

Moodle has many features expected from on e-learning platform. Plus some original innovations. Moodle is modular in constriction

and can readily be extended by creating plug-in for specific new functionality. Moodle's infrastructure supports many types of plug-ins:
a. Activities
b. Resource types
c. Question types
d. Data field types
e. Graphical themes
f. Authentication methods
g. Enrollment method
h. Content filters

Brihaspati

Brihaspati software establish in 2006 in India, the organization is dedicated to developing high quality, user friendly software products for all platforms, to provide full service for affordable off share web site design, to provide support for web application development, and to provide support and customizations services for open source software's. We focus on software solutions at low prices serving the needs of businesses, corporate, government as well as individuals.

India's premier educational institution IIT Kanpur launches its own LMS using an open-source frame work to build e-learning courses and deliver them across wide area networks. Brihaspati virtual classroom is software developed by IIT Kanpur. Admin has the main authority of Brihaspati. The cost of the software is free and anybody can login into Brihaspati as a 'Guest'. In this case the username & password both would be 'Guest' but the Instructor and student accounts are crated by the Admin user. It is a very friendly open source framework and can be used effectively to build e-education applications[6].

Brihaspati is implemented in jawa using Turbine, an open source framework, as secure web application. This confirm or the model view controller paradigm which aims at separating content, presentation and business logic. Brihaspati has been designed to support multiple Graphical users Interface. In the current distribution, we have English, Freanch, Hindi, Bangla and Marathi as supported languages. GUI in other language such as Malayalam, Telgu and German are being developed.

- Learning Management System is a broad term that is used for a wide range of systems that organize and provide access to online learning services for students, teachers, and administrators.
- These services usually include access control, provision of learning content, communication tools, and organizations of user groups.
- Brihaspati aims at putting together an integrated e-learning environment for a university student.
- Learning Management System is a software system that allows the development and delivery of educational courses using the Internet as a delivery system.

Advantages of using Brihaspati
- Access to consistent standardized learning materials.
- 24 X 7 accesses to flexible e-learning.
- Track personal achievement and progression.
- Virtual communication enabling the sharing and dissemination of information throughout the college or Institution.
- Improved access to learning opportunities.
- Equitable access to learning
- Instant feedback on learner's achievement.
- Personal area to store files.
- Track attendance & assessment result.

Roles in Brihaspati
- As an Admin
- As a content Author
- As an Instructor
- Primary Instructor
- Secondary Instructor
- As a Student
- As a Guest

Features for all Users
(Admin, Instructor, student, Author)
Anybody can access all these features:
- Calculator
- Glossary
- Search Engine
- Repository Browser
- Calendar
- Task Manager

How Brihaspati is Different from other L.M.S.
- Recommended by UGC.
- First Indian open source LMS.
- Regional and Foreign Languages support.
- Remote course.

http:www.Brihaspatisolutions.co.in/Brihaspati/
mspresentationpd

Plone
Plone is a free and open source content management system built on top of the zope application server. Plone can be used for in principle any kind of website, including blogs, internet sites, web shops and internal websites. The plone project was begun in 1999, by Alexander Limi, Alan Runyan and vidar Andersen. The first version was released in 2001. The increase in community led to the creation of the annual plone conference in 2003, which is still running today[7]. In March 2004, plone 2.0 was released.

Features- these are some of the features available in plone 3.0:
- Inline editing
- Working Copy support
- Link and reference integrity checking
- Automatic locking and unlocking
- Collaboration and sharing
- Versioning, history and reverting content
- Upgraded visual HTML editor
- Work flow capabilities.
- Authentication back-end
- Full- text indexing of word & PDF documents
- Collections
- Presentation mode for content
- Support for the search engine sitemap protocol
- Wiki support.

Greenstone
Greenstone is produced by the New Zealand Digital Library project at the University of Waikato, and has been developed and distributed in cooperation with UNESCO and the Human Info NGO in Belgium. Its developers received the International Federation fir Information processing's 2004 Namus Award for "contributions to the awareness of social implications of information technology, and the need for an holistic approach in the use of information technology that takes account of social implications[8].

SCORM (Sharable Content Object Reference Model)
SCORM Software located in India Ahmadabad Maduvan InfoTech Pvt. ltd.

MINFO started its full flagged operation in 1995 and has undertaken mission critical projects and product development on niche technology domains for global and Indian orients to their complete satisfaction.

Features- three types of user registration: open, approval required or closed.
- Publish SCORM catalog
- Launch and track courses
- E-Learning software keeps track of bookmarks
- Scores and results of individual questions
- Online reports
- Full support for SCORM 1.2
- Place learners in groups
- Assign courses to all learners, specific learners and newly registered learners.
- Use style sheets to configure graphics, layout, colors and fonts.
- Easy to install- runs on windows, 115 and SQL server.
- Low cost hosting service for E-learning software would be available.
- Easy to use.
- Customizable
- Upgradeable
- Multilingual

Claroline
Claroline is an open source e-learning and e-working platform allowing teachers to build effective online courses and to manage learning and collaborative activities on the web. Translated into 35 languages, Caroline has a large world wide user 'and developers' community.

Features
i. Publishing documents and files accessible to the users.
ii. Creating directories and sub-directories to gather files.

iii. Creating hyperlinks and building your own HTML pages.

CONCLUSION

'E-Learning' a modern tool and technology of informal education is not going to replace the face-to-face learning techniques. However, it is rapidly becoming an important additional delivery method by providing opportunities to those people where the other alternate in not available E-Learning. A globally emerging innovation tool and technology of learning and teaching in a computer environment offers a wide range of opportunities to LIS professionals access the countries to work together and enhances their own professional knowledge and skills through virtual communities. It is imperative that LIS professionals must develop new skills in the design and development of e-learning and teaching, online communications skills and also new ways of working with each other. To make effective and efficient use and implementation of e-learning in library and information science discipline, LIS professionals must redesign, their course contents, teaching tools, materials, and their intellectual capital in a holistic manner in order to maximum utilization of e-learning.

REFERENCES

1. Vashishth C P. and Satija, M P. *E-Learning opportunities, challenges and implications in LIS Profession in digital Era, Library and information profession in India.* Delhi: B. R. Publication; 2004.
2. Abe J. E-Learning: repository for university librarians. *Journal of the japan medical library association.* 2009; 56 (1): 33-6p.
3. Allen B. Developing the best blend? From blended e- learning to blended learning, *Library information update.* 2007; 6 (3): 26-3p.
4. Altman E. and Mittal A. Knowledge based framework for facilitating e-learning services. *International journal of innovation and learning.* 2007; 4 (2): 112-15p.
5. Casella, G. SCORM thin client architecture for e-learning system based on web services. *International journal of distance education technologies.* 2007; 5 (1): 19-15p.
6. Chandra S. E-Learning in the geo science domain: the Indian perspective. *DESIDOC journal of library and information technology*. 2009; 29 (1): 42-7p.
7. Allan B. *Developing information and library staff through work based learning.* London: Library association; 1999.
8. Bradley P. *The advanced internet searcher's handbook.* UK: library association; 2002.

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Keywords: *E-Learning, LIS Education, Information Communication Technology, Open Source software, Internet.*

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Table of Contents

Research Article

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RTI (https://www.ugc.ac.in/subpage/RTI-Act.aspx)
Tenders (https://www.ugc.ac.in/Tenders.aspx)
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