Academic Library in 2030 : Visions and Challenges

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0 Abstract

Information played an important role in every aspect of life in modern world. Information and Communication technologies (ICT) have affected all fields of human activity. The field of Library and Information Science is not an exception to this. ICT forces towards the field of Library and information service (LIS) right from the print era to the digital era. Internet has emerged as a powerful source of information. Web 2.0, Web 3.0 Technologies are making it possible to access and disseminate the information at a faster rate in interactive mode with a lesser cost. The purpose of the paper is to highlight the application of modern technologies in the field of academic library services with vision 2030. The paper also highlighted the major challenges may face by the library and information professionals in present context and try to gives some proposal for better services in that day.

Key words: Academic library, ICT, Web technology, Knowledge society

1 Introduction

Information played an important role in every aspect of life in modern world. Nothing moves without information and it's believed that information is the power and it is an important resources needed to develop other resources. Due to information explosion and continuous changing nature of information, it's required to provide quick, exhaustive and pinpointed information to its users with minimum cost, effort and time through adoption and application of new technologies in the library and information system.

Information and Communication technologies (ICT) have affected all fields of human activity. The field of Library and Information Science is not an exception to this. ICT forces towards the field of Library and information service (LIS) right from the print era to the digital era. Internet has emerged as a powerful source of information. Web Technologies are making it possible to access and disseminate the information at a faster rate with a lesser cost. With the latest Information Technology (IT) revolution there is an enormous change in the total scenario of information availability, access and dissemination. Web Technology is a fast growing field of knowledge. Libraries would benefit immensely by adopting this technology for their information dissemination and accessing activity. In the present scenario it is essential on the part of the library professionals to equip themselves with the skills and techniques to fully exploit the digital resources available globally.

2 User community and library services of academic library

One of the key components of an academic library is its users. In addition to teachers, students and staff, the clientele may consist of other users such as authors and writers, lawyers, medical practitioners etc. The library must extend facilities to these users, treating them as its honored guests, adhering, however to the rules governing the use of library. Important academic library services are :

- Lending service
- Reading room service
- Inter library loan service
- Information and Reference service

- Display of current additions or lists of current accessions service
- Documentation service
- Current awareness service
- Reprographic service
- Audio-visual services e.g. film shows, tape-slide demonstrations, etc.
- Exhibitions and special display service
- Assistance in the use of the library service, etc.

3 Present scenario of collection development

To provide traditional library services as well as digital information services the collection development and selection policy should be made in the changing context of nature of resources. Some library collections are as follows:

Traditional library collection	**Modern library collection**
• Books	• e-Books
• Journals	• e-Journals
• Bound volume	• Journal Archival
• Reference collection	• Digital Tools
• Slides	• Images
• Scientific Movies	• DVDs
• Photo Album	• Image Collection
• Newspapers Clippings	• e-Newspapers Clipping
• Theses	• e-Theses
• Dissertation	• e-Dissertation

31 New technologies in conventional LIS

New technologies help to improve the conventional system efficiently and quickly. Following are the library services used modernized systems :

Library services	**Conventional system**	**Modernized system**
▪ Abstracting	▪ By man	▪ By machine
▪ Catalogue	▪ Card catalogue	▪ OPAC
▪ Circulation	▪ Manual	▪ Automatic
▪ CAS	▪ Print form	▪ Electronic form
▪ Document delivery	▪ By post	▪ By electronically
▪ Document sharing	▪ Inter library loan	▪ Resource sharing
▪ Indexing	▪ By man	▪ By machine
▪ Reservation	▪ By post	▪ By email / Online
▪ Translation	▪ By man	▪ By machine

3 Changing scenarios

Various aspects are effecting situations to adopt the new inventions. New inventions also effect in the library and information system in academic institutions. The changing scenarios are :

- Conventional Education to Web-Based Education
- Information Society to Knowledge Society
- Traditional Library to Digital Library
- Library Cooperation to Library Consortia
- Collection Development to Content Development

31 Conventional educations to Web-based education / E-learning

E-learning provides the following benefits :

- Increasing access to learning resources
- Interactive teaching and learning environment
- Increasing student convenience
- Reducing educational delivery cost
- Developing a scholarship of web based pedagogy

32 Information Society to Knowledge Society

Society in which the central instruments are information and knowledge called knowledge society. This society is characterized by the increasing use and utilization of knowledge in all its process of growth and development. In the knowledge society, knowledge is the key determining factor for innovation, policy formulation and material progress. As a consequence of this recognition, there have been increasing efforts in creating new knowledge through institutions exclusively dedicated to research.

33 Traditional Library to Digital Library

Digital library may be defined as the electronic extension of functions users typically perform and the resources they access in a traditional library. These information resources can be translated into digital form, stored in multimedia repositories, and made available through Web-based services. The emergence of the digital library mirrors the growth of e-learning (or distance learning) as the virtual alternative to traditional school attendance. As the student population increasingly turns to off-campus alternatives for lifelong learning, the library must evolve to fit this new educational paradigm or become obsolete as students search for other ways to conveniently locate information resources anywhere, any time.

34 Library Cooperation to Library Consortia

Growing dependence on digital information resources will create market pressure for the creation of cooperative solutions for long-term preservation. The charter of library consortia will enlarge to accommodate development of mass storage facilities serving a range of institutions. This will be more cost-effective and more reliable than individual solutions. Developments of such consortia are UGC-Infonet E-Journal Consortium, INDEST, NCSI, HELNET etc.

35 Collection Developments to Content Development

An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds. Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge. *(Budapest Open Access Initiative)*

4 VISIONS

41 Libraries as Gateways to Knowledge

In the context of above changing scenario academic library and information centers will play a vital role in education, like resource learning center. Basically it will be a self learning center. Any user will get any type of information or learning materials in one place. Individual library or information center can not be self sufficient. All information or other such center that holds any bit of information will be interconnected through networks. It will minimize the gap between information and its users. Hence libraries will be gateways to knowledge through:

- Networked Based Library and Information Services
- Library Consortia.

42 Application of latest technology in LIS

In the modern library and information system and service, technology plays an important role in information selection, processing, storage, retrieval, communication, sharing and dissemination. The invention of computer, communication and web technology are major milestones in information management.

Following are some of the important development, which should be applied in library and information system:

- Information technology
- Communication technology
- Web technology
- Optical storage media technology
- Search technology
- Information portals
- Electronic / Online learning
- Digital Rights Management (DRM) technology
- Online information services
- Wi-Fi technology
- RFID technology
- Leaser technology
- OCR and OMR technology, etc.

43 Nature and type of Library and Information Service

Apart from the general library and information services the new services with the help of latest technology should be provide to the users according to their needs. These are as follows:

- Electronic resources: it includes:
  - Electronic journals (e-journals)
  - Electronic books (e-books)
  - Electronic archives (e-archives)
  - Electronic theses and dissertations
  - Electronic databases (e-database)
  - Electronic proceedings (e-proceedings)
  - Electronic content (e-content)
  - Electronic text (e-text)
  - Electronic articles (e-articles)
  - Electronic audio books (e-audiobooks)
- Institutional repository
- Database service
- Online reference service
- Overdue notices
- Security system
- Online current awareness service (e.g. RSS)
- Online SDI

44 Application of open source software

Open source software will play an important role in the academic library and information service to prevent the ever increasing cost and licensing condition of commercial software. The open source software refers to software in which the source

code is freely available for others to view, amend, adapt and use under GPL (GNU Public License).

Some open source software used in library and information management may be categorized into to groups; a) Integrated library management software (ILMS), and b) Digital library software (DLS). Some of the available software are:

ILMS	DLS
Koha, Avanthi, Emilda, PhpMylibrary, OpenBiblio, WEBLIS, OpenILS, PhpMyBibli, PMB, Learning Access ILS, FireFly, etc.	GSDL, CDSware, DSpace, Eprints, i-Tor, MyCoRe, Fedora digital object repository management system, etc.

5 Challenges

To fruitful the above visions, academic library may face different problems, such as:

- Standard e-resources
- Technical manpower
- Technical support
- Finance

51 Standard e-resources

There are so many drawbacks in the selection of standard e-resources available in the market. Such as :

- Product quality
- Licensing and rights issues are complex
- Varied pricing models and access types
- Lack of good competitive/alternative products
- Delay in content updating
- Unfriendly user interfaces
- Lack of flexibility in adding IP address

52 Technical manpower

To maintain the latest technology and equipment professional manpower with sound technical knowledge is needed. There are very few in number of such technical manpower in the field of library and information profession.

53 Technical support

- Technological obsolescence (Software as well as hardware)

54 Finance

- Ever increasing subscription renewal costs
- Price difference: business/corporate organizations
- Unreasonable pricing models (Ex. More you use more expensive)
- Extra cost for Archival access, Long-term storage, etc.

6 Requirements

To efficiently manage the above challenges following skills are required for the library and informational professionals :

- Effective communication skills
- Project management skills
- Creative thinking skills
- ICT application skills
- Information literacy skills
- Self management skills

- Problem-solving skills
- Legal issue skills
- IPR in electronic environment skills
- Effective team relationship skills, etc.

7 Conclusions

The development of modern technologies must be considered in the overall context of initiatives to unify the academic campuses and transform the learning process through innovative technology. Economic, social, and cultural pressures are forcing academic institutions to reinvent themselves. As in the business process re-engineering activities of the last decade that transformed corporate enterprises, education organizations are now viewing themselves in a new light. New types of students and changing student expectations are driving the integration of core campus functions and deployment of student services on the Web. Fragmented, monolithic approaches are falling away as educators realize the need to link learning and administrative resources in a more effective way to become a 'knowledge enterprise'. A mix of sophisticated digital and Internet-based services and rapidly expanding global digital content will be possible to create a 'virtual learning environment' that delivers the capability to enhance the classroom experience or conduct learning apart from a physical campus. The digital library and web based contents will be core component of virtual learning environment. These developments are extending role of the library and changing the relationships between the library and other parts of the academic enterprise.

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