

Establishing Digital Libraries in the Technical Institutions: A Case Study

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Abstract - Today in this modern world from childhood to old age, everyone is using internet in everywhere. Right from home to research centers, Internet are used. In order to keep pace with this trend and meet user needs it is essential that libraries must incorporate criteria for the selection of materials in new formats, while also maintaining traditional collections. The librarian is also forced to use IT tools effectively to render services and to redefine the process of collection development. This articles deals with various issues related to establishing the digital library involves acquisition, preservation, copyright, licensing and access to these electronic resources which are for more critical that the print format.

Keywords: Electronic libraries, electronic resources, Digital library, setting up DL

I. INTRODUCTION

The usage of the Internet became widespread firstly in college campuses in the 1990s, and in many ways the Internet is a direct outcome of university-based research. Use of the Internet is a part of college students' daily routine, in part because they have grown up with computers. The growth of internet and the availability of enormous volume of information in electronic / digital form have necessitated the growth of e-libraries. By adopting emerging technologies, libraries are reshaping its collections and services by organizing, managing and disseminating information in an electronic format. Due to an explosion of electronic resources in the form of journals, books, newspapers, magazines, data, images, music and other audio, videos etc. it has become essential for libraries to store information electronically. As the electronic resources change at a very rapid pace, finding ways to manage them effectively, from selection to licensing is becoming a major challenge for libraries. There are certain issues related to e-resources like acquisition, access restrictions, authentication, copyright, preservation, software and the user interface. In addition to acquiring and managing e-resources, it is also essential that library professionals must educate users on the usage and access to electronic resources.

Libraries have evolved from paper based storehouse of books and journals, into distributed network of electronic information and knowledge, now known as electronic libraries (E-libraries). In electronic, information is stored

electronically and made accessible to the users through networks. Because of the user preference for the electronic format, these resources are becoming essential in library collection. The collections in E-libraries are developed and maintained to meet the information needs of a given user community. "Electronic resources" refer to those materials that require computer access and may either be accessed locally or remotely via the internet.

II. E-RESOURCES AND COLLECTION DEVELOPMENT

The libraries, along with their traditional holdings have now added various types electronic information resources like E-Journals, E-books, Full-text databases. E-reports, CD ROM and DVD-ROM databases, online databases, and internet resources as depicted in below;

Libraries have started subscribing the e-resources because of their multi dimensional features compared to the print sources. Different skills and systems are required to handle and manage these resources. Some of the advantages of e-resources are they allow remote access across geographical barriers, can be simultaneously accessed by more than one user, support searching capabilities with unique features ie. multimedia information, and save physical storage space and do not require physical accessing e.g. receiving and binding.

Although e-resources offer above mentioned advantages, there are certain issues like infrastructure costs, need of technical support / training, concerns about copyright issues and archiving, complex licensing agreements and lack of uniformity and consistency in the format / user interface etc. Collection development is the process of systematically building library collections to serve the needs of the users. It is essential to answer certain questions before developing an e-library like "why do we need an e-library collection?", "Who are our users and what are their needs?". How the collections will be organized and accessed. Due to budget constraints, it is essential to evaluate e-resources before purchase, based on an in-depth knowledge of the user's needs and availability of electronic resources enables remote access to the information, it also simultaneously presents certain issues and challenges not encountered with traditional materials.

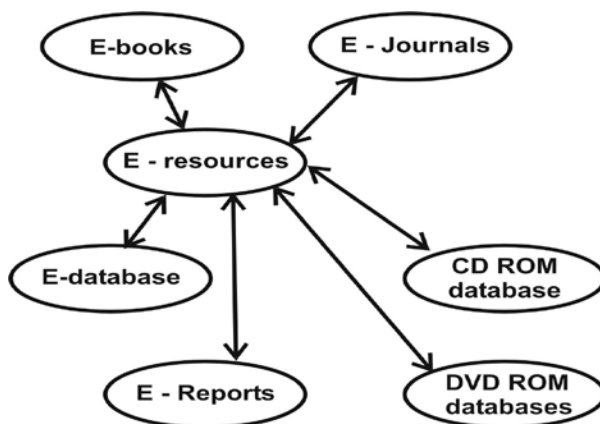


Fig.1 Collection Development

III. DIGITAL RESOURCES/E-RESOURCES IN TECHNICAL INSTITUTIONS

Digital or Electronic Resources are subscribed by the technical institutions are mandatory in India. Some of the E-resources subscribed by the engineering colleges are IEEE (IEL Online), ASPP, ASCE, ASME, Science Direct, Springer, McGraw Hill, J-Gate, GREENR, ASTM, N-list, NPTEL, ACI, Delnet, Knimbus etc. in the professional colleges.

The e-services provided are Library’s e-group is e-mail group and library OPAC though the intranet connected systems within the campus. The communications, circulars and other important infrastructures are sent through the library e-groups services collectively.

IV. ISSUES AND CHALLENGES IN DEVELOPING DIGITAL LIBRARIES

The challenges of integrating electronic resources and technologies are many and need to be considered including content, functionality, pricing, infrastructure, access, technological obsolescence, licensing ownership and copyright. Therefore, before purchasing e-resources it is essential to evaluate and form policies to integrate this new technology as described below.

V. CONTENT AND PRICING

It is essential to determine the media / format in which the content should be acquired, frequency of updates, the availability of back issues, archiving policies etc.

Pricing models of electronic resources vary significantly. Libraries while subscribing should consider the cost and other additional benefits like savings in physical storage, increased availability, improved access or functionality. In terms of access and archival, the best model which meets the needs of the library should be considered.

VI. INFRASTRUCTURE

It is essential to ensure that library has proper infrastructure i.e. hardware and software and has the capability to provide and effectively maintain access to resources on an ongoing and cost effective basis.

The various methods of access; IP-authentication or login / password need to be considered. Access via IP filtering is often preferable because it provides simultaneous access to multiple users. Also, IP-address recognition allows authorized library users to access content from outside the physical boundary of the library via a proxy server. The resources should be compatible across a wide range of platforms and web browsers. Library should also provide training to its users about the resources and browser requirements.

VII. FUNCTIONALITY AND RELIABILITY

The interface should be user friendly, easy to navigate, and users should be able to save search history etc. It should offer a powerful and flexible search engine with features like keyword and Boolean searching, full-text searching, truncation, relevancy ranking etc. The system on which the e-resources are hosted should be available 24 / 7 and reliable with minimum downtime.

VIII. TECHNOLOGICAL OBSOLESCENCE

The biggest challenge in e-collection development is the obsolescence of hardware / software required to access electronic information. In order to ensure longer life of the electronic information, a continuous development and up gradation of information storage and access to techniques and technology is a must. It is also essential to consider the provision for migrating files to new formats / platforms, to keep up with technological advances.

IX. ARCHIVING / PRESERVING E-RESOURCES

A major concern is archiving and preserving e-resources for the future use, because libraries do not have ownership of the e-resources, but can only access them. Libraries may want a guarantee that if they cancel or terminate their subscriptions, they have the right of perpetual access to previously subscribed contents. Consideration should be given to whether the content provider is compliant to LOCKSS, Portico or other similar types of archival products.

X. COPYRIGHT

Copyright is a form of intellectual property that gives the author, of an original work exclusive right for a certain time period in relation to that work, including its publication, distribution and adaptation, after which time the work is said to enter the public domain. Since the entire electronic library is available online, it comes under the Copyright Laws and its contents should not be reproduced or electronically transmitted.

XI. LICENSING ISSUES FOR E-RESOURCES

Unlike print publications, e-resources are not purchased outright and usually require a license agreement to the signed. Prior to the purchase, the license agreement must be reviewed and negotiated as it describes the authorized uses and users of licensed information. The library should ensure that as a part of the license agreement. The vendor provides sufficient advance notification in relation to renewals to allow for sufficient lead time to undertake an effective review of the resource.

XII. RENEWAL AND REVIEW OF USES

Before renewal of any resource, the library should review usage statistics to determine effective use of the resource. The library should demand from the vendor statistical reporting complaint usage of e-resources. The library should be able to ensure that library budgets continue to be spent on resources that support the overall mission and objectives of the organization and remain relevant and cost effective.

XIII. FUTURE OUTLOOK

The success of a electronic library depends upon the computers, communication skills and knowledge of library professionals in connection with modern technology. Future trends point toward the need for extensive research in electronic libraries and for the transformation of libraries as institutions. The present ambiguity of terminology is hindering the advance of research and practice in electronic libraries and in our ability to communicate the scope and significance of our work.

Goldner (2010) study suggested the following concern:

1. Most library computer systems are built on pre-web technology. Transformation is required in terms of deployment of web 2.0 architecture.

2. System distributed across the net using pre-web technology is harder and more costly to integrate. Security issues are needed to address.
3. Libraries store and maintain much of the same date hundred and thousands of times Collection assessment is required across the E-library database.
4. With library data scatter across distributed systems the library's web presence is weakened. A comprehensive framework needs to install.
5. With libraries running independent systems collaboration between libraries is made difficult and expensive. Inter-libray cloud is required to be installed.
6. Information seekers work in common web environments and distributed systems make it difficult to get the library into their workflow.
7. Many systems are only used to 10% of their capacity. Combining systems into a cloud environment reduces the carbon footprints, making libraries greener.

XIV. CONCLUSION

The development of digital library is a long and challenging process and libraries need to apply proper skills in planning the collection and manage both print and e-resources. During the last decade, the status of libraries has drastically changed due to emergence of e-resources. Also, there is a rapid urge of the user community to get more information in e-format. Replacing printed resources with electronic materials can reduce the cost of processing, shelving and binding. Moving towards electronic library from the traditional library needs a balanced collection between printed and electronic forms.

Since a vast amount of information is available in electronic formats on Internet, Librarian must not only identify and facilitate access to electronic information resources, but also educate library users about their availability and use patterns. Protection of intellectual property, security of electronic resources, user training etc. should also be considered as effective management of information within the electronic library.

REFERENCES

- [1] Kovacs, Diane K Kovacs, Elkordy Angela (2000). "Collection development in cyberspace : building an electronic library collection", Library Hi Tech Volume 18 issue 4 : 2000.
- [2] Avasia, Maya (2001). "Electronic resources : Collection development". Proceedings of Caliber 2001.
- [3] Kovacs Diane K and Robinson Kara L (2004). "The Kovacs guide to electronic library collection development.
- [4] Goswami S K & Ghosh B.K. (2002), Digital library environment – Indian context In A Chatterjee, et al (Eds.) Digital information systems and services (pp. 229-234) Kolkatta IASLIC.
- [5] Bhattacharya P (2004) "Advances in digital library initiatives : a developing country prospective", The International information & Library Review 36 (3). pp. 165-175. 175.
- [6] C L Borgman, C L (1999), "What are digital libraries? Competing visions", Information Processing and Management, 35 pp. 227-243.
- [7] Goldner, M (2010), "Wind of change ; Libraries and Cloud Computing", OCLC Online Computer Library Center, Accessed on 06.08.2002.