

Information Resource Management in Libraries: Key Issues

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ABSTRACT

The paper describes the issues related to electronic information resources management in college libraries. Highlighted the significance of electronic resources in the changing need of user's expectations. The challenges faced by professionals in reaching information to users in the internet era have been discussed.

KEYWORDS: Information Resources, College Libraries, Management, Electronic Information Resources.

INTRODUCTION

Today information and communication technology surpassed all other technologies and it is playing a crucial role in the economic, industrial, social, scientific and technological development of the society. It has brought dramatic changes in the structure and functioning of libraries and information centres at the global level. Its applications to libraries and information filed are becoming popular because of the complexity involved in information storage and retrieval. Though, over the years, information resources of libraries and information centres have grown adequately, but the problem of effective use of information resources among users is still a matter of great concern. Given the widespread use of e-information resources by users, particularly journals and databases, there is a growing demand for IT-based information services by library users for meeting their information needs, mostly on an 'individual basis'. Users of libraries desire quality information services in terms of up-to-date, timeliness and relevancy in its contents to meet their satisfaction. Print information resources have grown many-fold over the years, but their access and use among users is not effective because of their lack of digitization and networking.

Information sources of a library or information centre are the key elements to support the information needs of its users. To meet their information needs adequately, users need the availability and accessibility of electronic information sources (including conventional information sources), a variety of information services (including e-services), IT- infrastructure and a learning environment. Any confines on the supply of these resources may affect adversely the fulfillment of their information needs, which leads to reduced productivity in their academic activities. Therefore, all these resources make a library a dynamic, productive and useful facility for the users engaged in their academic activities. To keep these resources productive and useful to their users, the issues faced by information professionals must be analyzed from time to time for their needed improvements for effective use among users.

Information resource management consists of identifying and accessing information resources, categorizing them and providing them to the required users in time. IRM is the process of managing the life cycle of information resources, from their creation/subscription to their use by the end users, and on to archiving and eventual destruction of non-permanent data. The term IRM can refer to software resources, physical supplies and materials, or personnel involved in managing information at any stage of use.

ISSUES RELATED TO INFORMATION RESOURCE MANAGEMENT (IRM)

Electronic information resources have received considerable attention during the last few years as a major obstacle to building sustainable learning information resources in libraries. Despite evidence of increasing concern about digital resources, there are numerous technical, organizational, legal and economic barriers to protecting and preserving digital assets. Following are some of the major issues associated with electronic information resources.

a. Physical Deterioration:

The first challenge is digital preservation, media on which digital content are stored are more vulnerable to deterioration and catastrophic loss than some analog media such as paper. While acid paper is prone to deterioration in terms of brittleness and yellowness, the deterioration does not become apparent at least six decades; and when the deterioration begins, it progresses slowly.

It is also highly possible to retrieve all information without loss after deterioration is spotted. The recording media for digital data deteriorates at a much more rapid pace, and once the deterioration starts, in most cases there is already data loss. This characteristic of digital forms leaves a very short time frame for preservation decisions and actions.

Media failures and undetected deterioration of storage media remain a problem for digital preservation, but the issue of media longevity has moved into the background. There have been significant improvements in the quality and longevity of almost all digital storage media. Although there is no “permanent” digital storage medium that meets standards of longevity and durability established for “permanent paper” or microfilm, improvements in magnetic and optical media reduce the frequency at which digital materials must be copied to new media to prevent deterioration or loss.

b. Digital obsolescence:

Another challenge, perhaps a more serious and important one, is the problem of long-term access. Digital technology is developing extremely fast, and one retrieval and playback technology can become obsolete in a matter of years. When faster, more capable and cheaper storage and processing devices are developed, the older version gets replaced almost immediately. When a software or decoding technology is abandoned, or a hardware device is no longer in production, records created under the environment of such technologies are at great risk of loss, simply because they are not tangible anymore. This process is known as digital obsolescence. This challenge is exacerbated by the lack of established standards, protocols, and proven methods for preserving digital information.

The the problem of dependency on rapidly changing hardware and software seems intractable unless it is broken down into several smaller discrete problems and issues. Despite debates in the digital preservation community about the the best method for ensuring the longevity of digital materials, most recent progress is the result of a focus on particular aspects of the problem and attempts to find solutions to smaller pieces of the puzzle.

This approach also has the advantage of bringing research on high-performance mass storage systems, metadata and representation schemes, rights management, and user evaluation to bear on the challenges of longevity of digital materials.

c. Issues related to Standards:

Technical standards form a foundation for much of what makes digital libraries possible. Standards and protocols fix storage, data formats, bibliographic control, display, retrieval, transport, and distribution are embedded in the infrastructure that makes digital libraries accessible, manageable, and usable. In the area of digital preservation, standards issues primarily concern encoding, data formats, and representation schemes. In the real world, there are several limitations to reliance on standards alone as a digital preservation strategy.

First, there are many areas for which no technical standards yet exist. Commonly, new types of media, new forms of representation, and other innovations precede the development of either open or proprietary standards. Typical examples today include digital audio, digital video, color representation schemes for images, and multi-media objects, all of which are being generated in competing formats.

Second, in the absence of open standards for many aspects of digital objects, proprietary standards become the de facto standard. Even where open standards exist, they may not be effective because a proprietary standard is technically superior to an open standard or because few or no vendors produce products that conform to the open standard.

Third, standards change and evolve. Even strict adherence to standards will not eliminate the need eventually to convert digital materials in obsolete, but standard formats, to newer formats.

Finally, even if there are accepted and implemented standards for the types of materials that a digital library collects and wishes to preserve, the digital library developers may not be able to enforce those standards on the firms, organizations, and individuals that supply information to it.

d. Migration of digital materials:

Migration is the most widely deployed technical strategy in repositories that have established digital holdings. It is a set of organized tasks designed to achieve the periodic transfer of digital materials from one hardware/software configuration to another or from one generation of computer technology to a subsequent generation. Migration involves some transformation of the original byte stream on new media. During the process, the byte stream may be corrupted by software bugs, mishandling of data, or mechanical failure of the input or output devices. Changes to the

original byte stream may involve loss of information, loss of functionality, the introduction of errors into the target files, or changes in the way information is rendered to users.

e. Legal Issues:

Ownership and copyright is not simple in the digital preservation world, where migration copies, archival copies, derivative versions and other states of an object exist. Meeting legal requirements for preserving digital objects requires careful, comprehensive, ongoing approaches that avoid risk to the organization or objects, and that enable effective mitigation as concerns arise. Through procedures, protocols, and documentation strategies provide the most effective organizational response for legal issues.

f. Intentional Attacks:

Unfortunately, in the world we live in there are some people who intentionally destroy or damage digital assets for a variety of reasons. As much of the information is currently located in open-access repositories accessible via the internet it is also vulnerable to attack. This is a threat to both long and short-term storage.

g. Organizational Failure:

This is a massive threat to long-term digital storage of any kind. Technology is so dynamic not only in innovations but also in movement with vendors and competition killing off what seemed to be at one point very strong tech players. For this reason, it would be folly to rely too heavily on any one vendor/system/sponsoring organization because they change and often change quickly. Digital assets that need to be preserved long-term must be protected from the failure of any one organization. Unfortunately, this is easily said but hard to plan for in such a dynamic environment.

SOLUTIONS AND SUGGESTIONS FOR CHALLENGES

Today, technology is advancing at such a rapid pace that what is learned today will soon be obsolete. Therefore, it is more important several basic steps to be taken to overcome the issues for the effective use of digital information resources to meet the users' expectations:

1. Efficient Professionals: Library professionals should be well-trained to work in the digital environment. Unfortunately, there is a scarcity of library professionals who can use the latest devices with ease and maneuver application software tools to provide library and information services in the digital age. They can only face the challenges of the digital age if they have to learn constantly (but selectively) and experiment endlessly. They need to love learning, be able to absorb technology and be inclined to innovate.

2. Improve Knowledge and Skills: There is a massive need for re-skilling the existing knowledge of library professionals as far as:

- Library faculty should continuously develop and restructure curricula to encourage learning.

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- Library and information departments in the universities should plan ahead of time and develop education programs that respond to market needs, fill skill gaps and prepare manpower for easy transition to digital information handling.
- Coordinated and well-planned research effort in LIS research is desired to help the professionals to better serve the society but also make them more indispensable for employment.
- LIS programs must accommodate technological developments leveraging applications for better performance in services.

3. Maintain Utility of Library: It is assumed by the users that Internet is the solution to every problem. Any information can be obtained through Google. So, there is no need to go to the library and users expect that their required information may be delivered to their desktop. It is, therefore, a serious challenge for Library professionals to attract users to libraries and maintain the utility of the Library.

4. Balance in Developing Library Collection: The history of technological innovation shows that all users don't have the same preferences. Some people like printed books, whereas some like information in digital format. So library professionals need to keep a balance in the digital and print collections of the library.

5. Preservation of Digital Materials: Digital material life is unpredictable due to the problem of format obsolescence of software and hardware. Software of different firms sometimes does not support formats used by other software and hardware becomes obsolete with the passage of time and digital material preserved on old storage devices may not be accessible with new hardware. Data stored on such storage devices becomes useless until converted to the latest devices well in time.

6. Awareness with Open Source Systems: Open Source Solutions are the emerging trend today and started dominating the information industry. In particular, libraries are the great beneficiaries of this open-source technology. Fortunately for Digital Library Applications, there are a lot of open source systems available namely DSpace, Green Stone Digital Library (GSDL), e-prints, fedora, Linux, etc. They are not only cost-effective but also capable of handling DL challenges like content & metadata management, information dissemination, etc.

7. Accessibility of Digital Materials: DLPs should continue to refine library instructional methods to enhance user skills. As we know nowadays most library users are computer literate, but even they are not able to access library resources properly. It is, therefore, a challenge for library professionals to impart training to library users about the use of digital resources available through the library website or within the library.

8. Open Access Information: There are many types of open-access the information is available online, free of charge, and free from most of copyright and licensing restrictions. It is the responsibility of the library professional towards the user to provide information accessible with the right manner.

9. Digital Rights Management: DLPs should be aware of Digital rights management (DRM). DRM is the name given to a set of technologies used by publishers of digital content (like music, video, or electronic texts) to control

how content consumers can use information. DRM technology creates intentional and artificial information usage barriers. In doing so, it compromises libraries' mission of providing free access to information – “free” in the sense that users can make their determination about how to use that information appropriately and ethically.

10. User Support Services: We are already seeing a transformation in the world of libraries & library professionals. Libraries are becoming less important for the materials they collect or house, and more important for the kind of materials they obtain in response to user requests. These trends imply less in-person mediation by library professionals, as patrons access information directly, but more of the scenes mediator role in the selection and creating annotated guides to external resources. This means a greater role for library professionals as instructors, troubleshooters and guides.

Digital library user services include the following important services:

- **Digital Conversion Service:** which digitizes original materials including books, photographs, journals, rare documents etc.
- **Course Reserve Service:** The Digital library supports the curriculum needs with its course reserves service, which offers books, coursepacks, CDs, and other physical items available to students. These items are available to students at the libraries for short periods to maximize access to high use and high-demand materials.
- **Research Data Services:** Research Data Services is a growing network of services throughout the library to assist users during all phases of the research data lifecycle. From preparing data management plans for grant proposals to sharing and preserving data, it provides resources to help the user with their data.
- **Digital Serials Services:** Digital Serials Services is a collection of information from back issues of serials, journals, newspapers and miscellaneous research material in various formats. Hence, we can say that libraries are shifting their focus from 'acquisition to access needs' to realize its implications. This often requires a significant investment in equipment and training. It requires the development of an infrastructure to support document delivery. The process of selection can become even more time-consuming for a library that is pointing users to remote materials than for a library that is buying its material.

CONCLUSION

One essential element that guarantees the efficient and successful delivery of information services to patrons in libraries is information resource management, or IRM. The difficulties of managing digital resources, guaranteeing fair access to information, incorporating new technology, upholding data security, and adjusting to users' changing needs are some of the fundamental problems with IRM. Libraries must take proactive measures to address these issues, investing in staff training, putting a priority on user-centric services, and utilizing technology to expedite resource management procedures. In addition to assisting libraries in fulfilling their primary goal of granting access to knowledge, effective IRM also improves libraries' capacity to adjust to the quickly evolving information world. In summary, proactive and flexible administration of information resources in libraries is necessary for their effective

operation. Libraries may continue to play a crucial role as information hubs in the digital age by remaining aware of important concerns and inviting innovation.

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