

Preservation of E-Resources: Issues and Challenges In Digital Environment

Mr. Karan Singh¹

¹Ph. D. Research Scholar, Sambalpur University

Abstract - In this 21st century, we all are living in digital environment, so when we preserve the electronic resources we should think about its accessibility for present as well as future generation. Preservation generally means keeping an objective safe of harmful effects such as loss, damage, destruction etc. The rapid growth in creation and dissemination of electronic resources has emphasized the digital environment's speed and ease of dissemination with little regard for its long-term preservation and access. Purpose of this preservation is to ensure protection enduring value for access by present and future generation. Preservation of e-resources has been a great challenge for libraries. Electronic resources includes a variety of object types such as electronic journals, e-books, e-databases, data sets, reference works, and web sites etc. which are born digital or which have their primary version in digital form. Its accessibility and use by future generations depends on technology which very rapidly evolves and changes. Hence, ensuring access of e-resources for future generation of users is a big challenge for libraries.

Key Words: Preservation E-resources, Digital, Libraries, Generation, Issues and Challenges, etc.

1. INTRODUCTION

In this present age electronic resources are the most vital and essential resources for the collection development of library. Libraries down the ages have been tailored towards teaching, learning, scholarly work and research activities with a view to achieving the mission and vision of the institutions. The entire library is taking the advantages of the e-resources due to its more tremendous quality than the print resources. The main objective of the library to fulfill the user need and it's the primary duty of the staff and the librarian that how to satisfy the user need towards the library. It is true that most of the user now a day's very much interested to use the internet and they don't want to go to library because they don't have time to stand in queue. By using the e resource the library are saving the time, space, and human power. As libraries acquired an increased number of electronic resources, such an online journals and databases, they realized the pressing need for a record keeping system that would help manage the details to maintain the resources. For e-resources preservation, the first step is digitalization. Digitization is nothing but a process for conversion of hard copy materials to an electronic format. Often the digitized materials can be made accessible via Internet, but they can also be disseminated on CD's or other media.

Preservation of e-resources is a broad term used to describe both the maintenance and the safe guard of electronic resource for the predictable and the distant future. E-resources preservation is a crucial part of the construction and management of any digital collection. The physical media that record knowledge has undergone steady revolution with the technological advancements and innovations. Now we are in the digital era and information is recorded, stored, retrieved and disseminated in the digital form. The introduction of digital technologies into the process of production, distribution and storage, e-resources challenge the capacities of libraries, archives, museums and other cultural institutions to carry out their responsibilities for preservation.

2. DEFINITION OF E-RESOURCES PRESERVATION

According to Trusted Digital Repositories, "Digital Preservation encompasses a broad range of activities designed to extend the usable life of machine-readable computer files and protect them from media failure, physical loss, and obsolescence." Several terms will be used throughout this lecture. They are defined here. In some cases, these definitions are for consistency within the presentation and are not indicative of general consensus within the community.

- **Born digital**– Materials that are created in bits and bytes rather than being digitized from paper or other analog medium
- **Digital archiving** – storing the digital information for long term preservation.
- **Digital preservation** – keeping the bits and bytes safe and unaltered for a long period of time.
- **Digitization** – converting materials in non-digital form (analog) such as paper, to digital form.
- **Emulation** – running old products by recreating the environment of the old hardware and software without actually using the old hardware and software.
- **Long-term access**– the ability to use a preserved object long after its initial preservation
- **Migration**– moving a digital product from one version of a program, operating system or hardware Environment to another over time
- **Recapturing**– copying the content from the original resource again in order to ensure that changes made to the resources are incorporated in the archival version

- **Refreshing**– moving a digital object to a new instance of the same media, retaining the same operating system and hardware environment. (Singh, 2015)

2.1. Why Preservation is required in Information Centers:

All in information centers face several kinds of preservation problems. Some of the most common ones for small Libraries and Information centers relate to climate control, biological pests and brittle information documents and books.

- Adverse environmental conditions.
- Temperature and Humidity.
- Light
- Biological Pests.
- Insects.
- Molds and Mildew.
- Brittle Papers.
- Researchers, Students and Staff require ongoing availability of digital documents, traditional documents or old information and current information for teaching, learning, research, and developments.
- Libraries, archives and other custodians have responsibilities of their properties so institution should plan for digital materials including their maintenance, preservation and distribution.
- The main object of libraries, archives and other custodians is to satisfy the user expectation and user requirements. They should preserve the material in all formats.
- Digital resources are playing vital roles to fulfill the requirements of the users working toward higher education and research. (Singh, 2012)

3. ELECTRONIC RESOURCES AND THEIR FEATURES

Electronic resources” refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally. Some of the most frequently encountered types are:

- E-journals
- E-books
- Full-text (aggregated) databases
- Indexing and abstracting databases
- Reference databases (biographies, dictionaries, directories, encyclopaedias, etc.)
- Numeric and statistical databases
- E-images
- E-audio/visual resources

4. FEATURES

1. The e-resources of library provide access to literary, thousands of magazines and newspapers which may not possible to subscribe in paper format.
2. Some e- resources provides back date issue and volumes of journals and E-books which is very much helpful for user those want both recent and past news.
3. User can access the e-resources by particular subject from many different publications at the same time without having to search each publication separately.
4. E-resources especially useful for finding information that not yet available in books or obtaining up-to-date information on current events or issues.
5. E-resources provide many authoritative, accurate, current, objective reference materials which may not readily available through a search engine like Google.
6. E-resources are free for library user which is available in 24 hours of day and 7 days of a week; you don't have to wait for the library to open to access these.
7. Simultaneously the user can use the resources of the library by many users which we cannot access in the print format.
8. It has no time and space barrier like print resources.
9. It saves the space of the library as compare the print resources.
10. The e-resources provide the current information and extra value added service in the time of subscription.

5. ISSUES AND CHALLENGES OF PRESERVATION

5.1. Justification:

The library has to assess the needs for obtaining the budget related sanctions. LIS professionals need to be more responsible for managing their budget effectively. They should ensure that they were spending money on needed resources, those e-Resources that were being used. In this regard, 'cost per user' formula will help the librarians for making decisions whether or not to go for a certain e-Resources.

5.2. Open Source:

These resources are free and downloadable. Even though they are easily acquired, the continuity of availability of such resource would be an important issue.

5.3.Trail Access:

Vendors and aggregators are coming out with newer marketing techniques such as providing trail access of the resource with nominal fee or free many a times. But such an access is limited for a certain period.

5.4.Multiple Access Models:

The prices e-Resources are offered in a variety of access models. Different subscription models are made available depending on the requirement of the libraries. These include for single site, different geographical sites. The content is made available for the current year as well as for back years as archival.

5.5.License Agreement:

Libraries need to go into deep when they enter into license agreement, as it contains several legal issues. This agreement differs from vendor to vendor and is not uniform. Hence each time before any e-Resource is considered for acquisition, one has to be careful in NOT violating the terms and conditions of such agreements.

5.6.Authorized Users:

In general e-Resources are subscribed and made available on the campus network and or wide area network which are IP-enabled; there is need to define the authorized user in order to prevent the e-Resources from misuse. The library should ensure that only authorized patrons should get access to the content; the range of IP-address, registration of Proxy Server, are the issues to be sorted out for better management of e-Resources

5.7.Hardware & Software:

Considering a suitable hardware and software for the proposed e-Resources is an issue. The content of e-Resource usually is not stored in the library

5.8.Tracking and Linking:

The website of the e-Resources provider or the host will have different administrative modules. Exact location of these modules, the procedure for logging on their site, setting parameters are some of the issues to be considered.

5.9.Usage Statistics:

Generating usage statistics is another challenging task Different procedures are being adopted for generating usage statistics. While some publishers do allow libraries to generate usage statistics on their own, some do not.

5.10.Trouble Shooting:

A directory of trouble shooting should be compiled and made available to the users. This will be useful both for the library professionals as well as the end-users.

5.11.User Feedback:

Since the E-Resources subscribed is meant for use, feedback from users is a vital input in the decision making process. User satisfaction, usefulness of the e-Resources, down-time analysis, rights of the user is some of the issues to be considered.

5.12.Monitoring and Evaluation:

In order to evaluate e- Resources, the library should obtain usage statistics, feedback from faculty, end users. Also if any serious issues like problem logs etc., are to be evaluated carefully.

5.13.Vendors' Role:

While the libraries play important role for managing their print resources, when it comes to e-Resources, the management of e-Resources is shared both by the libraries and by the vendors.

6.REQUIRED SKILL SETS FOR LIBRARIAN TO MAINTAIN THE E –RESOUR Technical Skills:

In the age of 21st century LIS Professional must be aware of emerging technologies. It has become increasingly important that librarians keep up with technology and have certain basic skills. In the current scenario library professional must have the knowledge of HTML, Networking, scripting languages, the ability to deal with the back-end of the OPAC,

6.1.Online medium:

LIS Professionals need to do so much online these days, way beyond basic catalog and database searching (which sure isn't easy either). Librarians have to be able to use search engines and use them well. They need to be able to find quality online resources.

6.2.Ability to troubleshoot new technologies:

It is just a part of the good user service we provide in libraries. Most of the time when you are working in library our user facing problem I using the scanner, fix the printer, and troubleshoot any other technology problems they may be having

6.3.Ability to easily learn new technologies:

Most of the time people comment that there are so many new technological things at the library that they can't keep up. Whenever we intimated to use new gadget in library we always asked to IT team of that organization to send an expert to the library to teach library professional how to use it.

6.4.Time Management Skills:

Time management refers to a range of skills, tools, and techniques used to manage time when accomplishing specific tasks, projects and goals. This set encompass a wide scope of activities, and these include planning, allocating, setting goals, delegation, analysis of time spent, monitoring, organizing, scheduling, and prioritizing. Initially time management referred to just business or work activities, but eventually the term broadened to include personal activities also.

6.5.Presentation Skills

This is a huge one. LIS Professional must have highly effective presentation skills. Suppose when he wants to implement a new technology or service for Library clients firstly he must create a proposal for management he must show that what would be the consequence of this new technology which tool to use to train staff, market the service etc.

6.6.Communication Skills

Communication has a great importance in providing better services to users. He communicates the value of library service to decision makers, staff and users. When he provides information to the user he must communicate clearly and respectfully with customers and colleagues. Always Demonstrates active listening skills with customers and colleagues in his workplace.

6.7.Customer Service

Nowadays librarians must be customer oriented. He can demonstrate a sincere commitment to customer service. Always he must try to observe customer needs & try to provide their desired information on time

6.8.Evaluation and Assessment Skills

LIS Professionals need to understand how any changes in the way the library provides services will affect all stakeholders. Sometimes he focuses on the needs of one group and ignores the fact that the changes that will benefit one group will not benefit another. With any change, librarians should create a list of all of the different stakeholders and actually discuss how it will affect each of them.

6.9.Managerial skills

In managerial skills we include technical skills, human skills & conceptual skills. Technical skills involve process or technique knowledge and proficiency in a certain specialized field. These skills are more important for Librarian also because library professional also dealing with a huge no. of staff doing the organization's work.

6.10.Knowledge of Policies, Procedures, Issues and Standards

- Maintains current awareness of professional issues impacting libraries
- Demonstrates knowledge of library policies, procedures and service standards

6.11.Knowledge of Information Sources & Services

- Develop specialized subject knowledge about the purpose of the organization
- Identify materials appropriate to customers' requirements and their abilities
- Expert knowledge in the content of information resources and ability to critically evaluate and filter them
- Develop and deliver convenient, easily accessible and cost effective information services to the users (CCFR)

6.12.Commitment to Life-Long Learning

- Take responsibility for the development of one's own professional career
- Remain knowledgeable in current events and technologies
- Pursues learning opportunities, personally or through formal training

7.ROLE OF LIBRARIAN TO MAINTAIN THE E-RESOURCES

1. Provides leadership in managing access and maintaining accurate information about electronic resources.
2. Coordinates the overall administration of the library's electronic resources management system (currently Serials Solutions).
3. Effectively communicates internally, with relevant departments, and externally, with vendors and publishers, on pricing, authentication requirements, access issues, MARC record loads, or other needs that arise pertaining to electronic resources
4. provides relevant statistical data and metrics, including usage and cost analysis, to support collection analysis and development decisions

5. Executes license negotiations with vendors and publishers, works closely with the university's legal office, and serves as contract initiator for materials purchased from FIU Libraries resource budget.
6. The libraries should deploy modern preservation and conservation tools such as technologically enabled ICT devices which will aid adequate storage and enhance the durability and longevity of information materials in the libraries.

8.CONCLUSION

After a brief discussion, it can be concluded that, Preservation of E-Resources: Issues and Challenges in Digital Environment must be given very high priorities for archives of e-resources in used in future generation. E resources preservation has gained considerable footing in the last few years. In the modernization era, we adopting the ICT are a must for preservation of importance and regularly used document. In India and around the world, much remain to be done in research, development and implementation before we can assume that our digital heritage will survive more than few year, its accessibility and use by future generation depend on technology which very rapidly develop and changes. There is no doubt that libraries need a system to manage their electronic resources throughout its "life cycle". Preservation Program is to develop a national strategy to collect, archive, and preserve the rapidly increasing amounts of digital content, especially materials that are created only in digital formats, for current and future generations . So that, the preservation of electronic resources is highly essential for the future generation to access and retrieved the resources are easily their institutions.

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