

Management of E-resources in Academic Libraries: Some observations

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ABSTRACT

Purpose: Academic libraries are acquiring e-resources to provide electronic access to documents for their users. The main aim of the article is to in-depth study of the management of e-resources in academic libraries. It tried to observe the types of e-resources, sources of e-resources, and availability and accessibility of e-resources which are useful to the academic library users. It also provides some suggestions to overcome the problems in the management of e-resources in academic libraries. Another purpose of the article is to trace the different e-resource management tools available for academic libraries.

Design/Methodology/Approach: This paper briefly discusses the Electronic Resource Management (ERM) and its importance in the library. This paper also examines the problems faced by the academic libraries due to the rapid growth in the number as well as the type of electronic resources. A comprehensive review of the literature and practical experiences have been used for the paper.

Findings: Software-based ERM tools are essential to manage the e-resources in the library. Collaboration between vendors and libraries can lead to a system design of electronic resources that fulfill the demanding and rapidly changing requirements of the users.

Value: Management of electronic resources is very important in the present age, where most academic library offers electronic resources to their users. This discussion will help librarians overcome the problems in e-resource management

KEYWORDS: E-resources, Management of E-resources, Electronic Resource Management, Academic Libraries

1. INTRODUCTION

Information and Communication Technology (ICT) has brought rapid changes in each aspect of our daily life along with library services. The concepts of electronic library, digital library, and virtual library came into the present situation. Information available in e-resources has many advantages over traditional resources. E-resources are available in web-enabled medium. A lot of developments have been witnessed in recent years in e-publishing. Publishers are traced on publishing costs, changing readership, changing user expectations, rights management, and archiving. Researchers are interested in easy access to full text. Hence higher education institutions started subscribing to electronic resources to meet the users' requirements and expectations.

2. STATEMENT OF THE PROBLEM

In the present information technology era, academic libraries and information centers are focusing on providing information through e-resources. Academic libraries offer e-resources in various easily accessible and usable formats like e-books, e-journals, e-databases, e-theses and dissertations, digital images, streaming video, sound, audio books, and web resources. Development of ICT is challenging for library professionals to manage the e-resources in the most organized manner. Library professionals are to acquire technical skills to manage the e-resources, to meet the technologically advancing scenario. This is the reason of the emergence of Electronic Resource Management (ERM).

3. OBJECTIVES

Academic libraries are acquiring e-resources to provide electronic access to documents 24x7 for their users. The main aim of the article is:

- ✓ To study the management of electronic resources in academic libraries in depth.
- ✓ To observe the types of e-resources, sources of e-resources, availability and accessibility of e-resources which are useful to academic library users?
- ✓ To identify the problems faced by the library to manage the e-resources.
- ✓ To provide some suggestion to overcome the problems in the management of e-resources in academic libraries.
- ✓ To trace the progress in different ERM tools for academic libraries.

4. ACADEMIC LIBRARY

The library which is associated with the academic institution is called the academic library. Generally, academic libraries are considered the heart of the institution. It serves mainly the academic community like students, research scholars, and teaching and non-teaching staff of the institutions. The resources of the academic library include the courses offered by the institutions. The collection of academic libraries consists of textbooks, reference books, journals, theses and dissertations, project reports, maps, atlases and magazines in print formats. Also, academic libraries are subscribing the online journals, e-books, and online databases for the benefit of students and scholars. The traditional and e-resources of the library's learning environment belong to the information related to the user's requirements. Academic library resources are considered as a good measure of an institution's excellence and quality.

5. ELECTRONIC RESOURCES AND ITS IMPORTANCE

5.1 Electronic Resources

E-Resources are resources in which information is stored in electronic format and which are accessible through electronic systems and networks. E-Resources includes a variety of publishing models, including OPACs, CD-ROMs, online databases, e-journals, e-books, internet resources, e-mail publishing, electronic link, and web publishing, etc. which may include text, numerical, and/or graphical data. Electronic Resources are becoming very important these days as they are more up-to-date, and can be accessed anywhere, anytime, crossing all geographical boundaries.

5.2 Types of E-resources

The types of e-resources and services that are available in libraries are:

- ❖ E-Books
- ❖ E-Journals
- ❖ E-Thesis and Dissertations (ETD)
- ❖ E-Databases
- ❖ E-News paper
- ❖ E-magazine
- ❖ E-conference proceedings
- ❖ E-Reports
- ❖ E-Maps
- ❖ E-Pictures/Photographs
- ❖ E-Manuscripts
- ❖ E-Audio
- ❖ E-Images,
- ❖ E-Data/ GIS
- ❖ E-Exhibitions
- ❖ E-Subject Guide
- ❖ E-Newsletters
- ❖ OPAC (Online Public Access Catalogue)
- ❖ CD-ROMs
- ❖ Email and Bulletin Board
- ❖ Web resources, etc.

5.3 Advantages of Electronic Resources

Electronic Resources have several advantages for libraries, users, authors, editors, publishers, and archivists. The advantages are: The cost of publication and distribution is less than the print versions.

- ❖ Save time by providing easy and instant access without wasting time for processing, printing, binding, and delivery.
- ❖ Eliminates printing, binding and postage costs
- ❖ Facilitate easy duplication
- ❖ Enable simultaneous access to a large number of users.
- ❖ Enable access 24x7
- ❖ Allow remote access from anywhere at any time
- ❖ Saves library storage space
- ❖ Integration of different media (Image, Sound, Video, etc.)
- ❖ Allow interactive facilities
- ❖ The data can be easily manipulated at a regular intervals and can be kept always up-to-date
- ❖ Easily preserve fragile/precious original materials
- ❖ Helpful for physically challenged persons

- ❖ Eco-friendly
- ❖ Provide hyperlinks to related additional resources

5.4 Disadvantages of Electronic Resources

The academic libraries face enormous challenges in the acquisition and access of e-resources. There are many disadvantages as mentioned below:

- ❖ The initial cost of e-resources is very high.
- ❖ Require special equipment to access which are expensive.
- ❖ Hardware and software compatibility problem
- ❖ Lack of compatibility among different publishers
- ❖ Lack of awareness on IT skills for usage of e-resource
- ❖ Use of products according to the user's requirement is not possible. It has certain technological restrictions.
- ❖ Lack of uniform standards in the retrieval of e-resources from different publishers create problems in their usage.
- ❖ Users have to acquire certain skills before hand in accessing the electronic documents.
- ❖ Copyright violation problem

5.5 Need of electronic resources in libraries

In today's digital environment e-resources are enacting a prime role in the library for providing information timely and precisely. Electronic resources in a present scenario are much more in demand as compared to print sources, because of the following benefits:

- i. Many users can access e-resources simultaneously.
- ii. E-resources can be searched via various search engines.
- iii. Knowledge sharing is easy and convenient via e-resources as compared to print resources.
- iv. E-resources can deliver efficiently and quickly to all the users.
- v. Research dissemination has become easy and time saving via electronic sources.
- vi. It can be stored a huge amount of information in a small space

5.6 Sources of E-resources

- i. Open source e-resources
- ii. E-resource provided by Publishers/Vendors
- iii. In house creation of e-resources

6. ELECTRONIC RESOURCE MANAGEMENT

According to Wikipedia, Electronic Resource Management (ERM) is the practices and techniques used by librarians and library staff to track the selection, acquisition, licensing, access, maintenance, usage, evaluation, retention, and de-selection of a library's electronic information resources. Librarians play a vital role in the management of e-resources. The following things are of importance for the management of e-resources:

i. Discovery – Librarians have important work in searching for new e-resources, also take faculty members' recommendations for special subjects e-resources recommendation Then librarian searches for information about the electronic a resource like bibliographic information of electronic journals, the subscription period, the package of electronic journals.

ii. Trial – Librarians must get a trial of electronic resources that they want to purchase for libraries and users. Also, the librarian trials the electronic resource with all users and takes their feedback for purchasing, then the librarian subscribes to the electronic resource for the library.

iii. Selection –The discovery process and trial process is completed, the librarian decided to purchase the electronic resource.

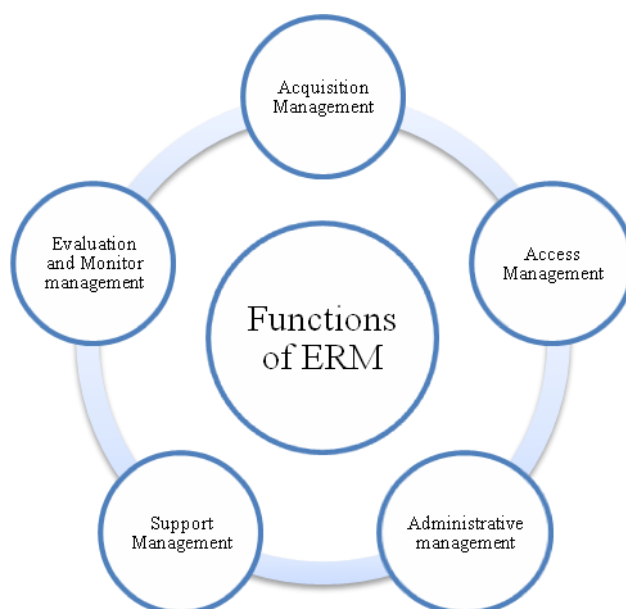
iv. Acquisition – If the library decides to subscribe the electronic resource, the librarian has to know the information about the license, copyright policy and the availability of the source. Also, when a library is purchasing electronic journals package, the librarians know how many journals are under the package and also the subscription period.

v. Access – Access to e-resources is very important, when the library has purchased an electronic resource, the librarians must know that it is well used by users and it can easily be accessed by library users.

vi. Decision –Electronic resource subscribed for a specific period. The librarian must renew the subscription or cancel it before the subscription period ends. The decision depends upon the actual usage of the e-resources by library users.

7 Life Cycle of E-resources Management

The lifecycle of an e-resource goes through several stages. The functions of ERM cover the five major components such as: (1) Acquisition management, (2) Access management, (3) Administrative management, (4) Support management, and (5) Evaluation and monitor management.



7.1 Acquisition Management

Acquisition process of e-resources is very important. It includes budget, selection process, and trial access for selected e-resources. The following issues are to be considered for acquisition of e-resources:

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A. Budget: The first step of acquisition management is budget i.e. how much amount should be spent on e-resources.

B. Selection: Selection process may include

- Ø Recommendation from experts
- Ø User recommendation
- Ø Discussion lists
- Ø Peer Library website
- Ø Publisher's catalogue
- Ø Colleagues suggestions
- Ø Demonstration from publishers/vendors
- Ø Evidence based acquisition
- Ø Patron–Driving acquisition

C. Evaluation of E-resources

- Content
- Updates
- Quality
- Authority
- Accessibility
- Technical support
- Licensing agreement
- Cost

D. Price Negotiation

- Product type: Full text database or aggregator
- Access type: Perpetual or yearly subscription or multi year subscription
- Subscription type: Print + Digital or only Digital
- Number of users

E. Trial Use

- Consistency / Uniformity
- Functionality

F. Licensing Agreements

- Permits multiple users to access e-resources from different geographical locations at the same time.
- Perpetual access: Allow access to paid e-resources even after termination of an agreement.
- Institutional archiving: Allow the institution to upload the publications to IR.
- Allow users to view, download, and print materials.
- Usage statistics
- Liability for unauthorized use: Library to monitor unauthorized users.
- Technical consideration
- Cost, terms of payment, termination and indemnification
- Any dispute should be settled within the geographical limits of the institute

G. Ordering and paying the e-resources

After maintaining all the above points order should be placed and payment should be done according to agreement.

7.2 Access Management

Following issues are to be considering for access management:

- IP/User name based access
- Off campus access
- Open access
- Library Portal
- Discovery service
- Federated search
- Link resolver
- Subject index
- Browsing lists
- Linking to OPAC
- Create A-Z list

7.3 Administration Management

Administrative management includes:

- Access restriction
- Users rights
- Licensing terms
- User ID and Password
- Holding list
- Cataloguing
- URL Maintenance
- Admin Module information

7.4 Support Management

Following support services are to be maintained:

- Contact Information
- Problem logs
- Troubleshooting

7.5 Evaluation and Monitor Management

Evaluation and Monitor Management includes the following:

- Usage statistics: COUNTER, SUSHI, CORE
- Cost Benefit Analysis
- Uniqueness of e-resources
- Downtime analysis and review problem
- Users feedback

8 ELECTRONIC RESOURCE MANAGEMENT SYSTEMS(ERMS)

8.1 Definition

According to Wikipedia, “ERMS is a system that supports management of the information and workflows necessary to efficiently select, evaluate, acquire, maintain, and provide informed access to electronic resources in accordance with their business and license terms.”

8.2 Features of Electronic Resource Management

Features of ERM Systems include:

- Supporting acquisition and management of licensed e-resources
- Integrated with other library system modules or may be a standalone system
- Have a public interface, either separate or integrated into the OPAC
- Displaying licensed rights such as e-reserves, course packs, and interlibrary loan
- Tracking electronic resources from point of order through licensing and final access
- Providing information about the data providers, consortia arrangements, access platform
- Providing contact information for all content providers
- No Logging problems with resources
- Providing customizable e-mail alerting systems
- Supports retrieval of usage statistics
- Support access restriction
- Automatic notification / Current awareness
- A-Z list
- Budget tracking & fund accounting
- Circulation
- Cost analysis / cost per use
- Link resolver
- Renewal information
- Resource Sharing
- Workflow management

8.3 Benefits of ERMS

Benefits of ERMS are as follows:

- Save time and speeds workflow
- Reduces duplicity of work
- Reduces users search time
- Eliminates costly overlap between packages
- Easily maintain the ever-growing size and complexity of e-resources
- Provide usage statistics for smart collection decisions
- Simplifies set-up and maintenance
- Efficient use of library budget
- Helpful in consortia

9 ELECTRONIC RESOURCE MANAGEMENT TOOLS

A. Commercial: The following ERMSs are all available from commercial providers.

- 360 Resource Manager by ProQuest
(https://knowledge.exlibrisgroup.com/360_Services/360_Resource_Manager)
- Alma by ExLibris (<https://knowledge.exlibrisgroup.com/Alma>)
- BLUE cloud eRM by SirsiDynix (<https://www.sirsidynix.com/bluecloud-erm/>)
- EBSCONET ERM Essentials by EBSCO (<http://www.ebsco.com/>)
- E-Resource Central by SIRSI Corp. (<https://www.sirsidynix.com/eresource-central/>)
- Gold Rush® by Colorado Alliance of Research Libraries (<https://coalliance.org/software/gold-rush>)
- Innovative ERM by Innovative Interface (<https://www.iii.com/>)
- Knimbus (<https://www.knimbus.com/>)
- LSe-RMS by LIBSYS (<https://www.libsys.co.in/products/library-solutions/electronic-resource-management-system>)
- Meridian by Endeavour Information Systems (<https://www.endeavour-is.com/>)
- Research Monitor by Priory Solution (<https://www.trgscreen.com/>)
- Sempertool' Digital Library Suite (<https://www.sempertool.dk/>)
- Sierra Library Service Platform by Innovative Interface (<https://www.iii.com/products/sierra-ils/>)
- TDNet ERM by TDNet Inc (<https://tdnet.io/>)
- Verde by ExLibris (<https://knowledge.exlibrisgroup.com/Verde>)
- Web-Share License Manager by OCLC (<https://www.oclc.org/en/license-manager.html>)

B. Open Source: Some of open source ERMS are as follows:

- CORAL (<http://coral-erm.org/>)
- CUFTS ERM (<http://www.lib.sfu.ca/about/initiatives/researcher>)
- ERmes (<http://murphylibrary.uwlax.edu/erm/>)
- SMDB (<http://www.sempertool.dk/>)

C. In house Software's: Many libraries develop their own ERMSs. Few of them are as follows:

- E-Matrix by North Carolina State University Library (<https://www.lib.ncsu.edu/projects/e-matrix-ncsu-libraries-0>)
- ERLIC by Pennsylvania State University (<https://digital.libraries.psu.edu/digital/>)
- HERMES by John Hopkins University Library (<https://jscholarship.library.jhu.edu/handle/1774.2/32801>)
- VERA by Massachusetts Institute of Technology Library (<https://libraries.mit.edu/>)

10 INFRASTRUCTURAL REQUIREMENTS FOR ELECTRONIC RESOURCE MANAGEMENT IN LIBRARIES

Following infrastructure is requiring for electronic resource management in academic libraries:

- Servers and workstations
- Faster Internet facility
- Dynamic & forceful websites
- Trained staff members

11 PROBLEMS IN MANAGEMENT OF ELECTRONIC RESOURCE

Generally, librarians have to face variety of problems while implementing ERMS. Some of the challenges are as follows:

- ❖ Complex lifecycle of e-resources
- ❖ Availability in various forms and formats
- ❖ Dynamic nature
- ❖ ILS and LSP not able to manage
- ❖ Consortia vs. individual approach
- ❖ Low Budget
- ❖ Lack of skilled manpower
- ❖ Lack of infrastructure
- ❖ Standards of metadata

SUGGESTION

Promotion of the e-resource collections is essential otherwise users will not get information about the collection. To promote the e-resource collections seek as much support from publishers. Use social media, blog, WhatsApp group, email, intranets, and departmental forums to publish the collection. Check the publisher's website for on-site and remote training options, downloadable posters, and other promotional aids.

CONCLUSION

The world of publication is moving towards electronic media and academic libraries are acquiring electronic resources according to users' needs. Electronic resources are an important part of the overall library collection. It is a great challenge for librarians in the selection, acquisition, retrieval, and management of electronic resources. A system is needed to manage electronic resources and which should support the existing library system. For this purpose, it is important to consider the library discovery software. Hence libraries can choose an Electronic Resource Management System (ERMS) for the effective organisation and maintenance of electronic resources such as E-books, E-Journals, E-Databases, etc, in their libraries. Enhancement in infrastructure like high-speed network, wi-fi in the campus, and LAN portals at various points in the campus is very much essential to improve the practice. Organization of professional training is required for library staff to manage the e-resources effectively. For this purpose, sufficient budget should be allotted.

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