

## The impact of knowledge base: An electronic resource management system database for libraries

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***Abstract:** In the modern era of electronic age we are facing different sorts of problems in handling our library works in an easy & authentic manner. 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. A knowledge base (KB) is a database of information about some aspect of library resources. It generally contains the metadata of subscription or purchased information or links to journals or books rather than the content itself, although this requirement is loose. An integral component of knowledge management systems, a knowledge base is used to optimize information collection, organization, and retrieval for an organization, or for the general public. The chapter discusses the different areas of knowledge base & how knowledge base is implemented in libraries to managing the electronic resources through a scientific procedure.*

***Keywords:** Electronic resource management , knowledge base, Database,*

### **Introduction:**

Managing electronic resources is complex because there are lots of pieces to track: updated title lists for journal packages, perpetual access flags, transfer titles, subscription and payment reminders, administrative information, and usage reports. In general, a knowledge base is a centralized repository for information: a public library, a database of related information about a particular subject, and whatis.com could all be considered to be examples of knowledge bases. In relation to Information technology (IT), a knowledge base is a machine-readable resource for the dissemination of information, generally online or with the capacity to be put online. An integral component of knowledge management systems, a knowledge base is used to optimize information collection, organization, and retrieval for an organization, or for the general public.

**Electronic Resource Management:**

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. These resources include, but are not limited to, electronic journals, electronic books, streaming media, databases, datasets, CD-ROMs, and computer software.

**Features of Electronic Resource Management systems**

Features of some ERM systems include:

- Supporting acquisition and management of licensed e-resources.
- May be integrated into other library system modules or may be a standalone system.
- May have a public interface, either separate or integrated into the OPAC.
- Providing descriptions of resources at the package (database) level and relate package contents (e.g. e-journals) to the package record.
- Encoding and perhaps publicly displaying licensed rights such as e-reserves, coursepacks, and interlibrary loan.
- Tracking electronic resources from point of order through licensing and final access.
- Providing information about the data providers, consortial arrangements, access platform.
- Providing contact information for all content providers.
- Logging problems with resources and providers.
- Providing customizable e-mail alerting systems (e.g. notices to managers when actions are expected or required)
- Linking license documents to resource records.

**Elements of Electronic Resource Management System**

Electronic resource management systems (ERMSs) are another approach to the problem of multiple knowledge bases and data silos. The software attempts to represent the complexity of data for managing electronic resources: how a single journal can be available from multiple platforms and through different vendors, may have multiple URLs, and could be covered under a different license for each platform. Such a level of complexity is difficult to track in a traditional ILS but can be represented clearly in an ERMS KB. These software systems try to aggregate all sides of electronic resource management: the KB; budget, subscription, and purchasing management; administration and contact information for resources; license management; and reporting functionality; as well as other

functional pieces, such as the link resolver and A–Z list. Bringing all of these aspects together in one software system can simplify management of resources considerably, here we discuss about the concept of knowledge base & how knowledge base is being trying to giving knowledge about the documents within an organization as an ERMS database.

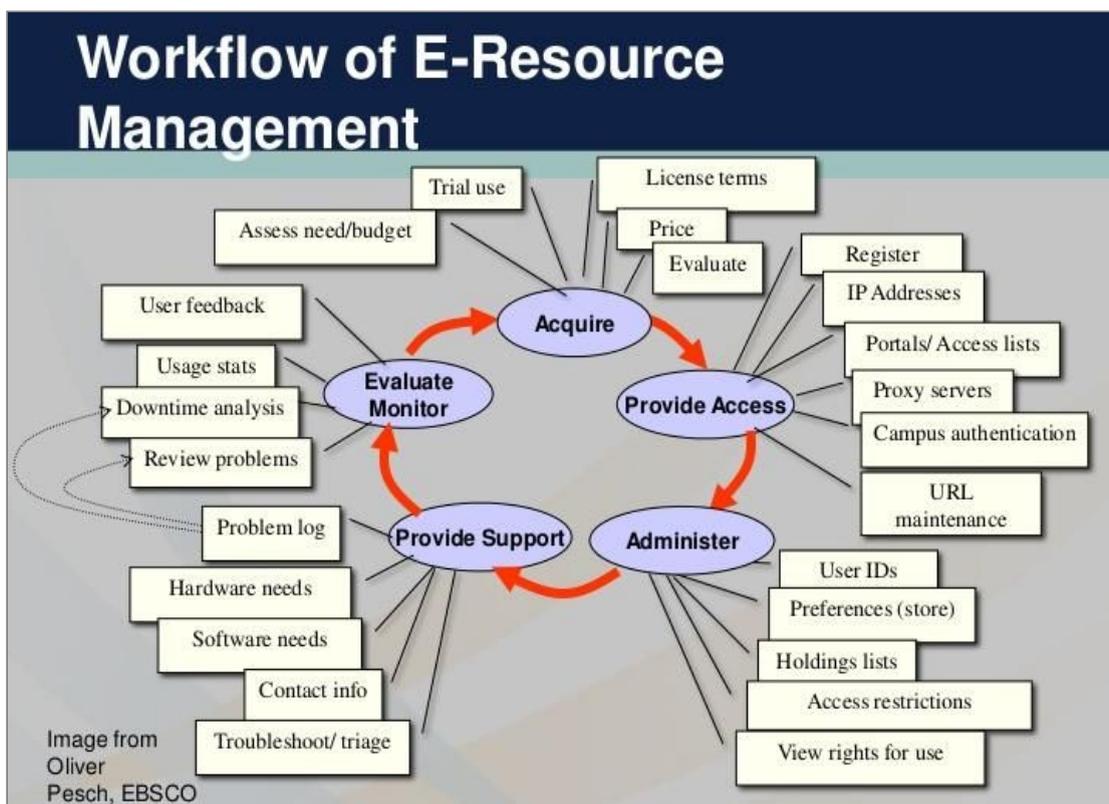


Image of work flow of E resource Management

### About Knowledge Base:

A knowledge base (KB) is a database of information about some aspect of library resources. It generally contains the metadata of subscription or purchased information or links to journals or books rather than the content itself, although this requirement is loose. The most common type of KB for the purposes of ERM includes information on the journal titles in a database or subscription package, the dates held in the database, and links to access the content. KBs can also include information such as journal titles available for subscription or purchase from the publisher, platforms, and price or license terms about legal usage of library-subscribed content. Because journal titles, available issues, and links change frequently and are collected from many different publishers, maintaining KBs is extremely time-consuming, far more than most libraries could manage individually. For this reason, vendor-curated KBs have become increasingly popular and common, generally integrated into other library software such as an ERMS.

### **Why knowledge bases are important :**

Having a knowledge base is extremely important because:

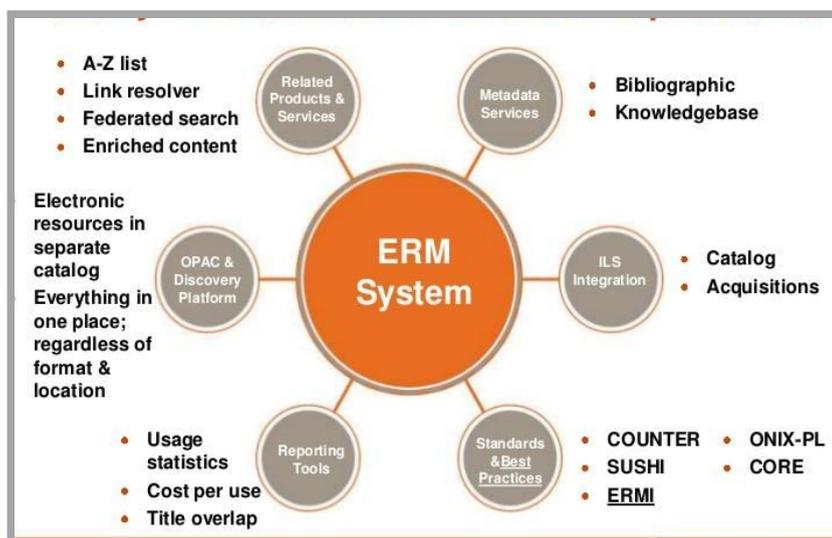
- The collection of information on electronic resources is the fundamental piece required for almost any library software to work.
- Large databases sold as a content package have many title changes, which need to be updated in patron systems. These updates and purchases can involve hundreds of titles in each package and multiple packages for each publisher.
- most of this information is common to multiple libraries;
- Individual libraries usually also need to track any individual data or unique collections, but adding these holdings to a Knowledge Base is easier than creating and maintaining all holdings for a large library. This means that external vendors are well placed to develop and maintain KBs and can then use the curated information as the basis for valuable software subscribed to by libraries.

### **Objective:**

- Demonstrate knowledge on the evolution of electronic resources in the library and publishing fields, and the various formats of library electronic resources that are available.
- Understand the various aspects of electronic resource licensing/terms of use .demonstrate knowledge on aspects of the entire life cycle of library electronic resources
- To Understand the role and operation of Electronic Resource Management Systems (ERMS)
- Develop an understanding of the role of effective communication in the management of library electronic resources

### **How can a KB make a difference for coworkers & customers:**

If a knowledge base in place, you should combine it with a program of knowledge management. Knowledge Management enables you to create, curate, share, utilize and manage knowledge across your whole company and across industries. With a strong knowledge base and knowledge management, your life may not change overnight. However, you'll find your organization is more nimble and able to deliver faster service. You'll also be able to improve self-service, give greater access to more articles, and offer regular updates through that knowledge management



ERM SYSTEM CHOICES FOR DIFFERENT REQUIREMENT

### Advantages

- Implementing a Knowledge Base is a time-consuming and labor-intensive process. The primary objective is to consolidate, into one system, information pulled from a variety of electronic and paper-based sources.
- They are especially useful for finding information not yet available in books, or obtaining up-to-date information on current events or issues.
- IT provide us with authoritative, accurate, current, objective reference material not readily available through a search engine like Google (more on this later...).
- e-Resources are free to library users, and if you have a BPL card you can access them from any computer with Internet access, 24 hours a day, 7 days a week—you don't have to wait for the library to open to access them

### Types of E-resources description for ERMs

1. E-Book :E-books is the many formats competing for prime time, including Adobe PDF, Microsoft Reader, e Reader, Mobipocket Reader, EPUB, Kindle and iPad
2. E-Journal An e-journal is very important part of every library collection. E-journals are one application of information technology.
3. E-Newspaper An E- newspaper is also known as online newspaper or web newspaper that exists on the World Wide Web or internet.

4. E-Magazines An E-Magazine is very important part of every library collection. E Magazines are one application of information technology.
5. Indexing and Abstracting Databases: These are the reference sources which provide bibliographic information about journal including abstracts of the articles.
6. Full text database Today are either free or with charges. E-databases is an organized collection of information of a particular subject or multidisciplinary subject areas, information within e-databases can be searched and retrieved electronically.
7. Reference database These are many Dictionaries, Almanacs, and Encyclopedias, which are available on internet in electronic format.
8. Statistical database These databases contain the numerical data useful for the mass community.
9. Image collection Due to advent of e-images facility this type of databases is developed Multimedia products etc.
10. E-Thesis These databases are contained with PhD thesis and Dissertation published through e-format.
11. E-Clipping The main objective of e-clipping is retrospective search and comprehensive analysis of new items.
12. E-Patents E-patents is the exclusive right granted by the government to make use of an invention for a specific period of time.
13. E-Standards Written definition, limit rule, approved and monitored for co
14. Utilities of E-Resources Nowadays the reading materials and information sources are changing from print to electronic.

The selection of E-Resources should be done according to the need and demand of users. As a librarian one should consider the following steps at the time of selection.

- 1) To know the needs of users.
- 2) To know content and scope of e-resources.
- 3) To examine quality of the e-resources and search facility among them.
- 4) To maintain cost effectiveness.
- 5) To check either subscription based or web based at the time of purchasing.
- 6) To check the license copy.
- 7) To evaluate educational support and training.
- 8) To check the compatibility and technical support.

### **Impact Of ERMs Database on Library And Information Services**

The Internet e-resources is transforming the library system and as well the way in which we view information sources. It has made simple and speedy purchase of information sources librarians need quick access to books, journals and electronic publications. Internet access is the simple and efficient method for access and updating the documentation and interface of catalogue of all libraries. The request for Inter Library Loan (ILL) can be sent via e-mail and the photocopies may be sent by post fax, via e-mail after scanning the documents. The development of information technology and the dissemination of Web environments have a dramatic effect on the user behaviours in information usage. The workflows from acquisitions to user services and the life cycle of electronic resources is quite different from that of print resources since it is characterized by access without holding the physical objects.

As libraries build ever-larger collections of electronic resources, finding ways to manage them efficiently becomes a major challenge. The number of electronic journals, citation databases, and full-text aggregations held by most libraries has grown rapidly. Managing these electronic resources involves providing the library's user with convenient ways to find and access them and providing library staff with the tools to keep track of them. Most of the Library resources in the recent past are being made available in electronic formats such as e journals, e-books, databases, etc. Libraries are moving from print to e-resources either subscribing individually or through consortia because of its advantages over print resources. Recent studies show that users prefer e-journals than the print. As licensing electronic resources has greatly increased in recent years, libraries have struggled to control this information in paper files, integrated library systems, separate databases stored on local computers or network.

### **Utilities**

1. E-publishing may be less costly than paper.
2. E- Resources are created in any file format like text, audio, video and images.
3. E-resources are available for 24 hours of a day and save library space.
4. The E-resources search is easy because of user friendly interface.
5. They provide users faster, more convenient and anytime access from home, campus or library.
6. E-resources can be accessed by the support of advanced search and retrieval system.
7. The content can be reproduced, forwarded, modified and leading to problem with copyright protection and preserving authenticity.
8. The electronic environment enables to library to integrate with other libraries and make use of their resources also.

9. Those who have limited time to access to the libraries can effectively access to the libraries by dialing up process.
10. The libraries provide access to very large amount of information resources.
11. Libraries are focused on providing access to primary information.

**Criteria are for collecting data for database:**

1. Licensing: E-Resources need the license from the published to the library for making use of it.
2. IPR: E-Resources can be easily copied and forwarded to the another person so librarian should be alert about IPR(Intellectual Property Rights)
3. Standards of metadata: There are standards for metadata description like MARC21 but the available e-resources in the market are not standardizing by MARC21.
4. Low budget: Libraries are non-profit organization so they cannot purchase
5. Skill manpower: to handle the electronic collection the proper skills are required among the staff but libraries are lacking of skill manpower.
6. Lack of infrastructure: Electronic collection is supported by Information and communication Technology components.

**Conclusion**

Electronic resources are available in the current knowledge society. Hence, there should be a proper planning, policy and guidelines for providing, organizing and disseminating the e- resources. The institutions may provide continuous support and coordinate with the library professionals, to educate users to utilise the electronic resource for their higher studies. It is also very important to educate the users through orientation programme to promote the library resources through websites, so that the users will get maximum benefit from the e-resources.

The implementation of e- -resources is helpful to ensure exhaustive and pinpointed information. The e-resources provide themselves various search options to the user and library manages. Using of e-resources enable the library to save space of library and time of the users. . E-resources are useful for libraries as well as each and every users of the society who are starving to get a variety of information through the globe.

The specific system the library uses does not matter as long as the library is able to manage all aspects of electronic resources adequately. The best solution for an individual library will depend on the library's current software setup, staffing levels, areas of concern within electronic resource

management, level of support from local systems staff, budget levels and situation, and many other factors. As long as all the information needed to manage electronic resources is collected and available to everyone who needs it through the existing library setup, an ERMS might not be necessary. However, if there is difficulty maintaining and compiling information needed for electronic resource management with the process of managing subscriptions, reporting, administration, and licensing information, or if there is difficulty keeping all these disparate pieces updated and available to library staff, the library may want to consider an ERMs.

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