Abstract

The present paper discusses the major features of e-resources, types of e-resources and the effects of e-reference sources on research, development and other academic activities. The paper also discusses the selection process of e-reference sources, organization of e-reference sources and framing the e-reference policy in an organization. Delivery of e-reference service, major issues involved and various initiatives needed on the part of librarians and top management of various organizations are also discussed elaborately.

1. Background

On the basis of literature survey as well as experiences, it has come to our knowledge that university libraries, institutions of national and international importance, specialized organizations, professional societies and associations are deeply engaged to build e-resources in their respective areas, with the sole objective to provide instant and comprehensive access to their stakeholders. This initiative is basically considered as a noble step to assist end-users to achieve
excellence in their academic, R&D and consultancy efforts and activities. In this direction, e-resources are highly effective and efficient to provide instant and comprehensive access to users at their desktops irrespective of time & space.

2. Features of E-Collections

E-Collections are very useful to all institutions and individuals to get instant, relevant, comprehensive information at doorsteps. Keeping these factors in view, largely organizations are concentrating to build e-collections for their use.

Some of the major features of e-collections are listed below:

1. Globalised reach
2. Users can use the same e-resources @the same time@ any place
3. Easily copied, stored and disseminated
4. Easy to revise, manipulate and merge
5. Less bulky than paper
6. Speedy delivery
7. Add value to services
8. The e-collections save user’s time
9. Generate satisfaction among users
10. Buying and selling of e-collections is available on WWW
11. Promote Interaction with remote users
12. On-line users tracking
13. E-Collections enhance the R&D effectively and efficiently

As we have seen that e-resources are very powerful, dynamic and essential to any organizations. We find e-resources of various types, basically, the following major types of e-resources are listed:

1. E-Journals
2. E-Books
3. E-Groups
4. Search Engines
3. Effects of E-Reference Sources

It has been experienced that the reference sources and services are basically needed by the faculty and research scholars in university environment including IITs system in our country. Realizing the importance of reference service, academic and research libraries globally create separate Reference Section duly supported with dedicated staff and collections based on the existence of financial resources. Similarly, currently under digital environment, libraries create separate web page in the main page under various heads like Virtual Reference Desk, FAQs, Ask the Librarian, Virtual Help Desk, Bulletin Board Service, E-Resources etc. Realizing this, the Central Library of Indian Institute of Technology Madras has created various major links of e-reference sources in the area of science and technology for the benefit of the faculty and the students with the objective to provide access to various e-reference sources. Based on these reference sources, we are
providing virtual reference services under Intranet and Internet environment.

A screenshot of the main page is given below:

4. Selection Process

The selection of e-resources largely depends upon the current and potential information needs of users, IT infrastructure and the policy of respective institutes or universities. It has been noticed that a systematic attempt to study the web efforts of various institutions in the same area provides a great help to identify the suitable e-reference sources. We have experienced that number of e-reference sources are available free of cost. There is need only to provide hyperlinks to the main web site of a Library. Keeping this fact in view, we have identified various e-reference sources which are accessed by our users through
There is need to keep the following factors in view while deciding to have e-reference sources for an institution:

1. Continuous up-datation of hyperlinks
2. Continuous subscription to e-reference sources
3. Careful study of digital licensing provisions
4. To make provision for exchange of e-reprints for academic use
5. To ensure adequate on-line help and instructions
6. To provide adequate and frequent training to users and staff
7. To conduct periodic information literacy program
8. To provide training hand-outs to end users
9. To avoid duplication in the coverage of e-reference sources
5. Organisation of E-Reference Sources

It is necessary to organize e-reference sources keeping in view the priorities and preferences of specific institutions and users. For example an Institution in the area of Chemistry should identify e-references first in Chemistry and then related subjects like Chemical Engineering. Keeping this factor in view, we have identified various e-reference sources in the area of electronic citations, which will provide a great help to our faculty, and research scholars who are more interested to submit their papers through on-line sources for publishing in various e-journals. The electronic citation sources provide great help to our users in citing papers electronically. The following screenshot shows the citing e-resources are available at the Central Library of IIT Madras:
6. Framing E-Reference Policy

There is strong need to have a well-defined e-reference policy in an organization for effective and efficient building of e-reference sources and also to deliver comprehensive and dynamic e-reference services. The following factors can be taken into account while framing e-reference policy:

1. Fee based or free e-reference sources
2. Networking printing facility
3. Application of e-commerce
4. Creation of on-line forms
5. Usage tracking
6. Restricted or unlimited users
7. Collaborative development of e-references sources

7. Delivery of E-Reference Service

The e-reference sources are the base to provide e-reference service by the libraries globally. Research scholars and the faculty are fortunate in the digital era to get reply to their reference queries at their desktops without wasting their precious time. There are various specialized e-reference services are delivered by various university libraries in the developed world. Realizing, the importance of e-reference service, the Central Library of IIT Madras has initiated to provide the following major e-reference services:

1. Virtual reference desk
2. Ask the librarian
3. E-reference sources
4. On-line document delivery service
5. Web-reference form
6. FAQs / Help?
8. Major Issues

There are various major problems and critical issues involved in the management of e-resources with specific reference to e-reference sources. Based on the exposure and experience about the management of e-reference resources, some of the major issues are indicated as under:

1. Identification of proper e-reference sources
2. Creation and maintenance of IT Infrastructure
3. Lack of trained manpower
4. Lack of adequate training facilities
5. Lack of sustained Interest amongst staff and users
6. Lack of well defined e-reference policy
7. Lack of cooperation amongst librarians and computer center staff
8. Lack of resources
9. Lack of support from top management
10. Lack of cooperation amongst librarians

9. Initiatives

It is very much true that e-resources with specific reference to e-reference sources are fundamentally essential under digital age. There is strong need on the part of librarians and the top management of all institutions irrespective of their size and resources to build e-reference sources and also provide various e-reference services. The following major initiatives are required. These can be implemented in phased manner.

9.1 Web site of the Library

It is absolutely necessary for the librarians to make necessary arrangements for a comprehensive and interactive website exclusively for the library, integrating with the main website of an organization. The resources
including e-reference sources need to be projected under Intranet and Internet environment depending upon the e-policy of respective institution. The domain of the website need to have recall value and professional web pages for each activity. It is also suggested that the websites for major libraries of the world need to be studied and reviewed first so that a good website is designed and developed for the users. The screen shot of the libraries of Harvard University, USA clearly shows the link for e-resources so that users can directly browse the e-resources. The following website is a good example for providing links for e-resources.

9.2 Identification of Related E-Reference Sources

It is necessary to identify e-reference sources useful to a specific organization. There is need to have a separate staff for digital library activities in the libraries. The staff can be assigned special task to prepare the list of e-
reference sources both fee based as well as freely available e-reference sources which can be grouped and further sub grouped keeping in view of users and organizational interests.

9.3 Providing Related Hyperlinks

Currently, it is very easy to provide access to e-reference sources to users through simply providing hyper links in the website of a library. This can be done for both free and fee based e-reference sources. The Central Library of IIT Madras has provided various hyper links to various important and useful e-reference sources in the website which are extensively used.

9.4 Periodic Presentation

There is great need to organize periodic presentations by the library staff at the doorsteps of users. This will help the users to know the existence of e-reference sources for their better and effective utilization. In this direction, the Central Library of IIT Madras has taken various initiatives. Some of them are:

1. Organisation of staff-users meet
2. Specialized presentations by e-resources vendors
3. Presentation by experts
4. Presentation by the librarian
5. E-announcements

9.5 Developing Collaborations

There is an urgent need to develop constructive cooperation and collaborations among libraries at local, regional, national and international level to have more and more e-resources for the users community for assisting them to achieve excellence in research, development and academic activities. It is nice
to quote that Indian S&T libraries especially IITs are actively participating to provide comprehensive and cost effective access solutions to e-resources through INDEST Consortium. The screenshot of INDEST is given below:

10. Conclusion

It can be concluded that effective management of e-resources generates satisfaction among users community and also ensures excellence in collections and services. There is strong need on the part of librarians to take initiatives to have comprehensive and interactive website for their libraries. Librarians can identify the staff for this purpose and develop fruitful collaborations with other libraries for delivering effective and efficient e-reference services and solutions.

11. List of Web Resources Consulted

1. http://www.cenlib.iitm.ac.in
3. http://lib.harvard.edu/