

Open Access and Open Source Tools for LIS Professionals: *Some Insights*

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Abstract

Access to published information is of interest to many users. Library and information science (LIS) professionals are especially interested in gaining access and guiding users to all available information. though they are often dependent on traditional subscription-based library resources, moving away from the costly ones and replacing them with usage of available open access sources, presents practitioners with a significant budget consideration in today's shrinking economy. This paper highlights utilization of availability of open sources through use innovative technological tools, techniques and skills.

Keywords: Open access, Initiatives, Repositories, Free webs, Open access initiatives.

1. Introduction

The open access has arrived and is more than just a fad or some idealistic dream. The benefits of open access are manifest, as are the many challenges posed by shifting towards broader support for open access. The academic and other libraries continue to afford commercially published journals, especially those within the sciences, technology, and medicine, and still build their humanities, social sciences, and general monographic collections. Libraries are positioned to be at the forefront of the open access revolution, but it is altogether possible that they will allow themselves to be left behind. They stand to gain much by investigating potential new roles they might play in the transforming landscape of scholarly communication, but first they must consider the many ways in which they may be affected by open access, weighing significant costs against significant benefits and always with their communities' best interests in mind. A library is not a building stacked with books it is a repository and source of information and ideas, a place for learning and enquiry, and for the generation of thought and the creation of new knowledge. libraries in particular have the potential to bridge the gap between the 'information poor' and the 'information rich' by ensuring that people from all sectors and settings of the society and economy across the India have easy to access knowledge they seek.

2. Open access: A Conceptual Framework

In the history and landmark event with respect Open Access is "*Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*" emerged in 2003 conference held at Berlin hosted by Max Planck Society. The Budapest Open Access Initiative arises from a small but lively meeting convened in Budapest by the Open Society Institute (OSI) on December 1-2, 2001. The purpose of the meeting was to accelerate progress in the international effort to make research articles in all academic fields freely available on the internet. The participants represented many points of view, many academic disciplines, and many nations, and had experience with many of the ongoing initiatives that make up the open access movement.

3. Open Access Initiatives

- **1971 - Project Gutenberg** launched on the Internet (originally as an FTP site). There are now 18,000 free books online.
- **1997 - Research Papers in Economics (RePEc)**, and PubMed were launched (which includes free access to Medline).

- 1998 - Scholarly Publishing and Academic Resources Coalition (SPARC) was launched by ARL, and later SPARC-Europe was formed.
- 1999 --- The Open Archives Initiative (OAI) was launched
- 2000, "PubMed Central" launched to supplement PubMed's citations and abstracts with free full-text articles.
- 2001, The Australian National University launched its **E-Print Repository**, the first OAI-compliant institutional archive.
- 2001, The Budapest Open Access Initiative
- 2003, Landmark Year in the history of OAI
- The Bethesda Statement on Open Access Publishing.
- The Public Library of Science launched its first open-access journal, PLoS Biology.
- The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities was released by the Max Planck Society and European Cultural Heritage Online.
- The UN World Summit on the Information Society approved a "Declaration of Principles and Plan of Action" containing endorsements of open access to scientific information.
- 2004, The National Library of Canada started providing open access to doctoral dissertations on deposit at Theses Canada.
- 2004, Elsevier, the world's **largest publisher** of medical and scientific literature announced its new policy permitting authors to post the final editions of their full-text.
- 2004, the 34 country signatories to the OECD issued the Declaration on Access to Research Data from Public Funding.

4. Changing the Library Operations

- 4.1. **Information as a conversation:** Librarians are also beginning to use blogs to engage patrons in an ongoing discourse. They have created blogs, front and center on their homepage, on a variety of topics from building construction to the new automation system. One of the benefits of blogs as opposed to a feedback link on the library web site is that blogs encourage an ongoing dialogue between patron and staff. They also create a sense of community because everyone can see the comments and participate in the conversation.
- 4.2. **The changing landscape of the Internet:** Anyone who has used GoogleMaps to find the closest pizza parlor to his or her house, or to map directions to an unfamiliar location, has experienced Web 2.0, the latest web development, expected to transform the Internet into a highly interactive environment independent of browser or operating system. Web 2.0 uses a powerful set of tools known as AJAX, or asynchronous JavaScript and XML. AJAX pulls data from multiple, disparate systems and renders it into a rich, highly interactive interface in the user's browser.
- 4.3. **Increase in remote access to library services:** With the proliferation of portable computing devices and a generation of new library users who have never known a world without computers, libraries are offering more remote services (Rose N, 2005). Virtual reference, access to the library catalog from the PDA, and wireless Internet access for patrons are some common examples of remote service.

- 4.4. Libraries have a long history of cooperating in order to provide improved services to their users and to reduce their costs. In my area of interest - library automation - consortia and other cooperative arrangements provide opportunities to deliver access to broader collections to library users at lower costs to participating libraries.
- 4.5. Characteristics of the new generation of library interfaces include: relevance ranking, faceted navigation, search result clustering, breadcrumb trails, and a faster, more comprehensive search environment.
- 4.6. Today, there's an uneven deployment of Web technologies in libraries. On the one hand, we see many well-designed Web sites that deliver library services to users. Lots of these sites already embrace many aspects of Web 2.0, I also see a large number of libraries that either have no Web site at all or that try to get by with a site that's underdeveloped and not able to meet the expectations of the current generation of Web users.
- 4.7. One of the most interesting recent developments in the digital library arena involves the Open Archives Initiative (OAI). Developed only within the last few years, many of the major players in digital libraries and scholarly communications have lent strong support to this new approach to information discovery, search, and retrieval and will likely be a key piece of the future digital library landscape

5. Need and Purpose of Open Access

Here it's some of issues are to promote get beneficiary of open access and source moment in present libraries and innovative tools for effective utilize availability e-resources and services to users in changing library environment. a) *Retrieve* now days most of source available in print as well as electronic forms, in this regards the user and librarian both are in confusion to choose which is good for reading and build their collections, b) *Search/access* in traditional library system sources are available in particular location, the user should go and get their need information. Sometime this is time consuming for the users and Library professional when they have hug information/documents in the library. The open access and source tool is became backbone for the E-Learning, Distance Learning and Lifelong learning, c) *Foreign documents*, d) *Time/space*, physical document are expecting more space for arrangement and difficult to know the status and identification of the documents, e) *Restricted sources* like thesis/dissertations, reports etc., are kept in restricted, but new innovative tools such Open sources, Software, Web tools are made that types of information also easily to reach to the user Ex. Vidyanidhi - Digital Library and E-Scholarship Portal, Mysore is kept more than 6000 number of electronic thesis for free access, f) *Information explosion* is impact in present libraries, because libraries not able to procurement all information which are published by different publisher, in this critical view the e-source most helpful to fill gap of the our library resources, g) *Cost* is most impact in collection development and its routine works, because library is an a non-profit organization and most organizations are not able give sufficient financial back for their libraries to adapting new innovative techniques and build their library collections, h) *Co-operations* at present India J-GATE (JCCC) from Informatics India, IITs-BARC-TIFR Cooperation, TIFR Libraries Consortium, ISI-Library Consortia Deals, SNDT Consortia of LISA, STI Network, FORSA Libraries Consortia, ICAST Consortia, IIM Libraries Consortia, INDEST Consortia, CSIR Consortia, HELINET Consortium, VIC Consortium of ICICI-Knowledge Park, ISRO Libraries Consortia and INFLIBNET consortium under UGC InfoNet, WBUT Consortium etc., initiatives of India consortia's are promoting for the access, i) *Durability* also here we concerning promote to the open access, the print resources are difficult to maintain in proper way and its needs more man power to maintain and operating. The present public libraries as well as academic libraries in India still also struggling to with adapting new innovative tools and techniques for reset

of the library routine's and services and technological tools of Open source and Open access try to fill gab of digital divide between traditional and Virtual library system in rural and urban environment.

6. Technological tools for Open access

6.1 Availability v/s Usability

Electronic Publishing and e-dataabase	Open access - journals
Online Catalogue's: Worldcat, OPAC, OCLC	Open access- books
CD-ROM technology, Micrographic forms	Multimedia, Lib_Web_Cats

Open access journals are scholarly journals that are available to the reader "without financial or other barrier other than access to the internet itself." To enhance the access of these collections by creating direct links to the journals and their articles included in this A-to-Z-list. All information about the included journal collections is available at the websites of the included projects. These websites are directly accessible from the Open Science Directory. The Open Science Directory will not replace these programs. The some important e-resources available flat forms are following such as The Pubmed central, DOAJ, Open Science Directory, Open Access Working Group (OPWG), Online Access to Research in the Environment (OARE), HINARI Programme, INASP-PERI by International council for Science (ICSU), Social Science Open Access Repository (SSOAR), Access to Global Online Research in Agriculture (AGORA), ROAR, Open DOAR, Medknow publication, MedInd biomedical journals, The Indian National Science Academy (INSA), Indian Journals.com, Open J-Gate, Public Library of Science (PloS), Hindawi Publishing Corporation, Springer, Thomson etc., impotents bodies continually engaging to provide open database in the way of some time restricted and most of time in open mode.

6.2. Technologies v/s Tools

Most libraries today operate in partnership with a variety of other organizations, including their parent institutions such as universities, colleges, agencies, or local government; other peer libraries; and suppliers of all varieties. More importantly, library users access our services with an ever-broader array of devices - some with desktops, laptops, smart phones, or tablets and others through some intervening application such as their academic courseware system, corporate intranet. or even social networking sites such as Facebook. This reality of interconnectedness should shape the way that libraries adopt technologies as well as guide those who create software for libraries.

In recent years, libraries have turned away from the traditional online catalog to embrace a new genre of public interfaces that go by names such as next-generation library catalogs, discovery interfaces, or discovery services. These new services aim to revitalize the stodgy online sources of the past to deliver to library patrons an experience of the collections and services of the library more in tune with the expectations set by the mainstream web. With increasing overlap and even competition to serve the information needs of library patrons by commercial destinations, it seems essential for libraries to offer the most compelling approaches possible for providing access to their valuable resources.

Discovery of services have come a long way in improving the ways that libraries provide patron with access to their collection. This genre of software has become pretty well established since its introduction almost a decade ago. Libraries are increasingly abandoning the Integrated Library System (ILS) online catalog modules or relegating them to specialized use. Discovery services take boarder view of library collections, attempting not just to address the material managed directly in the library's ILS, but also to find ways to incorporate the content available to users by virtue of subscription to electronic resources and to specialized collections of digitized documents, images, sound recordings and etc's to make utilized through following technological tools

Repositories	Library/free websites
Web technologies: Library, web 2.0, 3.0	Social Networking
Portals	Gateways
Directories tools	Online catalogs
Open URL	

6.3. Technology and Technological Skills for LIS Professionals

Libraries today have to seek out strategies that promote stronger engagement with their users. In these times where so many public libraries face threats of budget reductions, it's important that they demonstrate vigorous use of their facilities and services and satisfy patrons who will help defend them and lend support when needed. Smart use of technology can help libraries strengthen their programs and facilities in ways that foster better services, higher patron satisfaction, and more positive perceptions. Libraries should be use technology in creative and innovative ways that enable libraries to offer new kinds of services or to revitalize an existing activity in a way that becomes more interesting and appealing to library users.

Library is concern very limited access to library resources is because budget constraints, many college libraries not able to subscribe e-resources even though these resources are very useful to the present day user's community. In these circumstances the availability of open access resources are became gift for the all type's libraries in the current technological environment.

6.3.1. Free website

Those involved in developing library Web sites can consider a number of measures to ensure that their own site runs counter to this trend and sees increased use over time. Some helpful techniques include search engine optimization to ensure the best possible exposure in the search engines and the highest rate of delivery of users from search engine results to your Web site, help out the Search Engines through XML Sitemaps, make good use of meta tags in Web page headers, leverage social bookmarking, and use RSS to draw users to your site. But more than anything else, the key to increasing interesting your library's Web presence involves offering compelling and interesting content. Design your site to enhance, promote, and deliver access to the library's collections and services

Free website is most powerfully tool for providing the information to their user, now days many more web developer is providing facilitate to create own site's and every one can create it, who have little about knowledge of IT and HTML, then after creation of sit, just write a formal letter to all e-resources and service provider for give permission who are providing free access facilities through the institutional repositories, portal, information gateways etc and just give links to all from the your own site and create user awareness how to use and utilize it. It most helps to user to utilizing availability of e-resources on web. Just go on searching on the internet and attempt to enter the search term "free web site".

6.3.2. Process of creating free web site

- It is significant for you to know your objective why you want to have a website.
- Make an effort to include valuable information into your free web site.
- To improve the targeted visitors of one's website. So, website readers are significant.
- To make your own website, you will feel like you have probably created one of the most important matters in your life

- When you through, you may check out your free web site every now and then and do some edits on it to make it up-to-date.
- To create a list about the contents which you are proceeding to set in for your website.
- It is often a wonderful option of yours by the time you decide to produce anything that may be valuable.

6.3.3. Personal Experience

We made a free library site <http://excelbusinessacademy.yolasite.com/> for 'Excel Business Academy' Bangalore, with using "Yolasitecom" freewebs applications to utilization of open access database. It have 8 contents in the site such as a) *Home*: it having brief information about library and Institute, b) *E-resources*, page we give links which are open access journals, books database's available in the field of Business and Management, then c) *Bulletin* board it have news paper clippings, faculty notes, previous years question papers, institutional events, d) *Gallery*, next contents e) *Services*, it is provide guidance for the library and its usage, f) *E-database* giving facilitate make it use of other Institutional Repository database like IIM Kozhikode, Cambridge university etc., both National and International institutional database, g) *E-News papers*, here we giving links of online news paper, magazines, dictionaries, encyclopedias etc., which are freely available in internet, lastly h) *Contacts* give the facilitate referral and reference service to users through e-mail and ask to librarian.

6.4. Portal- Gateways and Social networks

* The library and information science (LIS) professionals working in a college library have to take the advantages and actively involved in customizing all the open access resources which are available in different databases, directories, archives, e-resource subject gateways according to the courses offered by the college or institution. On the other side availability of open sources software (OSS) helps to LIS professional create a good web portal or electronic gateway to access and management of open access resources and services.

6.5. Institutional Repositories

The present libraries have been increasingly involved in the creation of digital library collections and other content repositories. It's not unusual at all for libraries to be involved in digitizing collections of manuscripts, photographs, newspapers, postcards, or multimedia content such as audio recordings and radio or television programming. Most of libraries have become increasingly active in building repositories of content produced within their institutions and in other aspects of publishing scholarly content as well. While books and journals - both the print and electronic variety - stand as the mainstays of library content offerings, it's the collections of rare, historic, or local material that provide the greatest opportunity to increase the impact that the library makes on its community. These collections of nontraditional content provide the best jewels of the library, and delivering them digitally can amplify their impact tremendously. As per reference of the ROAR (<http://roar.eprints.org/>, 14 January 2013) indicating at that more than 2712 Institutions and organizations was successfully implemented of the IR's in all over the world, to access to scholarly and institutional resources using open source software's. The following table is indicating, the status of most usable open software in various organizations in all over the world.

DSpace	Eprints	Bepress	OPUS	ETD-db	Fedora	GSDL	MiTOS	DIGIBIB	DiVA	Others
1321+	482+	172+	50+	30+	37+	19+	17+	19+	17+	548+

7. Conclusion

Open access resources is an emerging tool for many libraries and information centers is because of many libraries are may not able to offer high paid subscription to scholarly publications published by prominent publishers of the world. The escalation of prices for the scholarly subscriptions bring minimizing or cancellation of e-resources. The open access is a mantra of the 21st century really a good boon for the all types of libraries to co-up with the budget constraints especially under developing and developing countries including India context. One of the top issues in the present library arena in the recent years involves the development of a new generation of interfaces to replace online services that have fallen behind the expectation of Web savvy library users. This aspect of libraries currently attracts incredible interest almost all libraries are giving consideration to how they can bring the search tools they offer for their collections and their overall Web presence up to the level expected on the Web today. Even in this early point in the adoption cycle of new library interfaces, it's time to press onward toward even more effective and powerful search tools.

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