Relevance of Open Access Journals in Library Services

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Abstract

This paper discusses the general background and basic concepts of open access, as well as its current developments. It also discusses the open access journal portals, platforms for open access journals, its management and the impact it had on libraries. Despite the challenges raised against open access, open access has become a significant movement that libraries cannot ignore. Libraries need to address both advocacy issues as well as objections in order to assess the contributions of open access to the institutions.

1. Introduction

There has been a sea change in the last two decades in the way information is generated, communicated, processed and retrieved, primarily due to the Internet and the World Wide Web. The journal is one of the most evident primary sources of information in the context of scholarly literature. The transition from 'print-on-paper journals' to 'electronic journals' is among the most fascinating developments in the information field.

As there is a rapidly expanding stock of scientific knowledge, access to this pool of knowledge is often difficult because of the relatively high cost of scholarly journal, their printed and web-based versions. Another vital issue is that removing access barriers will accelerate research, enrich education and share learning. There is therefore, a critical need to make research results available to as many academicians and elite class as possible free of charge. Because of this need, concerned institutions and organizations felt challenged.

2. Open Access: Its Meaning

Developing and maintaining a good collection consisting of both print and electronic resources is a tremendous challenge for libraries facing budget constraints. It is under these circumstances that a relatively new trend of collaborative knowledge sharing has emerged, generally referred to as "open access" scholarly communication.

Scholarly communication is an on-going discourse among scholars, researchers, and libraries. They share their resources and research in the spirit of collaborating their scholarly effort and contributing to a shared knowledge base. It is also a forum for establishing and strengthening professional relationships. The rationale behind new forms of such communication is that non-profit information organizations and educational institutions, including universities and libraries, will share the economic burden of overcoming the crisis of increasing prices in scholarly publications.

According to the Association of College and Research Libraries (ACRL), the scholarly communication process has three purposes: (1) to conduct research, develop ideas, and communicate informally with other scholars or scientists; (2) to consult with colleagues about ideas and research findings before they are formally published; (3) to distribute the print or electronic version of the published works to libraries and other networks economically and efficiently (ACRL, 2003).

As universities and libraries seek alternative publishing models to reduce costs and protect authors' rights as much as possible, open access is considered a feasible system that enables archiving and distribution of scholarly works with minimal or no cost to universities, libraries, or readers.

3. Open Access: Its Background

Access to information is important because society benefits from the open exchange of ideas. Access to copyrighted materials inspires creativity and facilitates research development in academic disciplines. There are troubling economic trends in scholarly publishing; the increasing cost of subscriptions, the emphasis on licensing of access instead of purchasing physical copies, and mergers and acquisitions resulting in price increases and monopolies. Additionally, various legal and legislative issues constitute obstacles that limit access. ARL claims that open access is a cost-effective way to disseminate information and facilitate academic research. Open access is consistent with the legal framework of copyright and can include peer-review to ensure the quality of scholarship (ARL,2004).

The term open access was first properly defined at a meeting in Budapest of a variety of open access advocates, brought about by the Open Society Institute in early December 2001 (Velterop,2005);

(The Global Network on Global Public Goods, GPG Net, 2005). Out of that meeting, open access was defined as : " free availability on the internet, permitting users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited." (The Global Network on Global Public Goods, GPG Net, 2005).

Other initiatives include that of Harvard Law School Faculty which started on 1st May 2008 (Harvard University Office for scholarly Communications, 2010) and that of Marine Biological Laboratory Woods Hole Oceanographic Institution (MBL WHOL, 2006) Library, Budapest Open Access Initiatives (BOAI) and Bethesda (MBL WHOL, 2006), Scholarly Publishing and Academic Resources Coalition (SPARC) and Directory of Open Access journals (DOAJ) Petricig (2007). Librarians are vocal and active advocates of open access because of the belief that open access promises to remove both the prize barriers that undermine library efforts to provide access to the journal literature.

4. Open Access Journals

Electronic journals are either fee based or open source. Some e-journals are partially open access. Open access journals are scholarly journals that are available to the reader through the Internet without financial or any other barrier. According to Moed (2007), the term open access is used with

two different definitions. It is used to specify scientific publications published in a journal running under an open access model. It is also used to specify scientific publications that are freely available, not considering if they were originally published in a journal running under an open access model or in a journal managed under other business models but characterized by being deposited in a freely accessible archive such as a personal home page, institutional repository or subject based archive.

Open access journals are scholarly journals that are available online to the reader " without financial, legal or technical barriers other than those inseparable from gaining access to the internet itself." Harvard University (2010); GPGNet (2005) and Velterop (2005) defined open access journals in various terms but these definitions were thematically and conceptually the same. Antelman (2004) investigated impact of results from research studies which are made available freely on the internet. He chose four disciplines: philosophy, political science, electrical and electronic engineering and mathematics. His result revealed that across the four disciplines, freely available articles do have greater impact.

5. Methods For Accessing Open Access Journals

There are two methods for accessing OAJs. These methods are: Open Access Journal Portals; and Open Access Platforms. These methods act as highly useful access points for retrieving relevant information by the scholarly community.

5.1 Open Access Journal Portals

The tremendous growth of e-journals has forced libraries to develop means of providing access to these popular resources. Over the past 20 years,

methods to connect users to e-journals have taken different shapes fluctuating among a plethora of theories, ideologies and technologies. Open access journal portal is a method employed by academic libraries to provide e-journal access to their users. There are a number of portals through which open access journals can be accessed. They are discussed below:

5.1.1 Open J-Gate

Open J-Gate is an electronic gateway to global journal literature in open access domain. Launched in 2006, Open J-Gate is the contribution of Informatics (India) Ltd to promote open access. Open J-Gate provides seamless access to millions of journal articles available online. Open J-Gate is also a database of journal literature, indexed from 9732 open access journals, (6513 peer-reviewed) with links to full text at publisher sites (www.openj-gate.com/Footer/About.aspx).

5.1.2 DOAJ

The Directory of Open Access Journals covers free, full text, quality controlled scientific and scholarly journals. There are now 7361 journals in the directory, 3522 journals are searchable at article level and 719963 articles are included in the DOAJ service (www.doaj.org/).

5.1.3 Epress

The Epress journal management system helps editors and publishers of academic journals organize the flow of submissions, book reviews and journal issues. Designed by editors for editors, this web based tool can be accessed anywhere in the world from a laptop and standard Internet browser (www.epress.ac.uk/index.html).

5.1.4 Digital Library and Archives

DLA is a department in the university Libraries at Virginia Tech, which evolved from the Scholarly Communications Project (SCP) that began in 1989. Its focus is on collaborating with departments and individuals throughout the university to host and preserve the unique online resources of Virginia Tech. In 2011, DLA created V Tech Works, Virginia Tech's new digital repository. VTech Works is a service designed to assist the research community in collecting, preserving and disseminating scholarly and historic works. DLA also collaborates with other universities to develop and sustain the Meta Archive Cooperative (http://scholar.lib.vt.edu).

5.1.5 Highwire

A division of the Stanford University Libraries producing online versions of peer reviewed journals and scholarly content, Hirewire now hosts the largest collection of free full-text life science articles in the world with over 1.3 million articles from over 1642 journals, books, reference works and other scholarly publications (http://highwire.stanford.edu/).

5.1.6 J-Stage

The Japan Science and Technology Agency (JST) developed the "Japan Science and Technology Information Aggregator, Electronic" (J-STAGE). The user organizations computerize bulletins of academic societies and research papers with ease and at low cost. Computerised documents can be accessed from anywhere in the world with this system. J-STAGE has released 791 Journals (392,983 articles), 125 proceedings, 10 reports and 42 JST reports by 29th December 2011 (http://www.jstage.jst.go.jp/browse/).

5.1.7 Redalyc

Redalyc is an Open Access electronic library project supported by the University of the State of Mexico. It has more than 758 Ibero American scientific journals with 213672 free full text articles in pdf format and universal access. Redalyc also provides the scientific Journal Index of CONACYT (Consejo Nacional de Ciencia y tecnologia) (www.redalyc.com/).

5.1.8 HRCAK

HRCAK is the central portal of Croatian scientific journals. The Ministry of Science Education and Sports supports this portal. It is developed and maintained by the University computing centre and is based on the idea from the Croatian Information and Documentation Society. Hrcak offers the access to the journals following the Open Access Initiative. It has 274 journals, 5,299 issues, 4491 articles without full text and 68,792 articles with full text (http://hrcak.srce.hr/index.php?lang=en).

5.1.9 SciELO

The Scientific Electronic Library Online (SciELO) is an electronic library covering a selected collection of Brazillian scientific journals. SciELO site is an integral part of the FAPESB/BIREME/CNPq Project and it is an application of the methodology being developed by the project, particularly the Internet interface module. The portal acts as the electronic virtual library, providing full access to a collection of serial titles, a collection of issues from individual serial titles, as well as to the full text of articles. The access to both serial titles and articles is available via indexes and search forms. There are 20 journals on the platform, 170 issues and 2 777 articles (www.scielo.br/).

5.1.10 Bentham OPEN

Bentham OPEN published over 230 peer-reviewed open access journals in all major disciplines of science including .These free-to-view online journals cover all major disciplines of science, technology, medicine and social sciences. Published exclusively online, the journals are available for free viewing via Bentham OPEN's web site (www.bentham.org/open).

5.1.11 Project Euclid

Project Euclid is a joint effort by Cornell University Library and Duke University Press. Project Euclid's mission is to advance scholarly communication in the field of theoretical and applied mathematics and statistics. Project Euclid is designed to address the unique needs of low cost independent and society journals. Through a collaborative partnership arrangement, these publishers will join forces and participate in an online presence with advanced functionality, without sacrificing their intellectual or economic independence or commitment to low subscription prices. Full text searching, reference linking, interoperability through the Open Archives Initiative, and long term retention of data are the important components of the Project (www.projecteuclid.org).

5.2 Open Access Platforms

Open access Platforms are those which play an important role in providing links to the information resources on the web. Knowledge of these platforms is essential for fruitful information retrieval. Following are some of the open access platforms.

5.2.1 CrossRef

CrossRef is an independent membership association, founded and directed by publishers.

CrossRef's mandate is to connect users to primary research content, by enabling publishers to work collectively. CrossRef provides a means of linking from bibliographic citation to cited article through the Digital Object Identifier (DOI) system (www.crossref.org).

5.2.2 Google Scholar

Google Scholar provides a simple way to broadly search for scholarly literature. Scholar restricts its resources to those academic in nature, thus providing an even greater chance of users locating useful content. Google scholar operates like a federated search service, with the notable exception that Google, not individual libraries, determines what resources are being indexed (http://scholar.google.com/intl/en/scholar/about.html).

6. Management of Open Access Journals in the Library

Transition in libraries from print to electronic version has further led to a web-based information retrieval scenario. The web being a very useful resource has made librarians resort to different methods to provide web-based services as a compliment to the traditional library services. Designing an OAJ web portal is one service that a library can offer irrespective of its type, size and discipline. There is need for concerted effort in maintaining sustainability of open access journals in libraries. The push for OA serves to encourage new avenues of disseminating information quickly and broadly in order to advance knowledge. Critical library functions require professionals of a high educational background or intellect as they must be able to analyze, conceptualize, make judgments, develop and implement policy responses.

In response to the emerging OA environment, information professionals have to:

❖ Understand and apply client-centered concepts and principles in the management of traditional and digital information resources and services.

❖ Analyze policies, practices and standards related to collection development and management in traditional and digital environments.

❖ Identify and apply principles of service designed for virtual information environments.

❖ Critically evaluate contemporary issues in information provision and their implications for collection development and management.

❖ Understand key aspects and trends of information technology infrastructure and their implications for collection building and management.

❖ Carry out needs assessment and evaluation of virtual information collections, resources and services.

7.   Impact of Open Access on Libraries

Perhaps the greatest impact that the open access movement may have on academic libraries is that of putting them in a position to examine the very roles they play within their institutions and indeed within the global information market.

Open access does not require that libraries do anything for it to exist. It has not been designed with libraries as its foundation. From this perspective, open access is all benefit and no cost. Academic libraries wishing to control their

financial destinies, so to speak, may begin to assume new or expanded responsibilities such as serving as one of the institution's most prominent publishers of scholarly material. The role of " library as publisher" is not entirely novel, but may become a key role that libraries play as they become more and more involved with open access, and may very well result in a radical transformation of scholarly communication as it is known today.

Libraries may go about the task of publishing scholarly material in a number of ways, among which are cultivating and managing their own electronic journals and supporting an institutional repository. One of the key goals of the institutional repository, simply stated, is to capture the intellectual output of an institution and make it available via a single interface. A single point of access, search and organization of scholarly materials within the institution would be of value to the communities served by academic libraries, and there are certainly other values of institutional repositories.

The implementation of institutional repositories may be the easiest step; academic librarians "also must be able to persuade faculty, many of whom are for a variety of reasons quite reluctant, to contribute their prime research output. Liaisonship with the institution's faculty is thus seen as another key impact of open access. Though academic librarians are already engaged in liaisonships, efforts to sell open access, and librarians ability to do so, will need to be stepped up.

There are still many unresolved challenges in open access. Schmidt, Sennyey, and Carstens (2005) claimed that as libraries play a critical role in scholarly communication, the open access impact

on libraries is evident. Although the open access model has become irresistible, the authors are optimistic that commercial and nonprofit publishers will be able to overcome the obstacles and remain competitive with open access in order to promote access to scholarly research. It is predicted that a mixed open access (MOA) model will eventually emerge where traditional publishing and open access models coexist; they may even become interdependent. While playing a role as intermediaries between users and information, librarians need to be proactive, resourceful, and creative in evaluating and assessing the implications of open access and its compatibility with institutional goals, needs, and philosophies.

Some supporters of open access believe that it is possible to create equilibrium in a mixed publishing environment where open access and non-open access co-exist. Schmidt, Sennyey, and Carstens (2005) observed that while libraries are facing competition from the Internet and other commercial information companies, "the advent of the MOA environment makes this task [of overcoming] the competition urgent and complex". For example, there may be additional staff training and extra workload for the departments. There will also be some technological challenges; there are access issues when ensuring that the computer facilities and software are compatible with open access materials. Open access also requires policy and procedure changes, in order to accommodate the additional collections of institutional repositories and open access journals. Subject specialists, bibliographers, and cataloging librarians need to establish guidelines to perform quality control and regular catalog maintenance on these titles.

While deciding whether to adopt the open access initiative as a long term or short term goal, libraries need to be able to convince faculty and researchers regarding the connection between open access and greater research impact. Gedye (2004) claimed that in an open access era, "a new role for librarians needs to be discussed, defined, and promoted" in order to better apply their research and instruction expertise to facilitate and instruct their users in accessing and evaluating the quality of open access articles . In "The Criteria for Open Access," Goodman (2004) agreed that "librarians face major rethinking of how library service is to be provided". Goodman connected open access with intellectual freedom issues such as privacy, copyright, censorship, and user anonymity. Librarians carry social and ethical responsibilities in the promotion of open access. They should possess the knowledge, skills, training, and experience to promote information literacy among their users.

 In a nutshell, the ultimate purpose of open access is to make scholarly information more accessible and affordable. Open access is a successful model of resource sharing in cooperative collection development due to its widely collaborative institutional efforts. While technology facilitates information dissemination by converting print materials to digital works, it has posed significant challenges to non-profit institutions in terms of meeting increasing subscription costs, and managing difficult negotiations with publishers, particularly when these publishers monopolize the intellectual market and tighten copyright limitations. Universities and libraries need to assess institutional needs and priorities based on the strengths and weaknesses of the open access initiative in their decision-making process. They

must decide whether they should reject the open access model, adopt a full open access model, or attempt a mixed publishing model consisting of both open access and commercial publishers. For now, open access and commercial publishing should be able to coexist on the basis of healthy and constructive competition. In light of the urgent budget crunch, it is imperative that libraries should experiment and adopt a cost-efficient publishing model in order to expand the scope of scholarly communication.

8. Conclusion

Cost escalation and information explosion are the two forces which have inadvertent impact on the functions of modern libraries. In this scenario, open access journals are a boon to the practicing librarians. They are gaining popularity as most of them are getting peer reviewed. More and more users have begun to cite open access journals increasing their credibility in the scholarly world. They are particularly useful in an academic environment where scholarly information play a vital role in research activities.

Significance of library portals in the modern information world can be ascertained by their increasing presence in the major institutional library web sites. These portals act as a one-stop shop platform to access related information, thus saving the time and effort of the scholars. Compilation of OAJ web portals in select subjects and hosting them for public use on the web through university portals or institutional portals provide ample scope for researchers to reach relevant information by reducing the hassle of search process. Users can easily access the OAJs without going through the procedure of giving IP addresses or remembering username and password. Since

they are "Open Source", meaning free, they may be shared among users of different libraries, thus expanding the scope of its utility.

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