Confetti of Thoughts on
Library & Information Studies
Essays in Honour of Prof. (Dr.) C. V. Rajan Pillai

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The paper discusses the changes that open access and institutional repositories have brought in the scholarly publishing scenario at the international level, and their impact on libraries and librarianship. The need for open access, its mechanism involved, open access publishing and open access archiving are discussed.

Introduction

Open Access and Institutional Repositories are two buzzwords among the academia and the library and information science parlance. In the 80’s the Universal Bibliographic Control was a dream of information scientists. Through the Universal Bibliographic Control, the universal availability of published literature or its bibliographic details was expected. This remained a dream because of the barriers of time, distance and language. But the advent of Internet, networked environments and huge server computers changed the scenario globally. Now time and distance are not at all barriers. Communication to the other end of the globe is a few mouse clicks away. The information revolution has made the world a global village.

In this changed situation the need for making available the research output from the academic and research institutions was felt seriously. This gave way to the concept of open access. Institutional repositories are the products of innovative ideas to
MAKE POSSIBLE THE CONCEPT OF OPEN ACCESS. THIS ARTICLE DISCUSSES THE CHANGES THAT OPEN ACCESS CONCEPT AND INSTITUTIONAL REPOSITORIES HAVE BROUGHT IN THE SCHOLARLY PUBLISHING SCENARIO GLOBALLY AND ITS IMPACT ON LIBRARIES AND LIBRARIANS AS A WHOLE.

NEED FOR OPEN ACCESS

The need for open access to scholarly literature is supported by several arguments. The different groups of stakeholders have their own arguments in respect of this concept. The academic and research institutions are consuming huge amount of funds for research with a view that the research would benefit the public. The public (taxpayer) feel that the research in academic as well as research institutions are funded by their money. Hence they are eligible to get access to the literature output of those research projects. This view is very much relevant in the case of medicine and applies to other subject fields too.

The view in support of open access held by researchers is exceedingly significant. An analysis of the traditional scholarly publishing scenario would reveal this. The scholarly publication is mainly centred on scholarly journals, where the journals have the monopoly in each area of scholarship. The academic institutions and libraries of developing and under-developed countries have very little or even sometimes no access to such publications. So access to research was curtailed which in turn has adversely affected research globally.

"Most of the direct labor and much of the indirect cost required for the publication of a journal are derived from academic institutions that ultimately bear the cost of scholarly journals subscription fees. Faculty researchers produce the original research itself; academic editors and peer-reviewers select and validate the quality and priority of research; academic libraries process, house, and distribute the journals to end users, and library resources support archival preservation - all at little or no direct cost to the journals publishers themselves" (Crow, 2004).

Similarly, academic librarians all over the world were facing the so called 'Serials Crisis'. The cost of journal subscription was escalating, when academic institutions were not getting the
Figure 1: Traditional Scholarly Communication Process
required funding support. Librarians had no other choices than to cut down the number of journals to which they subscribe. The libraries were not able to purchase the journals in which the articles of their researchers were published.

The publication of an article submitted to a traditional journal took 36 to 52 weeks. But the real processes behind the traditional publishing like the creation, peer-review, correction and printing takes only very little time out of this. Hence between the production and dissemination of an article huge wastage of time occurs, which again leads to duplication of work and non-availability of information regarding research results.

Yet another pragmatic view in favour of open access is that, when there is technology to improve communication and dissemination of research, why not we use it? Naturally the academic community all over the world thought of alternatives, where the developments in ICT have a great role to play.

Open Access: The Mechanism

The exorbitant cost of scholarly journals, shrinking library budgets, and the dream of information professionals to make globally available all published materials ultimately resulted in the creation of open access mechanisms. The main impetus for the development came in the form of developments in communication and technology. During the paper based publication era, there was no remedy to the above disgusting factors. But the ubiquitous web opened pathways for open access.

An analysis of the declarations in favour of open access reveals that the ultimate goal of open access movement is open access to peer reviewed scholarly literature. In 2002 the Open Society Institute initiated the Budapest Declaration (Budapest Open Access Initiative) supported by a group of scholars and later seconded by researchers and professionals all over the world.

The BOAI suggests two mechanisms by which the universal availability of peer-reviewed periodical literature. They are the Open Access Publishing (OAP), otherwise called the "Golden" road to open access and the Open Access Archiving (OAA), otherwise called as the "Green" road to open access.
Open Access Publishing (OAP)

In this model of open access publishing the peer-reviewed journals are published as open access publications and they provide instant online open access to articles upon publication. A journal may be "full OA", meaning that it makes all of its articles available under open access principles, or "hybrid OA", meaning that some articles are made openly accessible whereas others are not. Open access journals generally publish under a copyright licence rather than an assignment of copyright, allowing authors to retain copyright ownership of their work. Some open access journals charge publication fees and some do not. By making content available online for free, OA journals guarantee that anyone with access to the Internet also has access to timely and useful research publications. A large number of journals have already come to exist providing free online full text access. A directory of the open access journals is available under the URL www.doaj.org. This site lists more than 3,000 journals. Major publishers also have come out with open access journals. Open access journals that do not charge publication fees are usually able to do so because they are supported by a hosting institution or university (for example, the Harvard Human Rights Journal is published and supported by Harvard Law School) or because they receive funding from external research or charitable sources. For example, D-Lib Magazine is produced by the Corporation for National Research Initiatives (CNRI) and Ariadne is funded by the Museums, Libraries and Archives Council (MLA), JISC and the European Union, and also receives support from the University of Bath.

There is a common misconception that OA journals do not provide peer-review at all or do not provide the same level of peer-review as toll access publishers provide. However, this is not true. Open access publishing is completely consistent with peer-review. OA journals provide a level of peer-review as rigorous and dependable as that provided by toll-access publishers. They use the same standards, the same procedures, and even the same reviewers as conventional journals.

One perceived disadvantage of open access journals at present is their lack of recognised research impact. Research impact is
defined as the extent to which a research articles is used for reading and further research.

Open Access Archiving (OAA)

This method of publishing is called the green road of open Access, where the authors are depositing their documents to a local repository which is available allowing open access. Wikipedia defines "institutional repository." "An Institutional Repository is an online locus for collecting, preserving, and disseminating - in digital form - the intellectual output of an institution, particularly a research institution."

For a university, this would include materials such as research journal articles, before (preprints) and after (post-prints) undergoing peer review, and digital versions of theses and dissertations, but it might also include other digital assets generated by normal academic life, such as administrative documents, course notes, or learning objects. The four main objectives for having an institutional repository are:

— to create global visibility for an institution's scholarly research;
— to collect content in a single location;
— to provide open access to institutional research output by self archiving it; and
— to store and preserve other institutional digital assets, including unpublished or otherwise easily lost ("grey") literature (e.g., theses or technical reports).

The Scholarly Publishing and Academic Resources Coalition (SPARC) defines "institutional repositories" as "digital collections capturing and preserving the intellectual output of a single university or a multiple institution community of colleges and universities."

What material will or will not be accepted for deposit in the institutional repository depends on an institution's open access policy. Usually, accepted material will include journal articles, research papers, book chapters and conference papers. Repositories have been designed to be interoperable through the use of common metadata standards developed by the Open Archives Initiative (OAI).
The institutional repositories are online locus for depositing the scholarly publications of an academic or research institution. The mechanism for submission of articles, its storage and backup, indexing of metadata, and the control of user interfaces are all controlled by software interfaces. There are many open source software packages available for this purpose. The leading names among them are DSpace, Eprints.

DSpace (www.dspace.org) software for developing institutional repository which is freely available as open source software and you can customise and extend. It captures, stores, indexes, preserves and redistributes an organisation’s research material in digital formats. This digital asset management software is jointly developed by Hewlett Packard and MIT Libraries. DSpace facilitates the institutions and universities to operate an open access and interoperable institutional repository at the local level.

Eprints (www.eprints.org) is another generic repository building software developed by the University of Southampton. It is intended to create a highly configurable web-based repository. There are about 300 Eprints based repositories according to the Eprints website. This also is highly customisable software.

Conclusion

The concept of open access has changed the scholarly publishing scenario globally. The extent to which we can attain bibliographic control is a matter of concern due to the limitations of policy matters of institutions involved in research and development.

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