CHAPTER-1

1.0 Introduction

Information plays prominent role in meeting the information needs of the user community. The information is growing at faster rate due to many reasons such as research in multi-discipline, micro level, varied needs of user community and so on. The recent trends in open access movement have paved the way for accessing the information freely from any part of the world by removing the geographical barriers. These helped the higher educational institutions to procure, organize and disseminate the information to its user community. Today, many of the higher educational institutions have developed Institutional Repository to preserve their archives for future use. This helps the scholarly communication activities among the faculty members and research scholars across the globe. Scholarly communication is all about information creation, preservation which helps in the dissemination of knowledge to the academic audience worldwide.

Scholarly Communication is going through a lot of challenging situations. The Scholarly Communication Channel likes Journals are published in enormous numbers nationally and internationally every year. Unfortunately, the accessibility of all these journals are very less because of increasing cost, less accessibility and other barriers. With the emergence of Open Access Movement, the barriers in scholarly Communication have been reduced to a great extent.

1.1 Background of the study

The scientific scholarly communication has been going through three important periods; they are traditional, modern and post modern scholarly communications.
The traditional scientific scholarly communication began from 1665, from which the first scientific journal in English known as Philosophical Transactions, under the editorship of Henry Oldenburg was published by The Royal Society, London. (Schauder, 1994; Prosser, 2003; Nurse, 2015). During these period, journals particularly science and technology have become dominated medium of scholarly communication. These types of peer-reviewed journals have helped scientific authors to publish their latest intellectual output which further helps to popularize and reorganize their work. And from the readers’ point of view, they receive latest finding of their required research area, which helps them to keep themselves updated in their research.

From 1990-2002, the tremendous development of Internet and its increased use have shown some modern development in scholarly communication. The traditional print journal publication has been slowly being converted to online e-Publication, which resulted in the increase in publication of research articles and increase in readers’ accessibility of journals. Due to the advancement in the technological aspects, the outreach of research has increased considerably. Thus, this era transformed the traditional scholarly communication into a period of modern scholarly communication and journals cost during this period has grown up.

“Association of Research Libraries (ARL) reports that the average cost of STM journals rose by 226% between 1986 and 2000, while the consumer price index rose by 57%. During this period, library spending on journals rose by 192%” This situation warranted the academic libraries to reduce the number of subscribed journals according to the library budget. Prosser (2003) also explained that “the rate of increase in cost to libraries for electronic access continues to be greater than the increase in budgets for many libraries”. In all these stages, the academic community faced the same fundamental
problem that is tremendous increase of journals price and less accessibility of the latest research work done by the research community, which led to scholarly communication crisis.

Nabe (2010) also stated that the reasons of scholarly communication crisis are “the growing financial imbalance of the traditional methods of distributing research results and scholarly work”.

In these circumstances, academic community started rethinking about an alternative or parallel model of scholarly communication to reduce or avoid scholarly communication crisis.

To solve this scholarly communication crisis, the scientific community developed a parallel model of scholarly communication which is known as Open Access Movement in which, the information can be accessed freely and can be used, reused and distributed by anyone without copyright restrictions. The invention of Open Archive Initiative/Protocol for Metadata Harvesting (OAI/PMH) (1999/2002), e-print (2001) and DSpace (2002) softwares were the milestones in the open access movement. This enables to develop a well standard open access journal and institutional repositories in all higher educational institutions in the world. This period can be marked as the post modern scholarly communication.

1.2 Major Historical Development of Open Access Movement

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<tr>
<th>Year</th>
<th>Development</th>
<th>Purpose</th>
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<tr>
<td>1994</td>
<td>Social Science Research Network (SSRN) was developed by Michael Jensen and Wayne Marr</td>
<td>To provide scholarly research output in the area of social sciences and humanities at the lowest possible cost to the readers all across the world.</td>
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<td>Year</td>
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<td>1997</td>
<td>Research Paper in Economics (RePEc) by the Research Division of the Federal Reserve Bank of St.Louis</td>
<td>Mainly focuses on research in Economics and related sciences</td>
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<td>1997</td>
<td>CogPrints , preprint software, later it came to E-Prints software</td>
<td>Launched for concepts of author self-archiving, and dealt in areas of Psychology, Neuroscience, and Linguistics.</td>
</tr>
<tr>
<td>1999</td>
<td>Open Archive Initiative (OAI) funded by Andrew W. Mellon Foundation.</td>
<td>Develop a technical support for harvesting protocol which provide uniform archiving way from the heterogeneous metadata</td>
</tr>
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<td>2000</td>
<td>PubMed Central (PMC) by National Library of Medicine’s (NLM’s) National Center for Biotechnology Information (NCBI) in U.S.</td>
<td>It is a free archive, keeping with NLM’s legislative mandate to collect and preserve the biomedical and life sciences journal literature</td>
</tr>
<tr>
<td>2000</td>
<td>EPrints, developed by University of Southampton</td>
<td>Open access repository software available on OAI-compliant</td>
</tr>
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<td>2002</td>
<td>Budapest Open Access Initiative(BOAI) Definition</td>
<td>To promote open access, there was a conference conducted by Open Society Institute in Budapest,December1-2, 2001</td>
</tr>
<tr>
<td>2002</td>
<td>Creative Commons(CC) by Lawrence Lessig</td>
<td>Provides sharing and use of creativity and knowledge through free legal tools</td>
</tr>
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<td>2002</td>
<td>SHERPA/RoMEO (Securing a Hybrid Environment for Research Preservation and Access/Rights Metadata for open archiving) by JISC- FAIR (Joint Information System Committee-Focus on Access to Intuitional Resource).</td>
<td>It is a searchable database which provides publishers policies regarding self archiving.</td>
</tr>
<tr>
<td>2002</td>
<td>DSpace by Massachusetts Institute of Technology (MIT) and Hewlett-Packard (HP) Labs released</td>
<td>Open-source software available on OAI-compliant for Open Access Repositories and academic scholar.</td>
</tr>
<tr>
<td>2003</td>
<td>Bethesda Statement</td>
<td>Open access definition</td>
</tr>
<tr>
<td>2003</td>
<td>Berlin Declaration on open access to knowledge in the sciences and humanities</td>
<td>Open access definition</td>
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1.3 Open Access-Definition

The famous definition of open access by the Suber (2012) is “Open access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions.”

SPARC definition by Open access as “an open system for communicating research results in which anyone, anywhere can contribute and our outdated publishing system has led to the call for open access”. SPARC also explain that “Open Access is the free, immediate, online availability of research articles combined with the rights to use these articles fully in the digital environment”.

Open access means the information available in the form of journal articles, books, theses/dissertations etc. made available to the public freely and there is no restriction in use, modification and redistribution of the information.

The open access is the combination of two methods i.e. “Gold” Open Access and “Green” Open Access.

1. The Gold open access, mean Open Access Journals in which scholars can publish their peer-reviewed scholarly journals and that articles are made freely available for access and re-use purpose. As per the statistics of Directory of Open Access Journals (DOAJ), 11,485 open access journals are registered all over from the world, of which 7,155 are searchable at article level, with 2,242,981 articles from 136 countries as on 29-03-2016.
2. The Green open access, means Institutional Open Access Repositories in which scholars archive or deposit already published articles which are made freely available for access and re-use purpose. As per the statistics of Directory of Open Access Repositories (OpenDOAR), 3047 repositories have been registered which include institutional, subject, aggregating and governmental from all over the world as on 29-03-2016

1.4 Institutional Repository – Definition

Institutional repository is a store house of information available to its members free of cost, available at their university which helps in the dissemination and preservation of knowledge.

Lynch (2003) defines IRs as “A university based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long term preservation where appropriate, as well as organization and access or distribution. While operational responsibility for these services may reasonably be situated in different organizational units at different universities, an effective Institutional Repository of necessity represents a collaboration among librarians, information technologists, archives and records managers, faculty, and university administrators and policymakers”.

Crow (2002) defines IRs as “An institutional repository is a digital archive of the intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside of the institution, with few if any barriers to access. In other words, the content of an institutional repository is:
Institutionally defined; Scholarly; Cumulative and perpetual; and Open and interoperable”.

Thus, IR is a set of services provided by an institution, which enables easier collection, dissemination and long term preservation of information accessible to both end users within and outside the institution.

1.5 Scholarly Communication- Definition

Any kind of new knowledge created needs to be communicated among the academic community. In simple terms, this exchange of knowledge is known as scholarly communication.

According to Bernard Becker Medical Library, “scholarly communications is the creation, transformation, dissemination and preservation of knowledge related to teaching, research and scholarly endeavors. Among the many scholarly communications issues include author rights, the economics of scholarly resources, new models of publishing including open access, institutional repositories, rights and access to federally funded research, and preservation of intellectual assets”.

Association of Research Libraries defines scholarly communication as “the system, through which research and other scholarly writings are created, evaluated for quality, disseminates to the scholarly community and preserved for future use. The system includes both formal means of communication such as publication in peer reviewed journals and informal channel such as list serves.”

Scholarly communication helps in scholarly endeavors by creating, transforming, disseminating and preserving knowledge. It is a process which facilitates, sharing and publishing of research findings among the academic community and beyond.
1.6 Librarian role in scholarly communication defined

Dartmouth College. (2012), defines the librarian role in scholarly communication as ,“Educate and inform faculty, graduate students, undergraduate students, and campus administrators on issues of scholarly communication. Be a resource for issues such as scholarly communication, open access, institutional repositories, and digital collections”.

Librarians play very important role in facilitating scholarly communication among the academic community. Information relating to all the developments in the field of research is first obtained by the librarian. Often, the librarian acts as a link between the information provider and the information user. Librarian can help faculty members and research scholars to gain a better understanding of scholarly publishing, copyright, author’s right, open access, institutional repositories and the management and preservation of scholarly work.

1.7 Description of the research topic

Institutional repositories cater the needs of scholarly communication. It is an umbrella term used to describe the process of academics, scholars and researchers sharing and publishing their research findings so that they are available to the wider academic community and beyond.

Crow (2002) prominently spelled out the roles of institutional repositories to “Provide a critical component in reforming the system of scholarly communication- a component that expands access to research, reasserts control over scholarship by academy, increase competition, and reduce the monopoly power of journals, and brings economic relief and heightened relevance to the institutions and libraries that support them”.
Institutional repository plays an inevitable role in scholarly communication activities, by facilitating better preservation or archiving of scholarly output, better dissemination of scholarly information, and reducing journals monopoly power.

1.8 India and Open Access Movement

India, a developing economy is at its stage of rapid development in all spears. The advancements in information and communication technology have transformed the way of life in India. The educational institutions too, have started using ICT as a medium to impart knowledge and information. The higher education institutions are equipped with the latest infrastructural facilities and thus open access is gaining importance in India with every passing day.

“In India too, open access is gaining momentum due to the advancements on Information and Communication Technology (ICT) and with the necessary available infrastructure facilities in institutes of higher research and learning” Singh & Nadhi (2011).

1.9 National Knowledge Commission (NKC), Statements on Open Access

National Knowledge Commission of India (2005) gave recommendations about Open Access and Open Educational Resources. They recommend that, “all research articles published by Indian authors receiving substantial government or public funding must be made available under Open Access and should be archived in the standard OA format at least on his/her website”.

In India, the total number of repositories registered in OpenDOAR are 71 as of 29th March, 2016 and, many of the state, central universities, and institutions with national importance have developed IRs. Some of the institutions developed IRs are
Documentation Research & Training Centre(DRTC), Indian Institute of Science(IISc), National Aerospace Laboratories (NAL), Indian Institute of Astrophysics(IIA), Indian Institute of Technologies (IITs), Indian Institute of Managements (IIMs) and so on. In Kerala also open access movement is in development stage. Among many state universities, CUSAT, Calicut, MGU and KUFOS and central institutions like IIM, and CMFRI have developed their own institutional repositories.

1.10 Shodhganga: a reservoir of Indian Theses

On 1st June 2009, University Grants Commission (UGC) took a revolutionary step in Indian open access movement to implement a mandatory policy for submission of electronic version of theses and dissertations by the researchers in universities to facilitate world wide access. For this UGC implemented an open access repository of Indian ETDs called the “Shodhganga, a reservoir of Indian Theses” developed and maintained by the INFLIBNET. Shodhganga has 70984 full text theses, 2131 synopses from 240 contributing universities have MoU with 254 universities of India as on 29-03-2016.

IR role in this digital environment is inevitable and it is a boon to the user community. In order to make the academic and research community to make use of the IRs effectively, awareness about the IRs are very much important. In this circumstances, this study will be more useful to find out the strengthens and weakness of the IRs and how effectively, it is being utilized.
REFERENCE


Websites