CHAPTER II
RELATED LITERATURE: AN OVERVIEW

Review of literature is a process to identify the research problem and research gaps in a field of study. Overview of related literature in this chapter is synthesis of research that supports open source software and open access literature. This chapter includes an overview of open source software and open access literature. The following overview of related literature is divided into two sections, i.e., open source software and open access literature.

2.1. Related literature: Open Source Software

The literature on the open source software is scattered in a number of ways, i.e., open source, as a movement, open source operating system, open source software in various fields including library and information science. However, the present study is concerned with open source movement and open source software in library and information science. As a general movement a number of studies are available to describe the development of open source movement. History of open source movement in literature is presented from several points of views and standards. For example, Raymond (2001), DiBona, Ockman, & Stone (1999), Soderberg (2008), and Kelty (2008) deal with ethical, moral and ideological view; Daffara and Gongalez-Barahona (2004) study open source movement as a project; Laurent (2004) emphasizes on the licensing of free and open source software and the like. In addition to these specific writings a number of general writings are available such as Williams (2002) and Evars (2000) who narrate the whole story of the beginning of open source movement; Gay (2002) synthesized the articles of Stallman describing his philosophy towards software and history of free software movement; and Koch (2005) reviewed the research done on free software movement and open source software movement and many more. The open source
software movement initially was part of free software foundation and later on separated from it and was termed as open source movement. By principle both are same but are different in their values. Raymond (2001) provides a very important account of open source software, reasons behind the starting of open source software and the philosophical difference between the two. He also narrates his experience as a member of free software movement (Williams, 2010).

People from Free Software Foundation separated their ways and divided into two movement free software movement and open software movement. However, by and large both are known as open source movement. The first objective of Free Software Foundation was to develop an open source operating system which was achieved with the development of Linux. With success of Linux, a huge number of people started to support open source movement and looked towards open source software not only in operating systems but also in other application software. The movement moved from general to specific through the development of software related to specific field of endeavour, in the case of present study the focus is on open source software related to library operations. Attention of library professionals was drawn with the historical writing of Daniel Chudnov (1999a; 1999b). After these studies a number of writing in support or against the idea of Daniel Chunov published rapidly. Tennant (Tennant, 2000) had no seen any ambitious open source project for libraries while Digital Library Federation (Digital Library Federation, 2001) believed that OSS could be economical and potential alternative for libraries. Marshall Breeding (Breeding, 2002), however had not seen early success to open source software in the field of libraries due to lack to programming knowledge in librarians and high cost of software development. Muir(Muir, 2005), however tried to analyse open source software in both positive and negative perspective.
Among these dissenting voices open source software for libraries were developing continuously. However the literature on these was relatively less except the manuals developed by the developers of the software. Clark (2000), and Morgan (2012) also saw the possibilities of open source software in library and information science. They also listed some websites notifying open source software for libraries.

The above mentioned studies, except a few later ones, discuss open source software for libraries, dealing with open source movement, but none of them discuss open source software movement from the viewpoint of a library professional. However, some studies provide good historical details of library automation, though not with open source software (Grosch, 1995; Line, 2006; Rayward, 2002). These studies are helpful to get the gist of activities that were going on in the field of libraries during the development of open source movement. The history of computer applications in libraries is so scattered that it is very difficult to tie them into a single thread.

Koha is claimed as first open source software for library management. Blake and Rachel (2000) introduced Koha to the world after first release. After this a number of write ups were published on Koha and other open source software. Anctil & Beheshti (2004) provided a brief overview of the open source ILS projects in existence in the initial phase of open source movement in libraries. Engard (2010) listed a number of open source tools for improving library services. She also provided the experiences of users using those tools. Ransom, Cormack, & Black (2009) reminded whole development process and the difficulties faced in bringing out Koha ILS. However these writings were limited to one or some more software, and none of these sources could provide full information about open source movement in libraries.
With the passage of time when more alternatives for open source software came into existence several studies evaluating and comparing these software had come into existence. Giri (2012) and Singh (2013) evaluated NewGenLib and recommended it as a very powerful open source ILS. Singh and Sanaman (2012) at the same time compared NGL with Koha and found NGL very competitive to Koha. Ramsay & Chamberlain (2012) and Muller (2011) suggested a number of criteria to evaluate open source ILS. Kökörčený & Bodnárová (2010), Lal & Prasad (2013), Vinit Kumar (2009), and Barve (2008) evaluated open source digital library software following a number of criteria. However these studies were evaluative studies. They either evaluated a single or multiple software. None of the studies could suggest a single software that can be used in any type of library.

The present study is towards filling the gap of these studies. It aims to analyze the open source movement from a librarian’s point of view and wish to suggest an optimum model after studying the available open source software for libraries. However, a review of all these studies helped the researcher in his research. Some very important studies on open source are presented below.


This book contains a number of essays from the pioneer of open source movement. Some essays of this book are historical and some are conceptual. The editors of this book in the prologue discuss the free software and try to relate it with open source. Eric Raymond in his two essays discusses about the people engaged in the software development. Some essays discuss the concept of open source software licenses. Richard Stallman in his essays narrates his days when he started free software development and reasons behind his bias toward free software. The essays present in this book make it easy to understand
the philosophy of most prominent open source pioneers and the initial open source movement.


It is yet another work that must be referred by anyone who is interested about open source. In this book Raymond explains whole open source ideology. He emphasize that open source can produce more competent and economical products than proprietary software. He categorizes closed source software as cathedral where final product is reviewed by a team of small number of members, while bazaar as an open source product which is open socially and can be reviewed by everyone. He briefly points out his views towards Richard Stallman and his Free Software Foundation.


This is another good book based on Richard Stallman’s struggle for free software. It looks like a biographical work on Richard Stallman, however, it includes his philosophy on software. This book is about the youth of Richard Stallman in 1960s and 1970s and his work for making software free. It also keeps the debate on ‘free software’ and ‘open source’ alive throughout the book. The revision of the book is done by Richard Stallman himself that makes the book more authentic. The earlier version of the book was carrying the interviews of Richard Stallman, however, this edition also carries his explanation of some interview questions answered by him.

It is a pioneering write-up that introduced open source software to the world of library professionals. Chudnov, in this article gave all the reasons to adopt an open source software and he also criticized proprietary open source software as they did not prove themselves perfect and up to the mark. He justified that the libraries are not for profit organizations and open source are the best option for them. He also requested the library world to get involved in open source production. This write up by Chudnov helped in raising open source voice among library professionals.


Engard listed a number of open source software useful for libraries with the practical experience from the organizations which are already using it. She tried to put arguments against those who say that open source is not good or economical for libraries. It includes case studies of open source software of almost all categories of libraries.

2.2. Related literature: Open Access

Open access is an area which is concerned with libraries, scientific publications, and each one who is involved in the process of publication and distribution, i.e., the author, the publisher, the library, and the ultimate user. Open access again is a very new concept born in the final years of the 20th century and initial years of the 21st century. However as a philosophy, open access could have been observed since ancient times. Open access, being a new phenomenon of scientific publication, attracts very few studies on it. Some of those are from the pioneers of open access movement.
Maximum literature in the initial phase of open access movement is found primarily on the rising cost of serials and ways to solve this problem. The contemporary situation is described by Johnson (1990) as “The consequences of the serials crisis are significant. The proportion of library budgets devoted to serials expenditures is increasing at a rate that threatens to consume the entire acquisitions budget”. A number of scholars during this time raised their concern towards ‘serial crisis’ and requirement of a possible solution of it. The subversive proposal by Steven Harnad (1994) is an important writing towards making people aware about open access. Writings from many other advocates of open access not only helped in the growth of the open access movement but also they share large portion of literature written on open access movement. Peter Suber (2012) is one of the advocates who is tracking open access movement from the beginning. He has worked on every aspect of open access such as copyright, pricing, economy, etc. Some important writing on open access are presented below.


This work is based on a listserv discussion started by Steven Harnad in 1994 provoking scientists towards publishing their papers online for making it available to other researchers at very low cost. It covers the whole discussion and its critical analysis. In addition it includes some essays on the subject. This book is useful to understand initial views of the researchers on serial publications and their pricing and their concern over constant rise is serial price.


By making this book open access Peter Suber proved that he is a true supporter of open access. This book however is a collection of his numerous articles available freely on the
Web. However, this book presents those writings in a very well managed form that makes the things easy to understand. Through this book he provides clear and concise explanations of various aspects of open access publishing.


This was the first collective work on open access and scholarly publishing. Willinsky interprets the rational of open access publishing in this book. This book however differs to that of Peter Suber’s who discusses the mechanism of open access.


It is a collaborative work of all open access advocates. This book includes open access and related concepts. Apart from the basic foundation of open access, it includes relation of open access with researchers, publishers, institutions and the contemporary position of open access literature around the world. This book is a good read to understand the development of open access since its birth to 2005.

No other major work on open access is available. However the writings on open access is available in scattered form from small articles from the pioneers of the open access. None of them carries high importance individually. The majority of works discuss about the various ways of open access publishing propounded by Peter Suber (2008) and Steven Harnad. These two and other advocates led to the open access movement through Budapest Open Access Initiative (2002), Bethesda Statement on Open Access Publishing (Suber, Bethesda Statement on Open Access Publishing, 2003), and Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (Berlin 9, 2007).
These studies discuss either the philosophy of open access or the framework of open access publishing. These studies do not cover the open access as a movement. The present study is an attempt to fill this research gap.

Though these are not the complete sources of information for this research work, however, these studies played an important role in formulating the concept, understanding and appreciation of open access literature and open source software. This literature was helpful in confirming the facts and clarifying the concepts during the initial stages of the present research work.

References


