

Adoption of Koha Open Source Software in Libraries: a Web Based Study

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Abstract Since last few years open source integrated library systems gaining attention of library and information science professionals. This paper tries to identify the extent of adoption of Koha, an open source ILS in libraries around the world through a Web based study. The study found that Koha adoption in libraries is still at infancy.

Keywords: Open Source, Free Software, Integrated Library System, Koha

1. Introduction

The term open source was coined by Christine Peterson in 1998 and the adopters of the term formed the Open Source Initiative [1]. Part of the free software community began using the term open source software rather than free software so that free as in liberty to copy or modify would not be confused with free as in free of charge. Open source software (OSS)/Free Software are computer software whose source code is available under a license that permits users to use, change, and improve the software, and to redistribute it in modified or unmodified form. The attitude behind open source software is mutual sharing of knowledge, expertise, and skills.

The library and information science (LIS) community first started to take note of open source software (OSS) in 1999, when Daniel Chudnov, founder of the Open Source Systems for Libraries project, wrote an introductory article in Library Journal. According to Chudnov [2] there are three factors pushing the use of OSS in libraries:

- OSS licenses allow libraries to cut budget on software and use it to other

issues needing more funds.

- OSS product is not locked into a single vendor. Thus even if a library buys an open source system from one vendor, it might choose to buy technical support from another company or get it from in-house experts.

- The entire library community might share the responsibility of solving information systems accessibility issues.

The major category of software in use in libraries at present is the Integrated Library Systems (ILS). Integrated refers to the capability of the system to share data among its modules. An ILS is a database of a library collection, user accounts, and the procedures acting on it. It may contain functional modules for cataloging, circulation, serials, acquisitions, statistical reports, member accounts, and an online public access catalog (OPAC). Since the late 1990s, several open source ILSs have been developed. They include Avanti MicroLCS, Emilda, Evergreen, Gnuteca, Koha, OpenBiblio, PhpMyLibrary, and PhpMyBibli. Among various ILS, Koha and Evergreen are the most widely used open source ILSs. The present study is a web based analysis of

adoption of Koha open source software in libraries across the world.

2. Koha

Koha (<http://www.koha.org>), is the first open source fully featured Integrated Library System (ILS) written in the LAMP paradigm. Development of Koha, began in 1999, funded by a group of libraries in rural New Zealand that found proprietary software expensive and lacking in needed features [3][4]. The full-featured Koha was developed initially in New Zealand by Katipo Communications Ltd and first deployed in January 2000 for Horowhenua Library Trust. Koha is currently maintained by a team of software providers and library technology staff from around the globe. Some of the key features of Koha are listed below:

- Web Based.
- Copy cataloguing and z39.50.
- MARC21 and UNIMARC for professional cataloguers
- Manage online and off line resources with the same tool.
- RSS feed of new acquisitions
- E-mail and/or txt patron's overdue and other notices.
- Print barcodes.
- Serials management module.
- Full catalogue, circulation and acquisitions system for library stock management.
- Web based OPAC system

- Simple, clear search interface for all users.
- Simple and comprehensive acquisition options.
- Multi-tasking and enables updates of circulation, cataloguing and issues to occur simultaneously.[5]

Koha is designed to work with a minimum of hardware resources. It runs on the Linux operating system in conjunction with the Apache Web server, uses the popular MySQL open source database management system, and is written in Perl. The Koha ILS can also be installed on Windows operating system. Koha supports MARC21 and UNIMARC bibliographic records.

3. Objectives

Open source software is becoming a central topic in our information world. This study aims to explore whether librarians or libraries are familiar with the new technological innovations and whether they use or adopt open source software like Koha for library automation. The study formulated the following objectives:

- to identify the extent of Koha installations around the world
- to find out geographical region wise installations of Koha ILS
- to find out library wise distribution of installations of Koha ILS .



4. Literature Review

A number of authors advocated the suitability of OSS to libraries, while a few articles describe empirical studies of open source ILSs. Tennant [6] asserted that open source is better than proprietary software because libraries may alter it to meet their needs, and such alterations may benefit other libraries as well. However, he noted that small libraries were unlikely to have technically sophisticated personnel who could install and maintain OSS, and large libraries exceeded the scalability limits of open source ILSs at the time. Bretthauer [7] considered OSS an opportunity for libraries and with a “tendency to push innovations”. OSS considered low-cost solutions for technological applications and offer cheap alternatives to expensive commercialized solutions for libraries [8]. Forrester [9] undertook an in-depth study of how open source software is being used in North America and Europe to understand its role in IT and examine the barriers and benefits that open source software represents to enterprise customers. Among the concerns, the biggest concern was to find ‘technical support’. The survey revealed respondents’ perceptions as: OS provide significant economical and technological benefits including cost savings, improving overall efficiency of IT, quality of products and processes, greater innovation, increased competition among service offerings, and more efficient use of resources across the industry. Kumar [10] has compared the open source ILSs Koha, PhpMyLibrary, and OpenBiblio in a cross comparison ranking of their features, and found that Koha was the most functionally mature of the three. Chalon et al. [11] researched several open source ILSs for small collections.

5. Methodology

This study is purely a Web based analysis. The libraries that use Koha were identified from library literature and Koha Wiki [12] on Internet. The dynamic nature of the Web necessitates that data to be collected in a short amount of time in order to provide a snapshot of a particular period. Two days to five months was reported as the range of collection periods of past studies, with two months being the most common [13]. The data of this study were collected over a one-week period in October 2009. The data were coded and input directly into a Excel spreadsheet, which facilitated later calculations

6. Results

6.1 Region wise Distribution of Koha Installation

The Koha user group lists a total number of 212 installations by different types of libraries. Region wise distribution of Koha installation shows that out of 212 installations 67(31.6%) are from North America, 47 (22.16%) from Asia, 46(21.6%) from Europe and 26(12.26%) from Oceania (Australia and New Zealand). Very few libraries of South America and Africa adopted Koha (South America 11(5.1%); Africa 15 (7%)). Fig.1 illustrates graphical presentation of Koha installations. It shows that American libraries lead in Koha adoption.

Further analysis of the data shows that out of 47 installations of Asia 20 are from India, 8 from Taiwan, 3 from Thailand and 2 each from China, Afghanistan, Indonesia, Malaysia, Pakistan, Philippines and Sri Lanka and 1 each from Bangladesh and Israel.

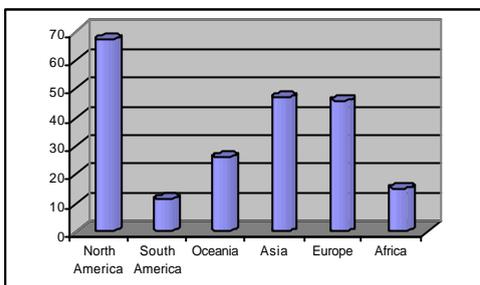


Fig. 1. Region wise Installations of Koha ILS

6.2 Category wise Installations of Koha ILS

Among the total number of libraries using Koha 40% are academic libraries and 27% are special libraries. Thus academic and special libraries lead in the use of Koha ILS. The share of public libraries that use Koha is 21%. 12% of installations are from other type institutions (multi type libraries, private libraries, home libraries, archives, museums and virtual libraries). The category wise distribution of libraries is presented in figure 2.

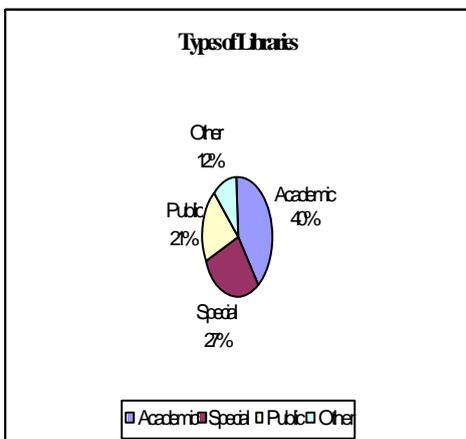


Fig. 2 Category wise Installations of Koha ILS

6.3 Koha in India

While a number of Koha installations have been reported in India, the numbers of URLs of institutions and their OPACS that are operational and available in the public domain are fewer. The study revealed that out of 20 Koha installations in India the major groups of libraries belong to Kerala 6(30%), Karnataka 3(15%), and Tamil Nadu 3 (15%). Fig.3

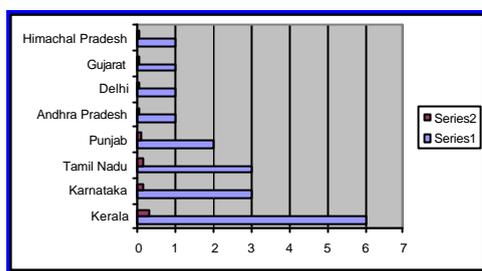


Fig. 3. State wise Installations of Koha ILS

7. Discussion

The study found that only 212 libraries are currently registered themselves in Koha user group. There may be some more libraries that are using Koha but not registered themselves in the user group. Even though Koha is an open source software with number of facilities and features and a lot of web resources and community support offered over net for installation and implementation, very few libraries adopt the software for their libraries. A study by Rafiq [14] found that library professionals had positive perceptions to open source software but adoption is still at beginning. The reasons that hinder the adoption of OSS in libraries can be revealed through further investigation. The level of support for OSS was indicated by Ho [15] and Chawner [16]. Documentation was another issue associated with OSS adoption. Murray [17] concluded that poor quality documentation was a drawback of OSS adoption.

8. Conclusion

The study was an attempt to find out the pace of adoption of Koha open source integrated library system based on the number of recorded installations on the web. The study found that Koha adoption in libraries is still at infancy.

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