International Journal of Research in Library Science (IJRLS)

ISSN: 2455-104X

DOI: 10.26761/IJRLS.11.2.2025.1871

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Use of Open-Source Software in Selected College Libraries of Western Suburban Areas

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ABSTRACT

This review article explores the awareness of open-source software in selected college libraries of western suburban areas, and the main aim of this study is to identify the use of open-source software in college libraries and the challenges the librarian faces in implementing open-source software in libraries. open-source software is beginning to have a long-term effect on libraries, beneficial for smaller and medium-sized libraries, also affecting in creation/organization of digital libraries. Government and professional organizations can play a critical role in designing policies to encourage the use of open-source software in libraries.

KEYWORDS: Open-Source Software Commands, Open-Source Platforms, Types of OSS, Common OSS License, Reason for the Success of OSS, Advantages of OSS, Disadvantages of OSS, OSS for Libraries

INTRODUCTION

Open Source is a Software development model as well as a software distribution model. In this model the source code of program is made freely available with the software itself so that anyone can see, change, and distribute it provided they abide by the accompanying license. In this sense, open source is like Peer Review, which is used to strengthen the progress of scholarly communication.

The open source differs from the closed source or proprietary software. The key difference between OSS and proprietary software is its license. As copyright material, software is almost always licensed. The license indicates how the software may be used.

Definition of Open-Source Software: -

• Singh, G (2011): "Open-Source Software are computer program in which the source code is made available to the source general public for use and to the sources general public for use and modifications from its original design free of change, open."

• Whitehurst, J (CEO, Red Hat):" Open Source isn't about saving money, isn't about doing more staff, and getting incremental innovation with the finite budget you have."

- (Morgan, 2003): "Open-source software is more about building communities and less about computer programs.it is more about making the world a better place and less about personal profit."
- (Chudnov, 1999): Open Source means several things:

Open-Source Software Commands: -

The open-source initiative (OSI) identified ten criteria for a software product to be called open source. The OSI certifies a software license as an "OSI Certified License" based on the following "Ten Commandments.

• **Free Redistribution**: The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources.

- **Source Code**: The program must include source code and must allow distribution in source code as well as complied form.
- **Derived Work**: The license must allow modification and derived works and must allow them to be distributed under the same terms as the license of the original software.

• **Integrity of Author's Source code**: The license may restrict source code from being distributed in modified form only if the license allows the distributed of' Patch files'' with the source code for the purpose of modifying the program at build time.

• No Discrimination against Persons or Groups: The license must not discriminate against any person or group of persons

• **No Discrimination against Fields of Endeavour**: The license must not restrict anyone from making use of the program in a specific field of endeavour.

• **Distribution of License**: The rights attached the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

• **License must not be Specific to a Product**: The rights attached to the program must not depend on the program's being part of a particular software distribution.

• The License must not restrict other software: the license must not place restriction on other software that is distributed along with the licensed software

• The License must be Technology-Neutral: No provision of the license may be predicted on any individual technology or style of interface.

Open-Source Platforms:

• **Open-Source Initiative [http://opensource.org/]-**The open-source initiative (OSI) is a non-profit corporation with global scope formed to educate about and advocate for the benefit of open source and to build bridges among different constituencies in the open-source community.

• **Source Forge[http://sourceforge.net]-** Source Forge an open-source community resource dedicated to helping open-source projects Be as possible.

Types of OSS: -

Proprietary/ **Commercial:** - Proprietary is a term for computer software with restrictions on use, and private modification, or with restrictions on copying or publishing of modified or unmodified versions.

Freeware: - Free software is software that can be used, studied, and modified without restriction. Free software can be copied and redistributed in modified or unmodified form, either without restriction, or with restrictions only to ensure that further recipients can also do these things.

Common OSS licenses:

• GNU General Public License (GPL) / Affero General Public License:

GNU is the most common of OSS licenses, the GPL implements a concept known as "copy left" that attempts to negate copyright for the purposes of collaborative software development.

• Creative Commons:

Creative Commons licensing is like that of the GPL but is not designed around software. The creative commons license was originally designed for other creative works such as music and film, though it is increasingly utilized within software projects.

• GNU Lesser General Public License (LGPL) / Artistic License:

LGPL is normally used to designate source code that can be used by applications for which a charge is levied, so that this code can be used in commercial product, hence

"lesser". The Artistic License is similar and also attempts to mitigate the fear of using code for commercial purposes.

• Berkley System Distribution License (BSD)/ Apache Software License / MIT License / NCSA License:

The BSD license is basis for many other licenses, including Apache Software License / MIT License / NCSA License. It is mainly concerned that the copyright of the code be recognized as belonging with the creators and that this copyright be promulgated to application built with the source code.

• OCLC Research Public License:

The OCLC license ensures that modifications are reported back to OCLC if the intent is to redistribute the changes externally.

REASONS FOR THE SUCCESS OF OSS



Advantages of Open-Source Software:

- View, change and redistribute source code-- Anybody can read the source Code provided they have the requisite know how to use technology.
- Allow integration between products- With open source, because source codes are available, users can always make things work together by examining these Codes.
- No vendor lock- Frustration with vendor lock-in is a reality for all IT managers. In addition to on-going license fees, there is lack of portability and the inability to customize software to meet specific needs. Open source exists as a Declaration of freedom of choice.
- **Open source has a large pool of skilled professionals** Open-source support is freely available and accessible through the online community via the Internet.

Disadvantages of Open-Source Software:

- Lack of personalised support- Unlike proprietary software, open-source Software packages do not come with phone support or personalised e-mail Support. However, there are some commercial service providers who can provide support by taking money.
- No vendor responsibility- With no vendor responsibility for the software, Support for the open-source software applications can vary and often depend on the user/developer's community's commitment to the project.
- **Customization** Open-source software may not offer the level of customization as it is being done in case of commercial software.
- **Forking code** Because of the openness of the source code for all, forking Happens in case of open-source software, when developers take a copy of source.

Open-Source Software for libraries:

Library Automation:

Library automation can be defined simply as the use of computer and networking technologies in the library.

Koha: Integrated Library System:

Koha is a promising full feature open source ILS (Integrated Library System) currently being used by libraries all over the world. For those of you out there unfamiliar of what an ILS is, well, it is a system of keeping track of the operation of a library- payroll, expenses, purchase, and most importantly, keeping track of the various media being checked out by the librarians' patrons.

> NewGenLib:

NewGenLib (New Generation library) is an Integrated Library Automation and Networking Solution Developed by Virus solutions Pvt Ltd and The Kesavan Institute of Information and Knowledge Management,

> Evergreen:

Evergreen ILS is another option when researching open-source ILS options. Developed by Equinox Software, Evergreen is a robust, enterprise level ILS solution developed to be capable of supporting the workload of large libraries in a faulttolerant system.

Digital Library

✤ Greenstone Digital Library Software:

The Greenstone digital library is an open –source system for the construction and presentation of information collections. It builds collections with effective full-text searching and metadata – based browsing facilities that are attractive and easy to use.

***** Dspace:

Dspace is a groundbreaking digital institutional repository that captures, stores, indexes, preserves, and redistributes the intellectual output of a university's research faculty in digital formats, It manages and distributes digital items, made up of digital files and allows for the creation, indexing, and searching of associated metadata to locate and retrieve the items.

& E-Prints:

E-Prints Is an open-source software package for building open access repositories that are compliant with the open Archives Initiative protocol for Metadata Harvesting management systems, but is primarily used for institutional repositories

***** Fedora:

Fedora open-source software gives organizations a flexible service- oriented architecture for managing and delivering their digital content. At its core is a powerful digital object model that supports multiple views of each digital object and the relationships among digital object can encapsulate locally managed Contents or market reference to remote content.

OBJECTIVE

- ✓ To find out awareness of open-source software in college libraries
- ✓ To find out uses of open-source software in college libraries
- ✓ To identify the challenges faced by the librarian for implementation of open-source software in libraries

SCOPE AND LIMITATION

The population for the study consists of librarians from Dahisar to Bandra area college library of management and engineering on use of open-source software in libraries. The majority of the studies are conducted with the help of questionnaire survey and interview.

RESEARCH METHODOLOGY OF PRESENT STUDY

The Selection of the methodology of the study depends on the aim of the study. The Present study aims to identify the use of open-source software in selected college libraries of western suburban area.

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LITERATURE REVIEW

Avery (2016) examines the circumstances and processes involved in implementing and migrating from a proprietary integrated library system (ILS) to an open sources ILS (Koha) for a special focus institution. This study will demonstrate that libraries, including special – focus institution, can migrate efficiently and without vendor support, additionally, this study examines some of the reasons why libraries might consider vendor hosting and support. This study gives libraries a framework, illustrated with a special – focus institution case study for selecting and migrating from a proprietary ILS to an open-source ILS.

Bisson, C (2005) issues of library technology reports Casey bison, with the help of Jasmyn west And Ryan EBay, reports on open- source software (OSS) and its use and importance in libraries Bison engagingly narrates the history of open source, explains how the OSS "Movement" come About, details key players in OSS Development and discusses why and how open source can Work for libraries.

Chahal, K.K (2016) this article presents the results of a systematic literature conducted to understand the open sources software development process since evidence found in the empirical research studies. The study targets the open-source software projects to understand the method and techniques employed for analysing the open sources software process. The use of prediction techniques that just extrapolated the historic trends into the future are no long-term correlation in data of such system.

Corbly (2014) examines the world of freeware and open-source software and focus of licensing issues unique to freeware and open-source software which leads directly to issues of registration and addresses questions regarding the use of freeware and open source software before offering a few closing thoughts.

Feller (2007) Open-source software development offers the first serious study of the open-source software phenomenon. The authors examine several key aspects of open-Source software E.g. definition of OSS and free software, including a compressive guide to both OSS and non-OSS licenses Profile of key OSS Products companies and organization, Analysis of the technological motivation for OSS development with explicit reference to the Possibility of OSS addressing the software crisis.

Lihitkar & Lihitkar (2012) describe general and specific features of some of the popular software packages of integrated library management software content management system and digital library. open-source software has placed the right to make changes to the software in the hands of immediate effect is the shift from proprietary software to FOSS which has resulted in cost of libraries.

Meeker, H.J (2008) this book is a user manual for understanding and development of OSS licensing in business written for lawyers and businesspeople alike. It explains and analyses as licensing issues and gives practical including useful forms information and both technical and licensing background, this book will help us avoid legal pitfalls and educate our organization about the risks of OS.

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DATA ANALSIS

The study deals with the analysis and interpretation of data which were collected through Questionnaire. Data analysis means systematic gathering, recording and summarizing of data to find answer to the research problems. Questionnaire is divided into several parts:

- 1. .Awareness of Open-Source Software
- 2. Uses of Open-Source Software in College Libraries
- 3. Challenges Face by the Librarian for the Implementation of Open-Source Software in Libraries

Awareness of Open-Source Software:

1. What is your level of familiarity with the term open-source software?

Options	Frequency	Percentages
Not at all Familiar	0	0 %
Slightly Familiar	1	7 %
Moderately Familiar	2	13 %
Very Familiar	8	53 %
Extremely Familiar	4	27 %
Total	15	100 %

Table: Familiarities with OSS



Figure: Familiarities with OSS

The questionnaire was administered in librarians of Management and Engineering colleges of western suburban area from Dahisar to Bandra, the researcher out of is colleges has is responses 7% librarians are slightly familiar (slightly familiar means little known) with open source software, 13% librarians are moderately familiar (moderately familiar means somewhat known) with open source software were has 53% librarians are very familiar with open source software and 27% librarians are Extremely familiar (extremely familiar means very known) with open source software

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Uses of Open-Source Software in College libraries

2. Are you using open-source software in your library?

Options	Frequency	Percentages
Yes	15	100%
No	0	0%
Total	15	100%

Table: using open-source software in library



Figure: using open-source software in libraries

The 15 (100%) Librarians" respondents that they are using Open-Source Software in their libraries.

3.	Have y	you faced	any problem	while installing	open-source software?
		/	V I	0	1

Options	Frequency	Percentages	
Yes	7	47%	
No	8	53%	
Total	15	100%	

Table: Problem Face While Installing Open-Source Software





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The 7 librarians" respondents that they are facing problem while installing OSS and 8 librarians" respondents that they are not facing any problem while installing OSS.

CONCLUSION

Conclusions. In short, in the context of open-source library management software, KOHA is mostly used and for Digital library software for developing archive/repository Dspace are mostly used and for elearning management software Moodle is mostly used in college libraries. The librarians 33% of respondents that they find a security issue with open-source software, and 67% of respondents that they do not find any security issue with open-source software.

RECOMMEDATION

- Proper training should be provided to the librarians as well as to the user about the new technology.
- College's libraries should select which open-source software to adopt for services of the users and for promoting of the services.
- College's libraries should develop the necessary standards, policies and plan about the adoption and use of emerging technologies.
- The college" librarians should learn some programming languages, like HTML coding, Java etc. it is very useful for them.
- The college's libraries should use e- learning management and content management software.

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