
Perception and Application of Open Source Software among LIS Professionals of Engineering Colleges in Tamil Nadu: A Study

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Abstract

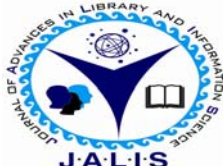
The purpose of this paper is to assess and evaluate the awareness and implementation of OSS by the LIS professionals working in various engineering colleges in Tamil Nadu. The study is based on survey method and questionnaire technique was used for collection data from the respondents. The study finds that although the LIS professionals of engineering colleges of Tamil Nadu have knowledge on OSS, their uses in libraries are in budding stage. Suggest that for the widespread use of OSS in engineering college libraries, a cooperative and participatory organizational system, positive attitude of authorities and LIS professionals, and proper training provision for LIS professional need to be developed

Keywords

Open source software; LIS professionals; Digital library; Library Automation; Engineering College

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INTRODUCTION

Information and communications technology (ICT) is a buzz word in library science today. ICT has been taught and discussed at a great length in the library as well as in library professionals' community. One of the main reasons given by the library community to use commercial software is 'support' provided by the commercial vendors. It is observed many times that though the AMC's are paid, still the commercial vendors lack providing proper support for libraries which include support for insulation /updating of the software, solving any issued while using the software, providing new features in the software, import/export/migration of data in standard library format for future preservation, easy documentation manuals, data entry support with library standards, interoperability support of data for exchange between libraries, etc. Source Forge provides a platform for the developers to create powerful software. Currently, it is hosting 3, 24,000 projects with more than 46 million users who are using these software and there are more than 4, 00,000 downloads a day¹. "The OSS offers libraries an attractive solution. Library end users with technical and nontechnical skills can participate in OSS installation and maintenance, librarians can engage in OSS development and modifications, and library user groups can often customise OSS environments. Moreover, OSS is an important library solution, for there exists a large use-base for OSS applications, a wide variety of available OSS tools, and a multitude of OSS support channels"²

The concepts on OSS that it is absolutely free seem to be impractical. Although unlike commercial software there is no initial purchase fees or license fees or upgrade fees, but it requires an investment of time and effort by users like other commercial software. The benefits of OSS are compelling libraries towards the use of OSS software and many libraries have an implemented this software for various purposes more specifically for automation, creation of digital library, institutional repositories, etc. The paper is an effort to make a study on the awareness and implementation of OSS by the LIS professionals of engineering college of Tamil Nadu.

LITERATURE REVIEW

The OSS is a collaborative programming development which releases its source code freely to the general public for any use, modifications and redistribution without any licensing restrictions. The

source code refers to instructions written by humans in a computer programming language to be compiled into a binary format that can run on a computer, carrying out the tasks outlined in the source code³. A good number of OSS, its history and case studies in libraries have been carried out by students, research scholars, and teachers of various institutions all over the world. Giri & Sengar⁴ in their paper have given an insight into the practical implementation aspects of OSS for managing the activities and services of a library. They have notified that the main pre-requisite of OSS use in libraries is the librarian's potentiality to harness the staff motivation in a positive way.

Bissels⁵ talked about OSS installation at the Royal London Homeopathic Hospital (RLHH) and described the transition to the Koha 3.0 library management system (LMS) as the library's primary information access framework. He has stated that Koha, an open source ILS, fulfilled the needs and goals of a specialized medical library institution. Biswas & Paul⁶ in their study have made an evaluation of DSpace and GSDL. They have attempted to identify the extent of adoption of open source digital library software packages in various organizations through an online survey. Sunil Kumar Satpathy and Rabindra K. Maharana studied the LIS professionals of engineering college of Odisha have knowledge on OSS, their uses in libraries are in budding stage and suggested that a cooperative and participatory organisational system, positive attitude of authorities and LIS professionals, proper training provision for LIS professionals.

OBJECTIVES

The objective of the study is to know the awareness and implementation of OSS among the LIS professionals working in engineering colleges of Tamil Nadu. However the other objectives of the study are to:

- Find out the types of OSS skills possessed by the LIS professionals working in engineering colleges of Tamil Nadu
- Evaluate the application of OSS by LIS professionals in libraries
- Identify the reasons of low use of OSS by LIS professionals

COPE AND LIMITATIONS OF STUDY

The scope of the study covers the use and implementation of OSS by the LIS professionals working in engineering colleges of Tamil Nadu. However, the study has following limitations;

- The study is margined to Tamil Nadu only.

- The study includes only the engineering colleges (both govt. and self-financed) of Tamil Nadu, which are affiliated under Anna University and approved by AICTE.
- The study covers only LIS professionals and not any other category of staff of engineering colleges. Among various aspects of LIS professionals, the study is limited to awareness and use of OSS only.

METHODOLOGY

This study is based on survey (questionnaire) method. A structured questionnaire was planned and dispersed to collect data from the LIS professionals of engineering colleges of Tamil Nadu. In addition, personal interviews were also conducted with library and information science professionals and experts to assess the problems related to use of OSS.

DATA ANALYSIS

The questionnaires were dispersed to 274 LIS professionals (2 professional from each college on random sampling basis), out of which 216 filled-in questionnaires (78.83 %) were collected. The data collected through the questionnaires was scrutinized, classified, and tabulated for better understanding and clarity. To make the data analysis has been used for various statistical techniques.

LIS PROFESSIONALS

The qualification, experience, designation were taken and the present study data have been tabulated in table 1.

Table 1: Demographic Details of LIS Professionals

Professionals percentage	No.of respondents	%
Designation		
Librarian	124	57.41%
Asst.Librarian	67	31.02%
Lib.Asst	25	11.57%
Total	216	
Qualification		
PhD	11	5.09%
MPhil	26	12.04%
MLIS	147	68.05%
BLIS	32	14.81%
Total	216	
Experience		
1-5yrs	73	33.8%
5-10yrs	102	47.22%
10-15yrs	34	15.74%
More than 15yrs	7	3.24%
Total	216	

Analysis of data table 1 showed designation of respondents that out of 216 replied, 25(11.57%) are of Lib.Asst. Professional qualification of respondents, the data analysis shows that as high as 147 (68.05%) respondents out of 216 have MLIS qualifications.

AWARENESS OF LIBRARY AUTOMATION OPEN SOURCE SOFTWARE

Automation has become the basic necessity for libraries of all kind and many libraries are adopting

OSS for library automation due to several advantages associated with this. Realising the importance of library automation, the respondents were asked about to their knowledge on open source library automation software and the collected data is tabulated in Table 2.

The analysis of data of Table 2 reveals that ISIS/CDS is most popular OSS. It is followed by other OSS such as Library Management System, LMS, Koha, , PhpMyLibrary, and OpenBiblio respectively.

Table 2: Awareness of library Automation open source software

Software	Known	Fully known	Partially known	Not known
CDS/ISIS	108 (50%)	37 (17.13%)	49 (22.68%)	22 (10.18%)
KOHA	35 (16.20%)	12 (5.55%)	51 (23.61%)	118 (54.63%)
LMS	66 (30.55%)	33(15.28%)	94 (43.51%)	23 (10.65%)
PhpMylibrary	12 (5.55%)	4 (1.85%)	55 (25.5%)	145 (67.13%)
OpenBiblio	5 (2.31%)	2(0.93%)	48 (22.22%)	161 (74.54%)

AWARENESS OF DIGITAL LIBRARY OPEN SOURCE SOFTWARE

The new trends of modern libraries are towards creation of digital library/institutional repositories and many libraries are using OSS for their creation. Accordingly, the present study attempts to know about the respondents' knowledge on these OSS. The data collected on this have been tabulated in Table 3.

Table 3. Awareness of digital library open source software

Software	Known	Fully known	Partially known	Not known
DSpace	106 (49.07%)	46 (21.30%)	43 (19.91%)	21 (9.72%)
E-Prints	73 (33.79%)	27 (12.5%)	53 (24.54%)	63 (29.16%)
GSDL	113 (52.31%)	34(15.74%)	48 (22.22%)	21 (9.72%)
CDSware	7 (3.24%)	2 (0.93%)	78 (36.11%)	129 (59.72%)

METHODS OF OBTAINING KNOWLEDGE ON OSS

There are various methods of acquiring knowledge on OSS by the LIS professionals and data collected on this and been tabulated in Table 4.

Table 4. Methods of acquiring knowledge on OSS

Methods	No.of Responses	%
From Colleagues /friends	94	43.51%
From Self Study	68	31.48%
Formal training / education	173	80.09%
Informal training / education	81	37.5%
Trial and error basis	122	56.48%

Data analyzed in Table 4 as high as 173 responses (80.09 %) indicates that the basic method of acquiring knowledge on OSS is formal education/training followed by other methods such as trial & error basis (56.48 %), informal education and

training (37.5 %), from colleagues/friends (43.51 %) and self study (31.48 %).

USE OF OPEN SOURCE OPERATING SYSTEM

Table 5. Reasons for not using OS operating system

Reason	No.of Responses	%
Less user-friendly	171	79.16%
Inadequate knowledge	68	31.48%
Use of commercial software	204	94.44%
Expert-dependent	143	66.20%
Feel Risk	181	83.8%

The analysis of data of Table 5 shows that out of 171 respondents replied negatively towards the use of OS operating system, all (94.44 %) favour commercial software. The other reasons stated by the

respondents are feeling risk (83.8 %), less-user friendly (79.16 %), inadequate knowledge (31.48 %) and expert dependency (66.20 %).

USE OF LIBRARY AUTOMATION OSS

The use of OSS for library automation attempts were made in the study to find out the reasons for non use of OSS and the collected data have been tabulated in Table 6 which shows that the main reason is feel risk (85.65 %). The other reason for this is fewer users friendly (75.46 %), inadequate knowledge (67.59 %), expert dependent (64.35 %), use of commercial software (57.87%).

Table 6. Reasons for not using OSS for library automation

Reason	No.of Responses	%
Less user-friendly	163	75.46%
Inadequate knowledge	146	67.59%
Use of commercial software	125	57.87%
Expert-dependent	139	64.35%
Feel Risk	185	85.65%

DEVELOPING DIGITAL LIBRARY/ INSTITUTIONAL REPOSITORY USE OF OSS

The respondents were asked about the use of OSS in creation of DL/IR in library. The analysis of the data shows that attempts were made to find out the reasons for non- use of OSS for creation of DL/IR and the analysis of data of Table 7 reveal that lack of support from authority (87.5 %) is the main reason for this.

Table 7. Reasons for not using OSS for library automation

Reason	No.of Responses	%
Less user-friendly	123	56.94%
Inadequate knowledge	114	52.77%
Lack of support from authority	189	87.5%
Expert-dependent	151	69.91%

FINDINGS & SUGGESTIONS

On the study of this paper the following suggestions have been made to enhance the use of OSS in engineering college libraries by LIS professionals of Tamil Nadu.

- The LIS professionals of engineering college of Tamil Nadu need to be more IT

sense and should possess a positive attitude with adequate knowledge on OSS through formal and informal training programs, so that they should be capable and confident in using OSS for various library applications.

- The OSS developers and experts need to play a vital role to make it popular among LIS professionals of engineering colleges of Tamil Nadu through the publications of good literature on OSS, organizing workshop /seminar on OSS, etc.
- Adequate training provision for LIS professionals of engineering colleges of Tamil Nadu need to be trained on OSS and its use in libraries.
- Although LIS professionals of Tamil Nadu possess fair knowledge on different OSS, its use in engineering college libraries is not up to the satisfactory level. Hence, the authorities of these libraries need to be cooperative towards LIS professionals and some autonomy must be given to them, so that they can improve their talent in using OSS comfortably.
- The OSS needs to introduce in the course curriculum of the LIS courses of universities of Tamil Nadu, so that the future LIS professionals will be well trained in using OSS in libraries

CONCLUSION

Open source offers useful savings in time, money and resources. Large percentage of library professionals has recognized potential for OSS systems and applications. With exponential growth of information, user expectations are growing and more and more 'personalized' services are required by users and there is a great opportunity for librarians to play a leading role in organizing and presenting filtered information by making use of these OSS tools. However, OSS is not always easy to use and is therefore largely inaccessible to many libraries. The basic problem is that most OSS are written by programmers who do not understand the end-user needs and whose software is often complex and difficult to use. The paper finds that although the LIS professionals of engineering colleges of Taminadu have knowledge on OSS, their uses in libraries are in budding stage. A cooperative and participatory organizational system, positive attitude of authorities and LIS professionals, and proper training provision for LIS professionals need to be developed for the widespread use of OSS in their libraries.

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