Chapter 8

Findings Suggestions and Conclusion

8.1 Introduction

The developmental initiatives for open source library management systems started in the year 1999. From 1999 to 2014 many open source library management systems have been developed. During the course of this study many important developments and changes in the entire library automation area come into light. This chapter presents some of the major findings identified on the basis of analysis and study of the developments that has been taken place during last fifteen years period in the library automation area.

8.2 Major Findings

On the basis of the objective analysis, the study has revealed following some of the important findings.

- This study has identified thirty one open source library management systems (LMSs) which were developed during 1999-2014.
- Out of thirty one LMSs projects only twenty LMSs projects have succeeded to pass success in growth phase.
- The study also shows that out of total thirty one LMSs projects only fifteen LMSs projects are presently active. Almost all the remaining projects became inactive or abandoned within short period after their initial release mostly in growth phase.
- Sixty percent of the active projects have intuitional/organizational support. Projects with intuitional / organizational support have shown very good development activity.
Almost all Library management systems multilingual i.e. the interface is available in more than one language languages.

Now in the field of library and information science different types of open source projects are available such as foundation/institution based open source projects, community based open source projects, vendor led open source projects and some cases combination of these.

- Functionality aspects.

This study shows that in case of basic traditional functions (acquisition, cataloguing, circulation, serial control, reporting, and OPAC) there is very little variation in the total score obtained by Evergreen (78.83%), Koha (78.07%), and NewGenLib (77.02%). This shows that Evergreen, Koha and NewGenLib have equally comparable functionality. PMB (67.39%), ABCD (54.21) and Kuali OLE (52.56%) are on fourth, fifth and sixth positions respectively. SLiMS is on seventh position with 46.04 percent.

Koha is the top LMS in the overall functionality i.e. traditional as well as next generation functionality, with 56.01%. NewGenLib is on second position with 52.13%. PMB (49.98%) and Evergreen (49.53%) occupy third and fourth position respectively. However very negligible difference (0.45%) in total score obtained by both systems. The Kuali OLE and ABCD are on fifth and six rank with 40.55% and 38.45% respectively. SLiMS is on seventh rank with 32.24 percent.

The E resource management module has not yet been incorporated in all system except Kuali OLE.

There is much more room for development of serial control module of all LMSs except NewGenLib.
Almost all LMSs have incorporated next generation feature in their OPACs.

Functionality to manage digital collection has not been incorporated in fifty percentages of LMSs.

ABCD and PMB have well developed inbuilt content management functionality.

Koha, Evergreen, NewGenLib, PMB and Kuali OLE are suitable LMSs for university library. Kuali OLE is the most appropriate as it is especially developed for academic and research libraries and it has e-resource management functionality. However, the system is under development it will take some more time to completely mature.

The LMSs such as Koha, Evergreen, NewGenLib, and PMB are better and equally comparable to available commercial software. However the adoption rate in libraries is very slow as compared to expected.

All LMSs have incorporated the essential standards such as MARC/UNIMARC, Z39.50.

Library professionals are expecting new generation library management system from a long time but library management systems have not moved to this direction except Kuali OLE.

The literature analysis shows that in the initial phase LMSs are not integrated and in later phase there was demand for integrated LMS. Nowadays LIS professionals taking on loosely coupled systems i.e. integrating the different systems and components using service oriented architecture.

**Open source software projects aspects**

Evergreen (93.75%) and Koha (92.82%) occupy first and second position respectively in software related aspect category, however, there is very little variation (0.93) in the total score obtained by these two LMSs. The total score of
these two LMSs under this category is more than 90 percent, this indicates that both LMSs incorporates the open source software practices very well. The Kuali OLE is on third position in this category with 79.39% score. PMB and SLiMS are on fourth and fifth position with 73.84% and 69.67% respectively. NewGenLib and ABCD are on sixth and seventh position with 65.74% and 62.73% respectively.

- Community activity, documentation of the Evergreen and Koha are excellent among all software.
- There is no regular training facility for almost all software. The workshops and training programs are organized as and when
- Koha and PMB have highest longevity among all selected LMSs, this indicates seniority and maturity of both LMSs.
- It is observed that ABCD mailing list messages are mostly in Spanish which indicates strong installed base in that region.
- PMB provides software interface in English language in addition to other languages. However PMB mailing list messages and documentation is in French language. It shows that it has mostly installed base in French speaking region.
- PMB English installation version includes most of the default value in database are in French and some captions in user interface are also in French. Therefore it needs some more translation efforts.
- Although, the Next-L Enju LMS is available in English as well in Japanese language but the mailing list and documentation is available only in Japanese language.
- Koha has very strong developers community and longevity but till this date it has not yet moved to full fledged next generation library management system.
• SLiMS is very user-friendly, simple to use, simple to backup, easy to install, upgrade, requires minimum training. Person with basic knowledge of computer can install, use and maintain the software. This software is suitable for libraries with basic required functionality, such as, college, school and public libraries.

• Professional support for all the selected software is available; however, Koha has strong worldwide professional support.

• Development of Kuali OLE is started in 2010 but till this date software has not become full-fledged or complete and it is lagging behind expected scheduled.

• Presently the user documentation of NewGenLib is not updated and community activity of NewGenLib is very weak in spite of its good functional features and huge number of downloads for the software.

• All selected LMSs have maximum installed base in respective country of their origin however, Koha is worldwide accepted.

• The traditional library management systems are very slowly incorporating next generation features. There is need of more efforts to speedy move to this direction.

• No traditional library management system has incorporated e-electronic resources management module yet, in spite of increasing electronic collection and demand.

-Combined Score of functionality aspect and open source software project aspects.

• Under the combined score of both aspects i. e. functional aspect and open source software aspects Koha and Evergreen are top LMSs with 78.86 and 76.97 percent score and occupies first and second rank respectively. PMB and Kuali OLE are on third and fourth position with 65.22 and 64.66 percent score respectively however there is very little difference (0.56) in score of both LMSs.
is on fifth position with 60.58 percent score. SLiMS and ABCD are on sixth and seventh rank with 55.47 and 52.22 percent score.

8.3 Suggestions

Keeping in view the findings of the study, the following suggestions have been made.

- In spite of high quality and reliable, mature open source LMSs the rate of adoption is slow and there are no regular training facilities. In order to build confidence in LIS professionals and new comers in field
  - Workshops and training program must be regularly organized on all major open source library management systems by university libraries, departments and organizations
  - All LIS school should take initiative to incorporate at least two open source library management systems in their syllabus. So students have comprehensive view of open source software and proper understandings of LMSs, as library management systems are backbones of library services. Confidence in installation, operation and maintenance of open source must be built in the entry level of the profession
- Open source software are mostly Linux based, therefore, Linux training must be incorporated in training programs.
- Only few open source library management software projects provides detailed and comprehensive information about project. Therefore there is need to follow some open source development standard model such as OSSM model.
- Professional experts and volunteers in the field should develop a online collaborative training portal on all major open source library management systems and related software consisting of training manuals, PPT, lectures, video etc.
Presently ABCD and SLiMS provide simple installation versions of the software, the person with basic computer knowledge can install it. Koha also provides deb package based installation version which is simple and takes less time as compared to normal installation. There is need to develop simple installation procedure both in Windows and Linux environment for all major software.

- Institutions must be encouraged to use of open source software.
- Koha with strong developers community should take initiative to incorporate E-resource management module and related features at earliest.

**Future research**

- Usability testing and user satisfaction study of major open source library management system needs to be carried out on large scale.
- To check formal training facilities for open source software there is need to conduct study coverage of open source software in LIS curricula.
- There is need to study the problem in the use and adoption of open source software in libraries.

**8.4 Conclusion**

During last fifteen years period, the information and communication technology has greatly affected the way of library functioning, way of giving of library services, collection development policies. Libraries become hybrid in nature and have to manage from print collection to digital to cloud based collections. However there is dominance of electronic collection. This trend directly affected library management systems. Now Library management systems have to manage print collection as well as all types of electronic collection (local and licensed). During the last five years, the developments are started to redesign library management system. Few new generation library management systems come into existence. However there is no clear picture as yet about
the design of new generation library management system. Another major impact of information technology is the advent of open source software in the library automation industry. Now majority of libraries are moving from proprietary systems to open source systems. During this fifteen year period many open source software have been developed however very few have attained maturity and sustained for a longer time.