

IMPLEMENTATION OF OPEN SOURCE INTEGRATED LIBRARY SYSTEM IN ACADEMIC LIBRARIES OF PAKISTAN: A PROPOSED FRAMEWORK

Abida Kanwal Chandio, Shahmurad Chandio, Dr. Noor Hasrul Nizan

^{1,2}Postgraduate Students, ³Assistant professor

Kulliyyah of Information & Communication Technology, International Islamic University, Malaysia

abidakanwal1@hotmail.com

ABSTRACT

“An interrelated group of computer programmes that automates multiple library operations called integrated library system”. In Pakistan, the condition concerning library software cannot be associated with the that in developed countries, it's not satisfactory due to absence of software systems used for making modern libraries, less budget, multilingual nature of library's collection, software privacy and absence of provision from regional vendors are the key barriers in the impressive implementations of integrated library system. The Objective of this paper is to propose an open source integrated library system implementation framework to boost the academic library standard, provide capability to resource sharing and library users can able to access the information material at any time regardless of their geographical location.

This research is grounded on comprehensive literature review that includes the journal articles, conference proceedings, thesis, books and libraries websites by the help of literature review the suggestion and the recommendation will give to the library professionals about criteria of selecting the open source-ILS and how to overcome problems and challenges faced by implementation of open source-ILS. Meanwhile this study will also focus on prevailing standards in developed world for Management of libraries and providing specific directions for upbringing of academic libraries in Pakistan.

Keyword: Framework, Integrated Library Management System-ILMS, Academic libraries, Pakistan.

1. INTRODUCTION

The open source Integrated Library Management Software (ILMS) provides a planning system and offers a various attraction for the libraries. The open source ILMS used Public license GPL, the source code is free of cost available for the users. They can free download and modify according to their needs. This is one of the effective source for developing countries to save money and make balance the library budgets conversely, proprietary library management software needs too much amount for buying with yearly maintenance furthermore, in house developed software also used for library management; these are specially made for library management like, maintaining OPAC, acquisition, circulation and other library operations. Now a day open source ILMS are very common particularly in developing countries and generally

academic libraries willing to adopt them. In Pakistan, most libraries are still managed manually and there is no implementation of ILMS, though automation is primarily done only for few library operations, the reasons behind unavailability of library management system in Pakistani libraries are according to: (Ramzan, 2004) due to less library budget, absence of standard library management software in native market, unskilled personal resources and the management arrogances are the major problems deterring quick acceptance of technology in Pakistani libraries. Some example of open source ILMS are: Greenstone, SLiMS Senayan, Evergreen and Koha, in this paper Koha will be discussed briefly. Mentioned open source ILMS provides almost all the essential and advance functionality like searching and browsing of library material as well as modules for cataloging, acquisition and circulation.

According to: (Tramboo *et al.*, 2012). Greenstone Digital Library (GSDL) is a collection of software established by the New Zealand Digital Library Project at the University of Waikato in 1995. The Greenstone library management software support Dublin core metadata scheme to organise the library collection greenstone is open source ILMS. Furthermore, SLiMS Senayan Library Management Software is another example of open source ILMS.

Whereas, Koha was firstly established in New Zealand by Ktipu communications Ltd and initial installed in January 2000 for Horowhenua Library Trust. Some of Koha's beneficial features comprise a simple interface, web 2.0 competences and customizable search (Ayelude, 2016). Similarly, Evergreen ILMS was started by the Georgia Public Library system in 2006 thus that a library catalog could be shared by a association of more than 270 libraries (the Public Information Network for electronic services or PINES) in the whole state. It was built to provide scalability for large systems and has been approved by libraries across the USA, Canada and the rest of the world. Some of Evergreen's key features include acquisitions, circulation, cataloging, and online public access catalogs (OPACs).

Above are the little introduction about few of open source ILMS, now a days the implementation of all of these software's has been going on in developed and developing countries successfully. In this paper, the features of the KOHA has been discuss and proposed framework for the implementation of KOHA in academic libraries of Pakistan will be given.

2. LITERATURE REVIEW

The idea of library computerisation is associated to the progress of work completed by the machines. Through the definition, automation in its perfect form suggests the removal of all physical labour the practise of automatic controls that assurance correctness and excellence (Encyclopaedia Britannica, 2008) so for the automation of entire library system the ILMS has been using either proprietary or open source. Currently in library environment the requirement of users are increasing while the library budget is decreasing due to global economic situations therefore, the libraries are progressively seeing for the methods to fulfil users demands through providing less costly systems and resources. Ribeiro (2007) stated that Asian governments are focusing "open source as a boost for their economies and a way to increase technological innovation in the region." It shows that developing world had given significant attention to adopt open sources systems.

In Pakistan, a landmark initiative was the formation of the Open Source Resource Center (OSRC), "a project of Pakistan Software Export Board, Ministry of Information Technology in 200" (Rafiq & Amin, 2009) though Koha is one of the suitable choice for the libraries of Pakistan it has all essential features that are necessary for library automation the reasons and the advantages for adopting koha will be discussed in this paper in next sections.

Historically, the greenstone software was first open source ILMS implemented in Pakistan by the United Nations digital library in 2000-2001 (Rehman et.al, 2011). according to: (Parichi & Nisha, 2011) Greenstone is a digital library management software it is available for all operating systems: Windows, Unix/Linux and Mac OS-X. Windows installation is the default, and the configuration steps and time taken is much less compared to Koha and it is very convenient and suitable for installation, uploading of documents and usage for small and medium size organizations. Greenstone provides three modes for acquisitions: command line, web interface and GUI. Greenstone accepts almost all kinds of document formats like technical document, newspaper, articles, educational journals, videos, MIDI pop music collections, ethnic folksongs etc. Greenstone is available in 59 international languages (Wikipedia, 2015). In addition the library of Beaconhouse university and library of the university of management technology uses Evergreen open source ILMS it provides a facility of searching by keyword, author, title, subject and series and provide advance searching as well, the registered users can login and can apply filters for actual search (evergreen at Beaconhouse national library university, 2011).

3. BACKGROUND OF ACADEMIC LIBRARIES IN PAKISTAN

The implementation of open source integrated LMS is at an initial stage in Pakistan while open source software offers many economical replacements to costly commercialized library management system and make easy library tasks but due to less IT awareness in library professionals hindrance to adopting open source library management software according to (Mirza & Mehmood, 2014) in Pakistan library automation was introduced in 1980 and very few libraries computerized their services till 1990. Although library automation remained in policies but less in practical. though some private higher education institutes have updated their libraries and had implemented ILMS, however, most of the public libraries. College, school and university libraries, were lacking computerised systems. Few software's like CDS/ISIS, INMAGIC and ORACLE were being used in Pakistani libraries at some extent (Haider, 2003) according to: (Shafiq & mehmood, 2008) explain the features of four integrated software ((LIMS, WINISIS, LAMP and INMAGIC) that were used in Libraries of Lahore Pakistan. some popular ILS were used for automation of library processes in Pakistan comprises INMAGIC, CDS/ISIS, MINISIS, KITABDAR, dBase, FoxPro, Pakistan library software and library automation and management program (LAMP) (mehmood. 2014). Kitabdar support both urdu and English language based on PASCAL language considered as first urdu language supporting software this software developed by Pak book cooperation for medium sized libraries but now Kitabdar is no more exist in the libraries (Malik. 1996). Furthermore PASCIMATE is result of in house development by VP-info. this software was developed by the librarian trained in USA, it has offered services such as OPAC, printing of catalogue card, article indexing, serial control, acquisition, preparation bibliographies and managing administrative functions, this software was implement in National Institute of Public Administration, Lahore; the

Command and Staff College, Quetta; and the Allama Iqbal Medical College, Lahore. (Mehmood, 2014). Sahibzada Yaqub Khan Library of National Defence University has adopted Libmax library software, developed by Max Intelligence (Sahibzada Yaqub Khan Library, 2011). Libmax is a comprehensive software that provides systematic management of print and electronic materials. It contains acquisitions, cataloguing, circulation, serials and OPAC modules (Max Intelligence, 2011). On the other side provincial assembly libraries of Pakistan started to adopt open source ILS for the libraries automation (Rfiq and Amin, 2009). The existing literature does not provide a complete current status of libraries software but according to available literature some of the academic libraries are using in-house developed software for library automation while the rest of academic libraries are still manual; using card catalogs except OPAC and the further activities like acquisition and preparation of bibliographies done manually. The reason is less budget, low level of computer literacy in library professionals. As stated in (Malik, 1996). Pakistan being the developing country, allocates little budget to education hence, very small portion of that is reserved for libraries. Thus, libraries in Pakistan face many challenges and excessive cost of modern systems and automation process create hindrance in implementing automation in libraries. Therefore, adoption of open source ILS is the solution to tackle the budget concerned issue.

4. Koha Open source ILS software

Koha version 3.0.1 is the Full-featured ILS. It is convenient for all types of libraries regardless of their size and material. It is the most common open source system used all over the world.

Following are the basic features that are necessary to run a library

- Online public access catalog (OPAC).
- Circulation interface. Handle many routine operations like generate overdues fines, damages charges bills and tackle many issues and send the users through email automatically.
- Acquisitions. This comprises electronically orders from vendors, budgets, and pricing information
- User record management. Keep all the information about the registered library users.
- Branches. It allows the users to borrow and return books at different branches.
- Online renewals and reservations of item by Library patrons.
- Borrower history, comments and tags.
- Customisable search. A library can choose the search fields as they want. For example, a search by author, title, subject, and keywords. The advanced search option is also available

- Serials. It allows the cataloguing of journals and user can sight holdings information through the OPAC.
- Book bag and virtual shelves. Users can have a virtual library where they keep their desired books.
- Multi-lingual OPAC support. The user can view the OPAC in different languages depending on the language preferred by the library.
- Barcode printing and reader. Koha completely cares of barcodes. This reduces the chances of error by human.
- security. Koha offers strong security measures to protect unauthorized access in the system.
- Reports and statistics. Koha provides detailed statistical reports.

There are so many other features Koha version 3.0.1 have like news, label/user card creator, upload patron's images, task scheduler, overdue notices, log viewer, SQL builders, comments, export Biblio, and etc

5. REASONS FOR ADOPTING KOHA

a) Free Download and install.

The Koha is free to download and install, no licence or upgradation fees, provides a source code for configuration and modification. koha provides an unrestricted and transparent use of their clients

b) User friendly

Koha is easy to install, efficient in updating, and provides upgrades frequently.

c) Security

Koha support a multi users and multiple security levels, by describing various categories for access to users at site. This helps admin to keep control over editing and publishing material on site.

d) Flexible

The koha is flexible in that manner the library is not requires any special hardware or hard disk to maintaining it, its only required a Linux platform for consultations it can be expand, adjust and change as per clients requirements.

e) Web 2.0 features

Koha has more Web 2.0 features such as RSS feeds, shared book lists, news, comments and information mash up which can be integrated with tools like zoreto, delicious etc

f) Modules

Koha has all basic modules that are required for an automated library,

6. PROPOSED FRAMEWORK

This research proposes that to overcome the several existing challenges in developing countries concerned with budget, culture and employee's readiness to accept modern library systems. The implementation of open source systems will be the great option to start with. It will give tow fold benefits, by creating motivation in employs towards technological facilities and benefits by Integrated library management systems, secondly it will create the culture of working with technology as well as being free available by default overcome budget constraints. Based on this following framework is proposed in order to implement KOHA in academic libraries of Pakistan.

Implementing with Koha unanimously will provide efficient management process by covering all academic libraries with one software at same time.

So following framework is proposed in order to bring academic libraries of Pakistan up to modern practices with easy and open access system KOHA. Figure 1. demonstrates the framework.

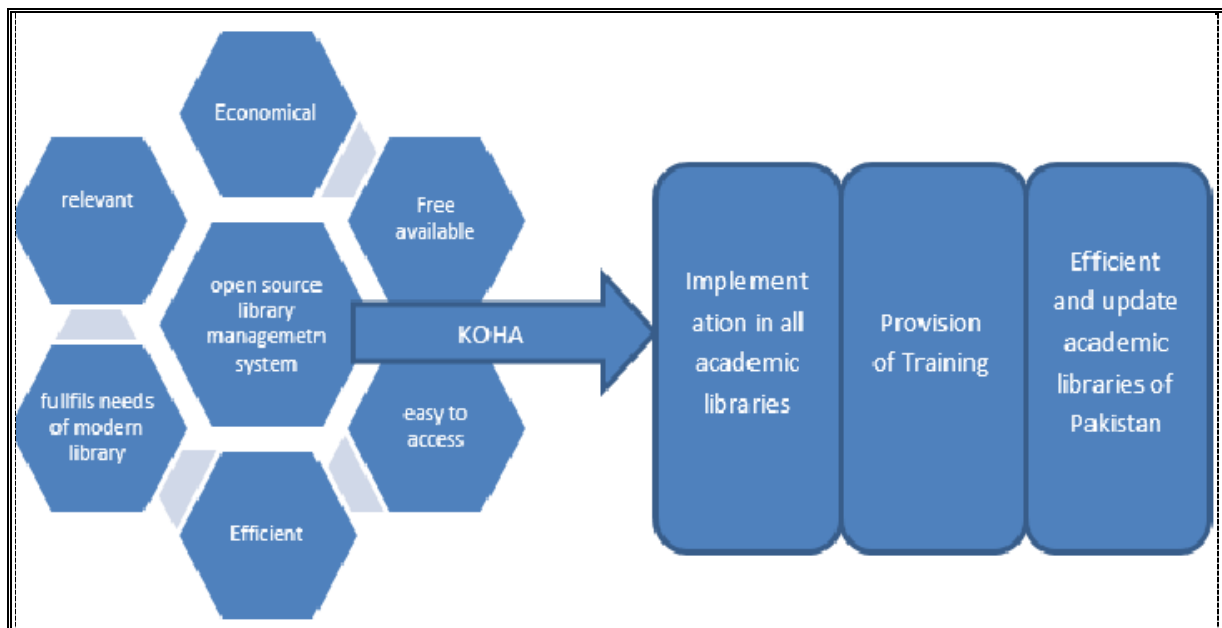


Figure 1 Proposed Framework for KOHA implementation

7. CONCLUSION AND RECOMMENDATION

overall the usage of technology in the libraries of Pakistan is not satisfactory the main reason is the less budget and unawareness of technology use, so for dealing with budgeting constraints needs to adopt the open source ILMS software and able to

provide the effective services to their users because the academic libraries are the valuable source of the knowledge. Suitable library software can integrate all library modules like acquisition, cataloging, serial, circulation and manage OPAC therefore the library function will be easy for both users and librarians in order for academic libraries in Pakistan. adoption of KOHA will be best choice to enhance the library performance and provide the effective and moderate services to the users. In this paper few number of open source ILMS has been discussed for the awareness of library professional and the adoption of these software based on the collection of library for example slims senayan is appropriate for the small libraries while greenstone support big collection but do not having complete modules that require whole library integration thus, KOHA having all module that involves for entire library integration and now a days KOHA is dominant and prominent for adoption in academic libraries especially of developing countries.

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