

## LIBRARY PROFESSIONALS PARTICIPATION AND CONTRIBUTION TO KOHA OPEN SOURCE SOFTWARE USED IN LIBRARIES OF PUBLIC SECTOR UNIVERSITIES OF PAKISTAN

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### **Abstract**

The purpose of the study is participation and contribution to open source Koha ILMS used in libraries of public sector Universities. Open Source software are the product of voluntary effort of developers and end users. Koha is an active Open Source library management software project make using voluntary effort of programmers and library professionals. Library professionals are end users of Koha and their involvement is very necessary in various stages of the software development. Koha user community is a growing one and the project offer variety of non-developer roles for library professionals. Library professionals can report bugs, documentation writing, plug-in development and training. The main aim of the survey is to know the participation and contribution of Library professionals in Koha Open Source software project implementation in their libraries.

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**Keywords:** Koha, Open Source software, Library automation

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### **Introduction**

Success of Open Source software project is requires the involvement of developers and end users. Health of an Open Source software project can be monitor in terms of various events like volume of mailing list postings, bugs reported and solved, frequency of update releases, number of downloads, number of active power user (a user who help another user), and developer interactions in (different) mailing lists (Wahyudin and Tjoa 2007). Regularly updated web pages and busy email lists are indicators of active Open Source software project. "If everything is quiet

on the development front, it might be that work has been suspended or even stopped” (Kelly, 2006).

Koha development started by Katipo Communications in September 1999 for Horowhenua Library Trust to replace the legacy proprietary library system with Y2K bug. Koha started to work for Horowhenua Library Trust in 3 January 2000. As per the suggestion of Horowhenua Library Trust, Koha released under the GNU General Public License (GPL) “as a way to ensure the project had longevity (they didn’t necessarily want to spend the rest of their days supporting a proprietary system) and this would encourage other people to use it—improving and enhancing it along the way” (Ransom 2014).

Koha is considered as the first Free/Open Source library management system. Koha get noticed among libraries, library professionals and developers from various countries and implemented many places. Gradually more members joined with the Koha community and started to involve in various events. Koha project offers various avenues for user collaboration and interaction. They are Bugzilla for bug reporting, public source code repository, wiki knowledge base, email discussion forums, monthly IRC (Internet Relay Chat), translation project, user manual project, etc. Koha won “The best example of interactive media specifically made for community and not for profit organizations.” Interactive NZ Award in 2000 (“History | Official Website of Koha Library Software” 2014). Librarianship is a special domain and it possesses its own practices and skills. Chance of usability problems occur in the absence of LIS professional’s involvement in software development. Librarian and software developers can find joint working avenues in Open Source software projects. One of the main similarities between Open Source movement and librarianship is that both respect peer review process. Open source software always goes through peer review process, community inspect source code, find errors and suggest solutions and improvements (Morgan 2004).

## **Methodology**

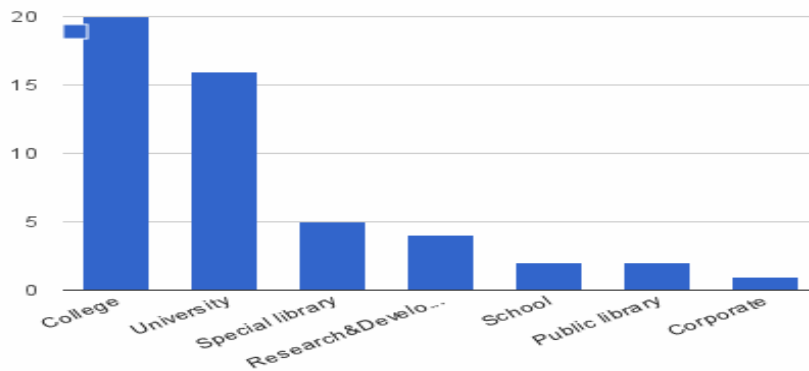
Quantitative research technique is used to get information about usage of Koha and participation of library professionals in Koha software project implementation. A structured online questionnaire was and emailed to selected participants of the study. Population of the study was library professionals who are working in different types of libraries in Sindh province, Convenience sampling techniques was used for data collection. MS excel was used for data analysis.

## **Analysis and Results**

Entire questionnaire categorized into three segments for the convenience of analysis. They are Koha support and training, Users involvement, and level of motivation. Statistical tool percentage is used for the analysis of data.

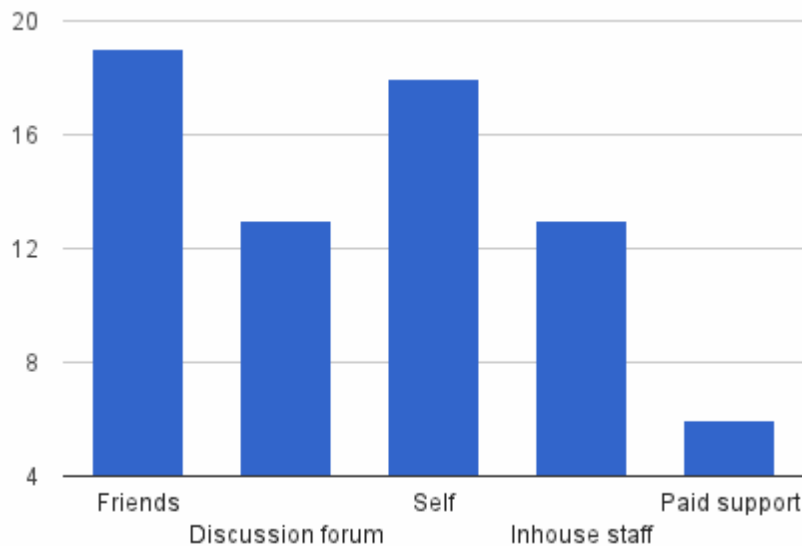
### **1. Koha support and training**

Community and commercial support are available for Koha software. Community support is free and user can make use free resources (user manual, video tutorials) for installation, data migration and maintenance. Spending time and dedication are the only investment for community support.



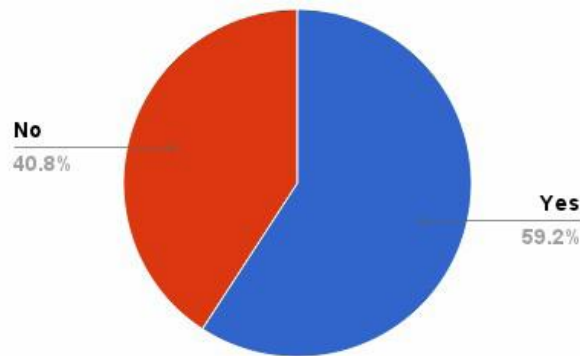
**Graph 1: Koha users by sector**

A significant number of library professionals participated in this survey are from academic libraries, especially from colleges and universities.



**Graph 2: Koha support provider**

The main aim of the question is to know about how they maintain Koha inside library. Very few number of Koha users depend paid support from commercial service providers. Community support is free and most of the users are make using discussion forums, friends and in-house support for maintaining Koha for their library. Koha project maintains very detailed user manuals and active email discussion forums.

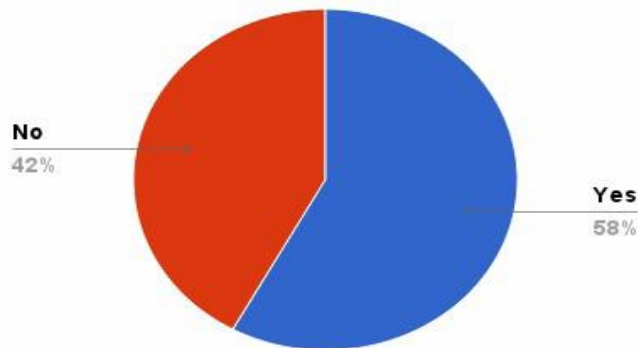


**Graph 3: Training in use of Koha**

More than half of the Koha users participated in the survey have attended training. We have to assume that others have learned to use Koha making using community support. Official documentation, free video tutorials and blogs are available for learning Koha. Professional organizations, libraries, universities and supporting companies have been organizing Koha training in various parts of India by charging nominal fees.

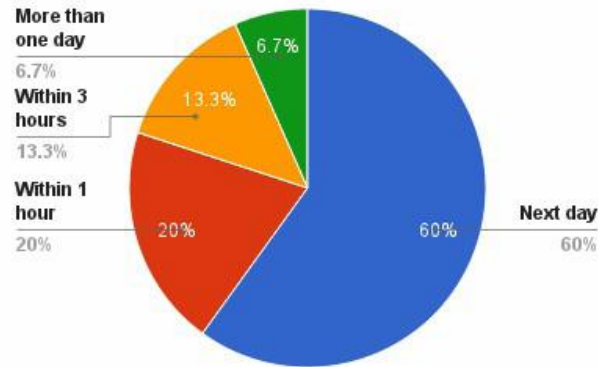
#### **User involvement**

In this segment, try to know the user involvement in Koha email discussion forum and extent of contribution in software development.



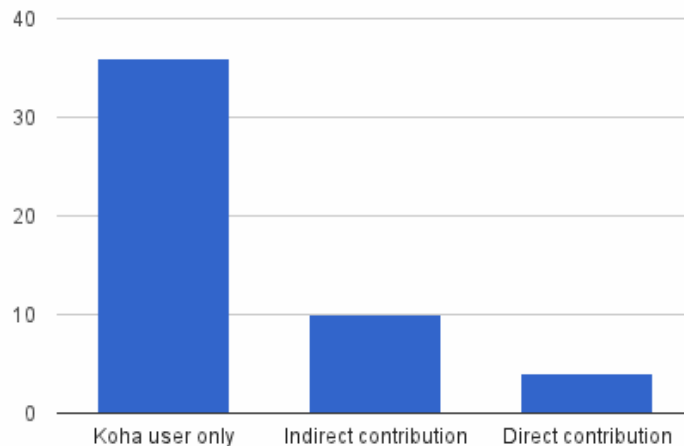
**Graph 4: Habit of posting questions to discussion forum**

In addition to detailed user manual, Koha project has a responsive email discussion forum. Separate forums available for developers, translators and end users. Koha email discussion forum is busy one and active with user's involvement. Half of the respondents are making using the discussion forums for clearing doubts and discuss general on software project. Users can update about training programs, new releases and regional activities from Koha discussion forums. Koha discussion forum is a best place to find other Koha users in your area.



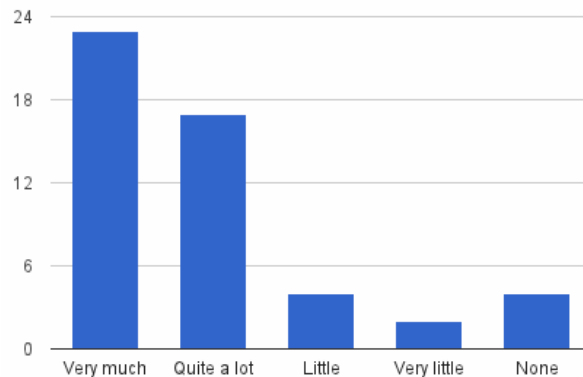
**Graph 5: Koha discussion forum response time**

Busy email discussion forum of Open Source software indicates the health of software project. According to LIS professionals responses Koha discussion forums provide replies very fast. About 60% of Koha users say that they receive reply next day after posting the query. Other segment of LIS professionals (33.3%) says that they have received responses within few hours. Discussion forums are meeting place of developers and active users. Active users can give contribution in testing new releases, posting bug reports and writing documentation (Crowston and Howison 2006).



**Graph 6: Level of involvement in Koha community**

Library professionals are end users of Koha. Library professionals (8%) contribution to source code development is very less. A good number of professionals (72%) are continuing as mere users of Koha and do not contribute anything to software project development. About 20% of library professionals are giving indirect contributions like reporting bugs. One of the main reasons of people motivated to associate with the community with the hope of getting help in return (Kollock 1999).

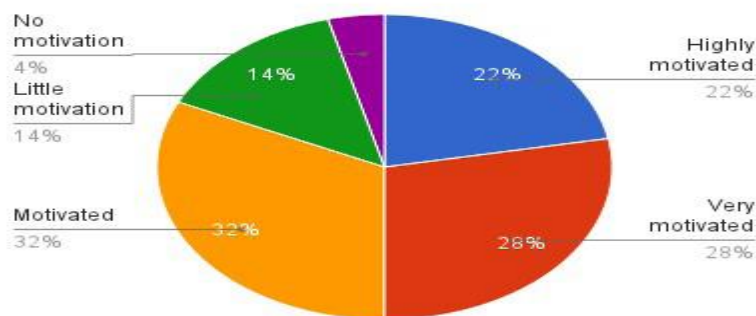


**Graph7: Learning new skills from Koha community**

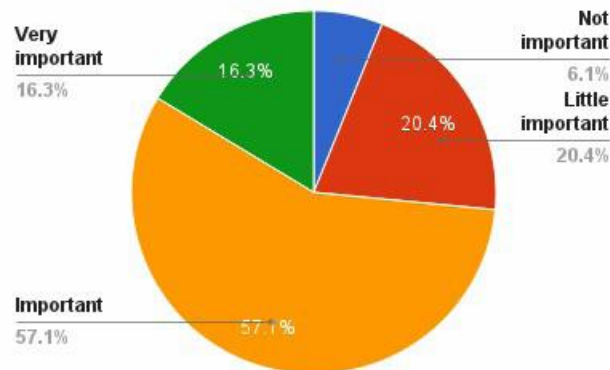
Koha run on Linux and installation and maintenance of Koha software is a challenging process for librarians. LIS professionals are getting familiar with Linux by participating Open Source software (e.g. Koha, Dspace etc.) useful in libraries. Linux graphical interface (Desktop) is easy to manage, but managing software services (e.g. MySQL, Apache) may be difficult for LIS professionals. LIS professionals have learned lot from Koha community by trial and error method. Basic level of knowledge in Linux Operating system is enough to run Koha for day to day activities. Knowledge on taking database backup and rebuild zebra index is essential to work with Koha.

### **Graph 8: Level of motivation: Limiting dependency on proprietary software**

Many libraries are moving from legacy proprietary automation system to free software like Koha due to financial hardships. Libraries have no control over the proprietary software and they feel helpless while thinking to switch another cost effective alternative. In many cases, proprietary



software companies have showed reluctance to give back bibliographic and user data. The survey found that limiting dependency on proprietary software is the main motivation behind the adoption of Koha and participation in software community.



### Graph 9: Importance of peer recognition

Peer recognition has importance among LIS professionals but they do not consider it as main inspiration to engage with community. Rather than peer recognition a significant number of LIS professionals have expressed that they give importance to learning new skills and limiting the significance of proprietary software.

### Recommendations

- It seems that academic libraries are enjoying the benefits of Open Source technology.
- Representations of Open Source technology in public libraries are very nominal. Initiative from government side is very necessary to encourage the implementation of Open Source software in public libraries.
- Basic knowledge in Linux and programming language is essential to fully engage with Open Source software development process.
- Continuing education in Open Source software is necessary to attract LIS professionals to Open Source software community.
- Training in Open Source software is necessary for budding professionals in LIS schools.
- Open source is a sharing culture and more or less it resemble with librarians philosophy of knowledge sharing.
- LIS schools and professional organizations have to find more avenues to expand cooperation with Open Source software community.
- Development of policies is necessary to encourage the use of Open Source software in educational institutions and libraries.

### Conclusion

Cooperation of developers and library professionals are necessary for the long run of an Open Source library management software project. Gradual and stable progress is visible in Koha project in terms of quality of source code, number of bugs fixed, developers, vendors, participating libraries, and active users. “It is really important that librarians are actively involved and don’t just leave development to the developers and vendors” (Ransom 2014). We have to promote and encourage the participation of LIS professionals in Open Source software communities for the long term benefits.

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