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# APPLICATION OF KOHA IN LIBRARIES OF THE INDIAN SUBCONTINENT

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## Indkoha 2019

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Date: 23rd – 24th February, 2019
Venue: Vivekananda Sabhagriha
Ramakrishna Mission Vidyamandira, Belur Math

Edited By:
Arup Raychaudhury
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Joydeep Chanda
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Bengal Library Association

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# *Editorial*

We are honored to bring you this collection of articles from the 'IndKoha 2019: Two-Day International Conference on Koha' which was held in Vivekananda Sabhagriha of Ramakrishna Mission Vidyamandira, Belur Math, West Bengal, India from 23rd to 24th February, 2019. The editors would like to thank the invited speakers and participants who have contributed to the volume which is a selected collection of 41 papers.

There are 13 invited papers. The main focus of these invited papers may be grouped as follows: authority recommender system, cloud computing, software migration, development of union catalogue, cooperative cataloguing and the experience of implementation of Koha in the different types of libraries in Bangladesh.

There are 28 papers from the participants. These papers have covered different domains like discovery services, cloud computing, open source software in the library, webometric study, proprietary vs. open source ILMS, running Koha on Zorin OS, implementation of gate register, and mobile OPAC, etc. A few papers are in very general in nature.

Overall, invited and contributed articles of this collection reflect a wide range of current activities based on Koha and highlight its prospects and future directions. We hope that they will attract the attention of library and information professionals throughout the Indian subcontinent.

The publication of the Conference volume after the paper submission dead line is a significant task. We, the editors, would like to express our gratitude to Sri Ramkrishna Saha, Sri Goutam Goswami and Sri Pushpendu Mondal for necessary proof correction and other editorial assistance, as well as express our sincere thanks to the team of Laser World for their active support regarding printing of this Conference volume.

We also express our gratitude to volunteers/members of Bengal Library Association for their unwavering commitment as the Conference organizer and also the authority of the Ramakrishna Mission Vidyamandira, Belur Math, West Bengal, India for their unfailing support towards 'IndKoha 2019'. Lastly, we are most indebted for the generous financial support given by Raja Rammohun Roy Library Foundation (RRRLF) and Indian Council of Social Science Research (ICSSR).

Editors

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# Invited Papers

# USE OF KOHA-ILS IN SOME SELECTED UNIVERSITY LIBRARIES OF CHATTOGRAM IN BANGLADESH:
## An Analytical Study

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***Abstract:*** *Chattogram is the 2nd largest city of Bangladesh. It is commercial capital and the port city of the country. Recently the government has changed the naming spelling of the city as Chattogram from the former name Chittagong. However, the academically registered institutions of Chattogram use their former name as it appears.This study assessed the performance of the university libraries of Chattogramin Bangladesh and tried to measure the operational process of "Koha open source integrated library system (ILS)" in Chattogram, Bangladesh by using primary and secondary data sources. The study finds that the Koha open source is successfully used for the daily library activities for ensuring qualitative university education in selected university libraries of Chattogram. To find out the exact scenario of Koha-ILS in the university libraries, a total of 20 library professionals were interviewed.*

***Keywords:*** *Koha-ILS, Library Automation, University Library, Chattogram, Bangladesh*

### Introduction:

The library is an essential and crucial part of any higher educational institution like as School, College, and University. It is the searching hub for accessing to knowledge and information. Most of the university libraries of Bangladesh are being digitized day by day with the help of technology. Libraries are adding the latest information technology-based system, and service like as Strong Wi-Fi services, online e-book

service, and automated service through ILMS (Integrated Library Management System). The use of Information and Communication Technologies (ICTs) in libraries is increasing gradually "for providing high-quality personalized services to its users"(Rahman & others, 2014). The use of ICTs "in libraries may be classified into three broad groups: Integrated Library Systems (ILS), information storage and dissemination, and administration/office management tasks" (M. A. Islam, 2007). Nowadays, University libraries are enjoying universal facilities. To meet the demands of the users is a big challenge for any university library. Digital library and automated library system have frequently changed the process of collecting information and also associated services where information are decorated in a digital format with over network (Shova, 2012). Koha-ILS is a system where all library and information activities found in a system. Moreover, all librarians can manage most library functions efficiently with the help ofKoha such as acquisition, cataloging, serials control,circulation, online public access catalogs (OPAC),reports and patron management. It is the most essential and useful part of automation system on university libraries in Bangladesh as well as in the world.

**Objectives of the Study:**

The prime objective of the study is to explore the present library automation status of the higher educational institutions of Chattogram in Bangladesh. More specifically, the objectives of the study are:

- To go through the current library automation services provided by the selected university libraries of Chattogram.
- To measure user satisfaction level on Koha services.
- To find out the ICT facilities in university libraries of Chittagong Division.

**Literature Review:**

A respectable number of relevant studieson automation activities have been already done nationally and internationally. "The term Integrated Library System (ILS) is also known as Library Management System (LMS) which is an Enterprise Resource Planning (ERP) system for a library" (Ahammad, 2014; Uzomba, Oyebola, & Izuchukwu, 2015:). An ideal ILS should have the following modules which are "acquisition, cataloging," OPAC, "circulation, serials control," "Inter-Library Loans (ILL)," reporting and "patron management" (Ahammad, 2014; Caminita, 2010). Anuradha and Sivakaminathan (2009) defined that an Integrated Library Automation Package (ILAP) integrates all routine works of a library. Uzomba et al. (2015) described

that ILS is used to automate many activities in the library. Ahammad (2014) defined the term "ILS refers to having all library functions under one system." Silvestre (2010) stated that "an ILS is planned, conceived and developed to coordinate and automate several library functions and register all the library operations. Many librarians in Bangladesh are working to bring their libraries up to global standards. The history of technology involved in library operations and services in Bangladesh goes back to the 1980s" (Shuva, 2012). In 1998, "the Dhaka University Library (DUL) installed the Graphical Library Automation System (GLAS) software, and some computers were distributed in a Local Area Network (LAN) within the different sections of the library" (Rahman, 2010). "BRAC University Library (BRACUL) installed Koha, a full-featured OSILS in 2010"(Afroz, 2014). "BRACUL used Radio Frequency Identification (RFID) tag with security control devices in 2011 for protecting stealing of books. Then, North South University (NSU) library implemented RFID based Integrated Library Management System (ILMS) in 2012. SUST Library in 2013, BUET Library in 2014 and SAU Library in 2015 have made integration RFID technology with their Koha OSILS" (Rahman, 2014). Alam and Islam (2011) reviewed that "automated library systems in Bangladesh are still in the infancy level. However, in recent times, very few initiatives have been noticed taken by different institutions".

**Operational Definition of Koha:**

Koha is essential and popular software at present age for operating knowledge management task under library information science and management. It is "an open source integrated library system (ILS)" where any librarian can operate all data and task at a time and also views all information by user ID and password. All users can quickly take in Koha software service openly. Library integrated system is a cost minimize and time-consuming way than others ILMS such as TINLIB software. It has many full features, comprehensive modules, and library-oriented services for operating a library and automation tasks such as acquisition, circulation, cataloging, serials control, patron management, report generating, barcode printing, e-mail & sms alert service, OPAC, branch relationships and much more. Mentionable that "Koha is a web-based ILS"(Wikipedia, 2018). Koha is the first and full-featured OSILS, mostly used worldwide by the public, academic and special libraries. "Since the original implementation in 1999, Koha functionality has been adopted by thousands of libraries worldwide, each adding features and functions, deepening the capability of the system". Koha is web-based ILS, with cataloging data stored in MARC and accessible via Z39.50 or SRU. "Koha is available for free download from the Koha web site or from one of the companies that supports" the OSS. Figure 1 has represented all Koha ILS functionshere:


Figure 1: Koha integrated library system with all Modules (source''''': N. Islam & Islam, 2018)

**Methodology:**

A total of two public and three private university libraries namely "Chittagong University of Engineering and Technology (CUET)" Library, "Chittagong Veterinary and Animal Sciences University (CVASU)" Library, Chittagong Independent University (CIU) library,"International Islamic University Chittagong (IIUC)" and Premier University (PU) Chittagong library were decisively selected for this research. To give a detailed analysis of the study, the websites of these university Kohaurl were used as a vital source of information for conducting this research. Besides this, the literature on the automation system from the national and international arena was reviewed to get the concept of automation and ILS. To determine the present scenario of automation by Koha-ILS in University of Chittagong Division interview method has been carried out in selected libraries with Koha administrators.

**Status of Koha-ILS in University Libraries of Chattogram Division:**

"At present, there are forty-one public, hundred-three private, and three international universities in Bangladesh" ("UGC," 2018). In Chattogram, only 6 university libraries, i.e., Chittagong Independent University (CIU) Library, "Chittagong University of Engineering and Technology (CUET)" Library, "Chittagong Veterinary and Animal Science University (CVASU)" Library, "International Islamic University Chittagong (IIUC)" Library, Premier University (PU) Library and Southern University Library are using Koha-ILS. Table-1 demonstrated the using status of Koha-ILS in university libraries of Chattogram, Bangladesh.

Table 1: Use of Koha in the Selected University Libraries of Chattogram, Bangladesh

| SL | University | University Type | Current OSILS | Version | Est. Year | Operating System |
|---|---|---|---|---|---|---|
| 1. | Chittagong Independent University (CIU) | Private | Koha | 3.0 | 2012 | Linux-Debian |
| 2. | "Chittagong University of Engineering and Technology (CUET)" | Public | Koha | 3.22.12 | 2018 | Linux-Debian |
| 3. | "Chittagong Veterinary and Animal Sciences University (CVASU)" | Public | Koha | 3.06.12 | 2012 | Linux-Debian |
| 4. | International Islamic University Chittagong (IIUC). | Private | Koha | 3.20 | 2015 | Linux-Debian |
| 5. | Premier University Chittagong (PUC) | Private | Koha | 18.05 | 2012 | Linux-Debian |

### a) Chittagong Independent University:

"Chittagong Independent University (CIU) is a Private University under the Private Universities Act 2010 mandated by University Grants Commission (UGC) and the Government of the People's Republic of Bangladesh. CIU started its journey in 1999 as the Independent University, Bangladesh (IUB), Chittagong Campus. The library was established in 1999. To search reading materials, library provides OPAC with integrated cataloging system using Koha database management software. Library maintains open access and open shelves system from where the student can take their books according to their choice. The library maintains its activities with the semi-automated system and planning to introduce DSpace software for full automation" ("CIU Library," 2019)

### b) Chittagong University of Engineering & Technology (CUET):

"Chittagong University of Engineering & Technology commonly referred to as CUET, located in Raozan Upazila, Chattogram District, Bangladesh, is one of the public engineering universities in Bangladesh. The university maintains a special emphasis on research". The central library installed Koha-ILS in 2018 to confirm useful and well-organized library services to the faculty, students, and researchers of the university.

### c) Chittagong Veterinary and Animal Sciences University:

"The Chittagong Veterinary and Animal Sciences University (CVASU) was established by the Act of the Government of the People's Republic of Bangladesh on 07 August

2006.To ensure effective and efficient information services to the patrons, CVASU Central Library has introduced state of the art automation technology using Radio Frequency Identification (RFID). It is moving forward to make the University as a center of excellence providing world-class library and Information services" --("CVASU," 2019). It provides the Online Public Access Catalogue (OPAC) services to its users through Koha.

**d) International Islamic University Chittagong:**

"International Islamic University Chittagong (IIUC) is one of the top private universities in Bangladesh." University got the Government's approval on February 11, 1995. IIUC runs well their library activities and services by Koha. "IIUC authority established the University library in 1995" at the commencement of its journey. It is one of the largest libraries among all the private university libraries of the country. The full name of the library is "Library and Information Division (LID)." "There are over than 85,500 books in IIUC Library covering the subjects relating to the academic programmers and other co-curriculum disciplines. The library can accommodate easily over 456 users at a time in its full air-conditioned reading room. More than 300 users use the library every day" ("IIUC library website," 2018). University's staffs and users can find books or others necessary information in a short time by using Koha software under OPAC catalog tool searching with the title, author, subject, ISBN, serial and call number. Library successfully operates the Koha-ILS from 2015. The library system followed all modules of Koha for ensuring efficient services to users and also professionals. The central library services at IIUC is rapidly changed and developed by installing Koha-ILS, and the ratio of users is expanding day by day because all users can access world widely by Koha-ILS (N. Islam & Islam, 2018).

**e) Premier University:**

Premier University was established in the year 2002 at Prabartak Circle, Chattogram. "Premier University Library has taken the initiative to develop library web interface using Koha Integrated Library Management System. PU Library has developed a library database and maintains cataloging, searching, and issuing reading materials. Using the Koha ILS system" ("PU Library," 2019).

**Library Resources Managed by Koha:**

All the selected libraries managed books through the Koha. The Table-2 shows that all selected libraries maintained journals, magazines, and DVDs and theses/internship reportsbesides books by the integrated library system.

Table 2: Managing Library Resources by Koha in Bangladesh

| SL | Features | CIU | CUET | CVASU | IICU | PUC |
|---|---|---|---|---|---|---|
| 1. | Books | Yes | Yes | Yes | Yes | Yes |
| 2. | Journals | Yes | Yes | Yes | Yes | Yes |
| 3. | Magazines | Yes | Yes | Yes | Yes | Yes |
| 4. | Thesis | Yes | Yes | Yes | Yes | Yes |
| 5. | e-Resources | Yes | Yes | Yes | Yes | Yes |

**Number of Books and Patrons:**

Table-3 and figure-2 illustrate that the highest number of titles were 16500 in IIUC Library whereas the lowest number of titles were 2992 in CVASU Library. It also shows that the most significant number of books were 85000 in IIUC Library whereas the lowest number of books were 7000 in CIU Library. IIUC library managed the maximum number of users (two thousand) in contrast IIUC Library maintained only eight hundred users. It is also found that each of the selected university libraries managed average 9098 books of 35200 titles for 1420 users.

Table 3: Number of Books and Patrons

| SL | University | No. of titles | No. of books | No. of Patrons |
|---|---|---|---|---|
| 1. | International Islamic University Chittagong | 16500 | 85000 | 2000 |
| 2. | Chittagong University of Engineering &Technology | 14000 | 52000 | 1500 |
| 3. | Chittagong Independent University | 7000 | 10000 | 800 |
| 4. | Premier University | 5000 | 21000 | 1000 |
| 5. | Chittagong Veterinary and Animal Sciences University | 2992 | 8000 | 1800 |
| Total | | 45492 | 176000 | 7100 |

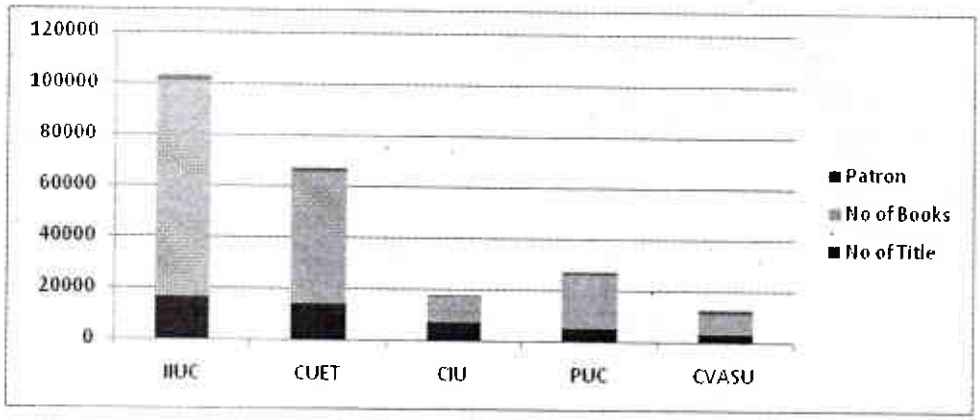


Figure 2: Statistics of books and patrons of selected university libraries

**Features of Koha Used in Selected University Libraries:**

All the selected university libraries had the required six features of the integrated library system which were cataloging, circulation, OPAC, user login, patron management, and fine control. Three university libraries used barcode print modules. Table-4 demonstrated the assumed features of Koha in the selected university libraries.

Table 4: Used Features of Koha in the University Libraries

| SL | Features | CIU | CVASU | IIUC | PUC | SU |
|---|---|---|---|---|---|---|
| 1. | Circulation | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. | Cataloging | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. | OPAC | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4. | User Login facilities | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5. | Patron management | ✓ | ✓ | ✓ | ✓ | ✓ |
| 6. | Fine control | ✓ | ✓ | ✓ | ✓ | ✓ |
| 7. | Barcode printing through ILS | ✓ | ✓ | ✓ | × | × |
| 8. | Purchase suggestion through ILS | ✓ | ✓ | ✓ | × | × |
| 9. | Reservation of books | ✓ | ✓ | ✓ | ✓ | × |
| 10. | Auto email alert service | ✓ | × | ✓ | ✓ | × |
| 11. | Stocktaking | ✓ | ✓ | ✓ | ✓ | × |
| 12. | RFID | × | ✓ | × | × | × |
| 13. | Acquisition | ✓ | ✓ | ✓ | ✓ | ✓ |
| 14. | Auto SMS alert service | × | × | × | × | × |

**Recommendations:**

To emphasize the following recommendations to accept a proper and suitableILS in university libraries of Bangladesh and other developing countries:

1. Need to ensure the better and updated ICT facilities.
2. To recruit more skilled professionals.
3. Require to develop a positive attitude towards the library of university higher authority.
4. Develop the resource collections
5. Organize the training program
6. Adequate allocation of budget for library automation.

**Conclusion:**

"At this digital age, open-source opportunities are becoming widespread in many countries. The interest of Koha and other modern library technologies among library professionals and library users in Bangladesh is increasing day by day". This research shows that It is an integrated library management (ILM) system that functioning by Kohasoftware which containsthe essential features of modules. Koha is an open sources ILM system by which all library activities are conducting efficiently and timely. It is found that the selected five higher education institutesof Chattogram in Bangladesh are performing their library activities efficiently and successfullywith the help of Koha-ILS.

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