

Web-OPAC in the University Libraries in Guwahati City: A Study

Gautam Kumar Sarma

Abstract

***Purpose-** The purpose of the paper is to examine the various features and components of web-based online public access catalogues (OPACs) of University libraries in Guwahati City. Among eight Universities in Guwahati City only four University libraries have been offering Web-OPAC facility to their user community and they are Gauhati University, Krishna Kanta Handiqui State Open University, Assam Don Bosco University and National Law University & Judicial Academy, Assam.*

***Design/methodology/approach-** The various features of the web-based OPACs in four University libraries are evaluated. The evaluation is done by viewing and examining the Web OPACs physically and also using a checklist.*

***Findings-** An OPAC is a public interface of users for search and retrieval in a library. OPAC integrates features characterized by the facilities of the web is called the Web-OPAC. OPAC and Web-OPAC are same in most of the aspects like searching and browsing of library resources. We have seen only 50% among the Universities in Guwahati City are providing Web-OPAC facility. The study found that Koha supports maximum functionalities for providing an efficient Web-OPAC and the Web-OPAC of National Law University & Judicial Academy, Assam provides maximum functionalities.*

***Originality/value-** This paper will be a useful source of information to library professionals who are planning to*

introduce Web-OPACs and also for software vendors who wish to improve the functionalities of Web-OPAC of their ILS products.

Keywords- *Online Public Access Catalogue, OPAC, Web-OPAC, Integrated Library System, ILS*

Introduction: Today's librarians and library professionals are witnessing many drastic transformation caused by advances in library automation. While keeping pace with an increasingly sophisticated user community and format changes in their collection, libraries and information centres are moving towards next generation Integrated Library Systems (ILS) which can satisfy their techno savvy patrons. Connecting the web with the online catalogue or OPAC (Online Public Access Catalogue) is a normal and necessary goal for library and information centres today (Madhusudhan and Aggarwal, 2011). Searching the information without entering the libraries has a great significance in strengthening the fourth law of library science, i.e. "Save the time of the reader".

OPAC and Web-OPAC: OPAC is an interactive search module of an ILS system (Husain & Ansari, 2006). An OPAC contains records for all of the physical as well as electronic items in the library, such as books, journals, and DVDs, databases, e-books, e-journals, etc. We can say it as the gateway to the library's collection. On the other hand, a Web-OPAC is an OPAC on the Web environment. Web-OPAC is an independent program designed separately from the library programs in an ILS (Husain & Ansari, 2006). Through Web-OPAC, in addition to searching of library materials, patrons can also request for borrowing, renewal and reservation related information through their own library profile, as well as can make purchase suggestions.

In recent times, many ILS provides Web-OPAC with web 2.0 facilities, i.e., RSS integration, linking with social networking sites, etc. Some Web-OPACs have incorporated the Z39.50 protocol, which is a strong communication tool based on the client-server interaction search interface to the catalogue and other resources on the Web.

Review of Literature: A good number of studies on OPAC and Web-OPAC have been carried out by various scholars all over

the world. Husain and Ansari (2006) discussed about the OPACs and Web-OPACs technology in library and information centres and explained various features, applications and advantages of Web OPACs.

Kapoor and Goyal (2007) did a comparative analysis of the functionality of web-based OPACs of Libsys, VTLS's iPortal, NewGenLib, Troodon, and Alice for Windows, implemented in five academic libraries in India.

Mercun and Zumer (2008) discussed the current state of library catalogues and draws attention to some important issues concerning Web 2.0 trends.

Yang and Hofmann (2013) discussed advanced characteristics of the OPACs of three ILS packages i.e. Koha, Evergreen and Voyager. The intention of the study was to find out which OPAC of these three ILS packages offers more in terms of services and is more comparable to the next-generation library catalogue.

Kumar and Mahajan (2015) made a study among the public libraries in Chandigarh City of India, where they investigated the use and usage of OPAC in terms of users' frequency, purpose of use, search pattern, search approach, usage of help tips and help, problem faced and satisfaction level.

Chatterjee and Sarkhel (2016) made a comparative study of library Web-OPAC on five major ILS packages namely Koha, LIBSYS, Alice for Windows, NewGenLib and Virtua. The study focused on these ILS package's Web-OPAC attributes and properties by visiting the Web-OPACs of various institutions where using those software.

Sarma (2016) made a comparative study of the OPAC modules among few open sources ILS packages to trace the features and characteristics with special reference to searching and online services provided through web interface of the ILS packages.

The present review cannot be claimed as a complete one; only selected and available literatures on the study area are included.

Scope and Limitations of the Study: The present study covers the Universities in Guwahati City, Assam. There are six State Universities and two Private Universities (www.ugc.ac.in) in Guwahati City, Assam.

Table 1: Universities in Guwahati City, Assam

| <i>Sl No.</i> | <i>Universities</i> | <i>Type</i> | <i>Established</i> |
|---------------|--|-------------|--------------------|
| 1. | Gauhati University | State | 1948 |
| 2. | Krishna Kanta Handique State Open University | State | 2007 |
| 3. | Assam Don Bosco University | Private | 2009 |
| 4. | Assam Down Town University | Private | 2010 |
| 5. | Assam Science & Technical University | State | 2010 |
| 6. | Sankardeva University of Health Sciences, Assam | State | 2010 |
| 7. | Cotton College State University | State | 2011 |
| 8. | National Law University & Judicial Academy, Assam | State | 2011 |

However, as the study area is focused on library Web-OPAC, those Universities are not considered for the study which has not provided Web-OPAC facility to their user community. Only four libraries have been offering Web-OPAC facility to their user community and they are Gauhati University, Krishna Kanta Handique State Open University, Assam Don Bosco University and National Law University & Judicial Academy, Assam.

Results and Discussions: For the purpose of analysis of data, the respondent University libraries are assigned the code word as shown below-

Table 2: Code word for the Universities

| <i>Universities</i> | <i>Code</i> |
|---|-------------|
| Assam Don Bosco University | ADBU |
| Gauhati University | GU |
| Krishna Kanta Handique State Open University | KKHSOU |
| National Law University & Judicial Academy, Assam | NLUJA |

These Universities were established in different course of time and almost their libraries are automated. Although little late, the Gauhati University library has adopted state-of-the-art library automation technology for making the library and information services faster and effective. These Universities have entered more than 75% of their collection in their ILS.

Table 3: University Libraries started automation, total collection & data conversation

| <i>Universities</i> | <i>Automation started</i> | <i>Total collection</i> | <i>Data entered in LMS</i> | <i>Percentage</i> |
|---------------------|---------------------------|-------------------------|----------------------------|-------------------|
| ADBU | 2009 | 16K | 12K | 75% |
| GU | 2004 | 3.3L | 3.2L | 97% |
| KKHSOU | 2010 | 17K | 15K | 88% |
| NLUJA | 2013 | 17K | 14K | 82% |

Key: K=Thousand, L=Lakh

Gauhati University library started automation with SOUL1.0 and they have upgraded their ILS to SOUL2.0 in the year 2010. Assam Don Bosco University library and National Law University & Judicial Academy, Assam have started automation with Koha. Krishna Kanta Handique State Open University library has started automation with SOUL2.0.

Among these Universities, only National Law University & Judicial Academy, Assam offers Web-OPAC service through internet. Rest four Universities offer through campus LAN.

Table 4: ILS used and Web Address of the Web-OPACs (browsed on March 3, 2017)

| <i>Universities</i> | <i>ILS used with version</i> | <i>URL</i> | <i>Access mode</i> |
|---------------------|------------------------------|---|--------------------|
| ADBU | Koha 3.22.08 | http://192.168.63.110 | Intranet |
| GU | SOUL 2.0 | http://10.10.114.100/opac | Intranet |
| KKHSOU | SOUL 2.0 | http://192.168.0.220/opac | Intranet |
| NLUJA | Koha 3.12.09 | http://14.139.213.149/ | Internet |

Development and Technology Components of the ILS:

The ILS packages are distributed applications, i.e., programs that run on more than one computer and communicate through a network or server. The frequency of releasing updated version is very rapid in case of open source ILS packages upon proprietary packages.

Table 5: Development and technology components of SOUL, LIBSYS and Koha

| | <i>SOUL</i> | <i>Koha</i> |
|---|-----------------------|--------------------------|
| Original Developer | INFLIBNET Centre | Horowhenua Library Trust |
| Licence | Closed | Open Source (GNU GPL) |
| 1 st release year | 2000 | 2000 |
| Latest release year | 2009 | 2017 |
| Version of the latest release | 2.0 | 16.11 |
| Architecture in the latest release | Client server, N-tier | Client server, 2-tier |
| Server OS Platform | Windows | Linux |
| Client OS Platform | Windows | Cross Platform |
| Backend database | MS SQL Server | MySQL |
| Web server | IIS | Apache |
| Application server/middle layer | ODBC | No |
| Written in language | Visual Basic | Perl |
| Web based administrative interface | No | Yes |
| Work in cloud environment | No | Yes |
| Provision for customization of OPAC interface layouts through staff interface | No | Yes |
| Software cost | 80K (FE), 30K(LE) | No cost |
| Software upgradation cost | No | No |

Web-OPAC Functionality: Basic functionality of the Web-OPAC of these two ILS includes the ability for users to perform searches to view the information and status of any given item.

State-of-the-Art Web Interfaces: All the four Web-OPAC interfaces have the Google-like simplicity in presentation. Though, the user interface of Koha ILS is configurable, Assam Don Bosco University library Web-OPAC is not configured at all. National Law University Assam Central library Web-OPAC is configured with header logo, external links, OPAC credit and description in the body of the OPAC. Between the SOUL2.0 user University libraries, Krisna Kanta Handiqui State Open University library Web-OPAC has configured a little bit i.e., external links, OPAC credit and description in the body of the OPAC. Figures 1-4 show snapshots of each Web-OPAC's user interface. All the four Web-OPACs offer advanced search with multiple boxes for entering search terms.

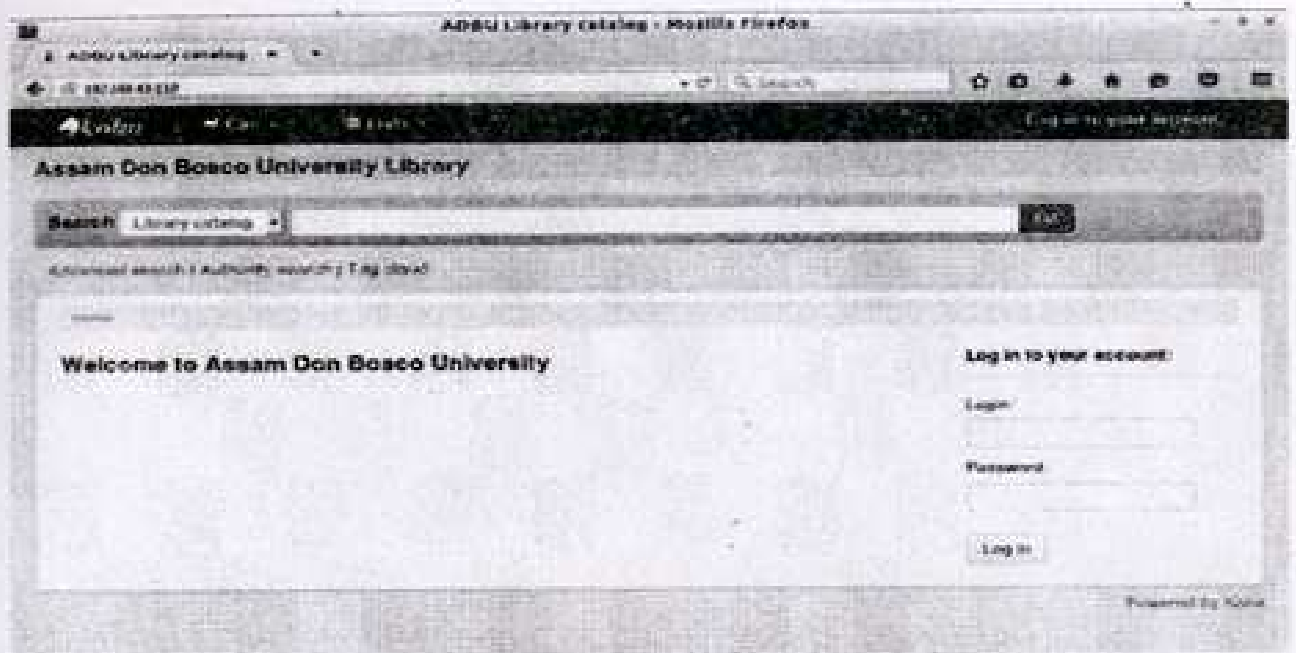


Fig 1: User interface of ABDU library Web-OPAC (browsed on March 3, 2017)



Fig 2: User interface of GU library Web-OPAC (browsed on March 3, 2017)

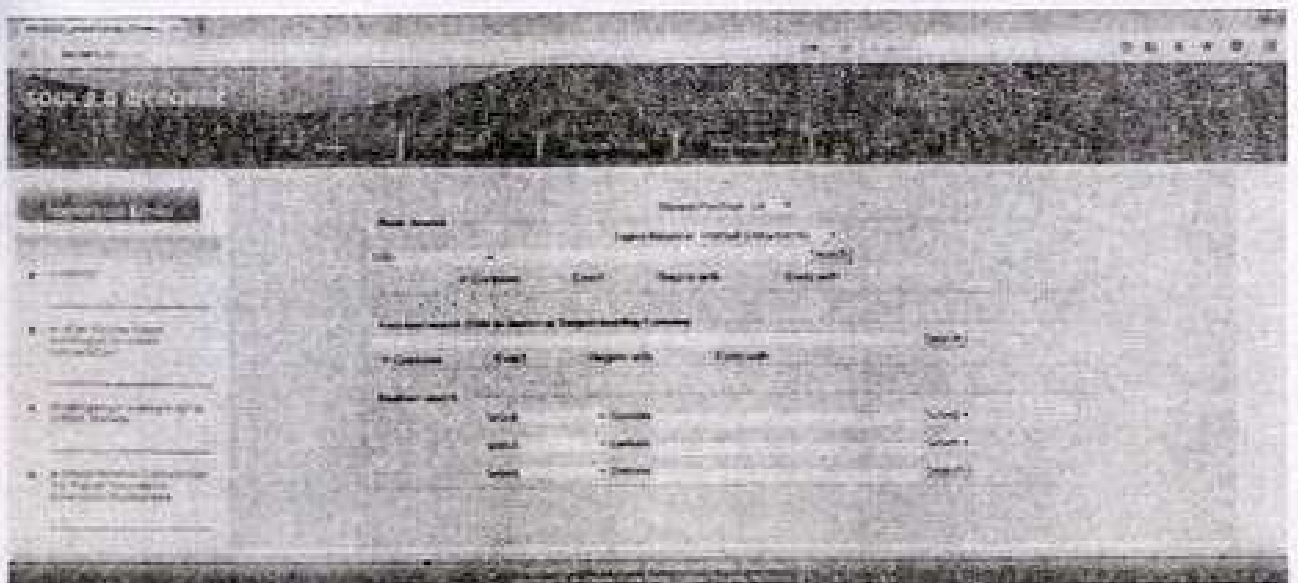


Fig 3: User interface of KKHSOU library Web-OPAC (browsed on March 3, 2017)

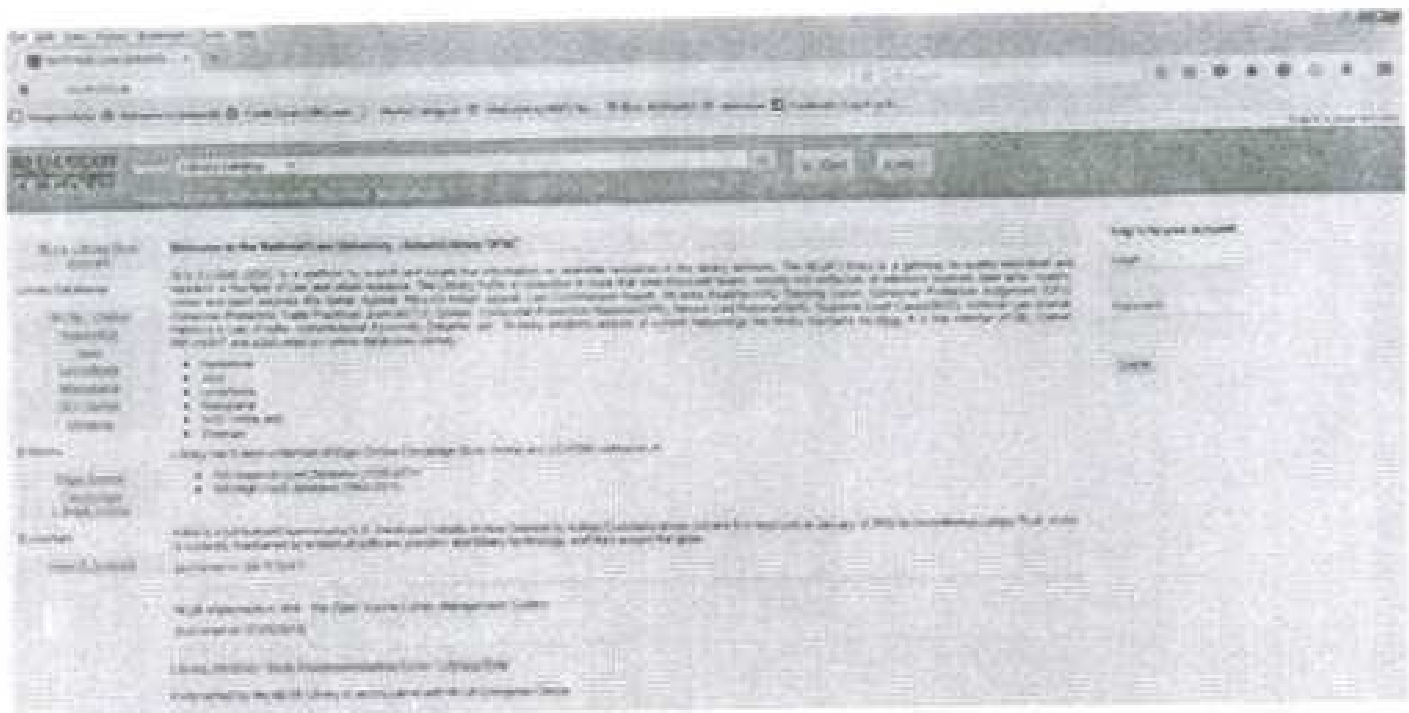


Fig 4: User interface of NLUJA Library Web-OPAC (browsed on March 3, 2017)

Display of Records: It is expected that the search features, irrespective of layout, should lead the user to the appropriate documents of his interest in a Web-OPAC. After giving search queries in a Web-OPAC; records are displayed in brief showing the title, author, call number, library and location, and circulation status, etc. The content of each record varies with the kind of display and the availability of features like MARC display, ISBD display, AACR2 display, etc.

Download and Print Searched Records: Printing facility of the search results is also a common phenomenon in some Web-OPAC. Searched results can also be downloaded to different formats in some Web-OPAC. Downloaded records in machine readable format (.mrc) can be imported to another ILS easily and this can reduce human errors, costs and time associated with cataloguing, and the records can be created in a standardized way.

Login in to the Web-OPAC: In some Web-OPAC, users can log in and get some facilities like reservation or hold library documents, pay fines, suggest a new document to the library for purchase, view and change the personal details, view the checked items, etc.

User Self Registration through Web-OPAC: Very few ILS packages have the facility to the users for self registration through Web-OPAC. This facility reduces the workload of the library professionals as the users can register with the ILS themselves from

the Web-OPAC interface. Koha has such facility if it is enabled from the administrative interface.

Web 2.0 Integration: Some Web-OPAC incorporated RSS (Rich Site Summary, originally RDF Site Summary, often called Really Simple Syndication), which are allowed in the Web-OPAC to alert users with any updates and additions for items of interest. In few Web-OPAC search results can be shared in social networking sites like Twitter, LinkedIn or Facebook.

Linking Record to External Databases: In some Web-OPAC, search results can be hyperlinked to the preview of the Google Books, Amazon Books, BookFinder, WorldCat, Open Library, etc. Linking to the external databases helps the users to show the book reviews and content summaries of the search results before they enter the stacks.

Navigation to External Links: From the Web-OPAC page some other webpages can be linked, e.g., parent organization's webpage, parent library's webpage, subscribed e-resources links, etc. It helps the Web-OPAC users to navigate other important web resources.

Comparison of the Web-OPAC Functionalities: An attempt has been made to identify the key functionalities in the selected Web-OPACs. Following table demonstrates that National Law University & Judicial Academy, Assam library Web-OPAC has seventeen out of the nineteen compared functionalities and comes in the top of the table followed by Assam Don Bosco University library Web-OPAC with score of fifteen.

**Table 6: Comparison of Web-OPAC Functionality
(browsed on March 3, 2017)**

| <i>Web-OPAC Functionality</i> | <i>ADBU</i> | <i>GU</i> | <i>KKHSOU</i> | <i>NLUJA</i> |
|--|-------------|-----------|---------------|--------------|
| Basic search | 1 | 1 | 1 | 1 |
| Advanced search | 1 | 1 | 1 | 1 |
| Authority search | 1 | 0 | 0 | 1 |
| MARC display | 1 | 1 | 1 | 1 |
| ISBD display | 1 | 0 | 0 | 1 |
| AACR2 display | 0 | 0 | 0 | 0 |
| Book jacket display | 1 | 0 | 0 | 1 |
| Download/save records | 1 | 0 | 0 | 1 |
| Print records | 1 | 0 | 0 | 1 |
| User login | 1 | 0 | 0 | 1 |
| User self registration | 0 | 0 | 0 | 0 |
| User purchase suggestion | 1 | 1 | 1 | 1 |
| Hold/reserve | 1 | 0 | 0 | 1 |
| RSS integration | 1 | 0 | 0 | 1 |
| Sharing with social networking | 1 | 0 | 0 | 1 |
| Link to external database | 1 | 0 | 0 | 1 |
| New arrival display | 0 | 0 | 0 | 1 |
| Manage Cart and List | 1 | 0 | 0 | 1 |
| Basic customization of footer, information in the body, navigation to external links, etc. | 0 | 0 | 1 | 1 |
| <i>Score (out of 19)</i> | <i>15</i> | <i>4</i> | <i>5</i> | <i>17</i> |

Conclusion: Modern trends in technologies and gadgets are challengingly forcing the library and information centres to adopt latest communication tools for effective delivery of service to the users in cost effective manner. Though, the libraries understudy are making an earnest effort to automate their traditional housekeeping operations using different ILS packages, still there are lots to perform by them for the significant development of library automation in the region. We have seen only 50% among the libraries understudy are providing Web-OPAC facility.

The study found that Koha supports maximum functionalities for providing an efficient Web-OPAC. The integration of Web 2.0 has made the Web-OPAC more user-friendly and interesting, because, the user community finds an interactive interface in searching library resources. As seen in the comparative study, Web-OPAC developed with Koha ILS can give much more user-friendly and interesting user interface. Koha's Web-OPAC is very interactive and also configurable to a large extent.

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