

Application of Web 2.0 Technology in KOHA LMS: a Study at St. Xavier's College Central Library, Kolkata

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Abstract:

Web 2.0 technology provides interaction between the library and its clientele in a very convenient way. The present paper describes the changing requirements of modern integrated library management software (ILMS) to fulfil the increasing user needs with the help of web 2.0 technology. It highlights various user friendly services that can be made available for the benefit of the user community as well as for the improvement of library management software quality. It describes the use of various web 2.0 enabled tools like blogs, RSS feed, etc. in Koha ILMS with special emphasis on St. Xavier's College Central Library.

Keywords: Web2.0, RSS Feed, Blogs, Star Rating

1.0 Introduction:

Technology is marching ahead with its full vigour and vitality giving space for its application. Web 2.0 technology is based on the principle of two-way communication system. Every system needs to be qualitative in its exposure and application. To fulfil this aspect web 2.0 is a time-worthy invention in the communication field of present era. Web 2.0 is an interactive application technology that can be used in various fields especially where patrons' needs are emphasized greatly. Library and information centres are operated and systematised keeping in mind the needs of their users. Web 2.0 works very conveniently in this area of academic pursuit, especially in ILMS. It emphasises on collaborative nature of information sharing throughout the various levels of management hierarchy. The fields where this technology can be applied include blogs, tagging, information mash up, social networking, bookmarking, etc.

2.0 Web 2.0 Technology:

The term 'Web 2.0' was coined by Tim O'Reilly who tried to define it as follows: "Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an 'architecture of participation' and going beyond the page metaphor of Web 1.0 to deliver rich user experiences" (O'Reilly, 2005).

2.1 Usefulness of Web 2.0 Technology in Library :

Web 2.0 tools provide new opportunities for collaboration and information sharing between libraries and users community.

Using Web 2.0 tools librarians can share information/news/announcements with their users at any time.

Web 2.0 tools can be used for the enhanced library services and resources through user feedback facility.

Web 2.0 tools will facilitate better interaction with the users.

Web 2.0 tools can be used to effectively marketing library services and resources.

Web 2.0 tools will help to enhance the image of the library among the users community.

Web 2.0 tools will help to enhance outreach library services.

3.0 Application of Web 2.0 Technology in Koha at Central Library:

Koha is the open source and most popular library management software. Web 2.0 technology has been integrated with Koha for enhanced library services for the user community which are as follows:

➤ Searching document using Z39.50 protocol:

Z39.50 is a copy cataloguing protocol. By using this protocol a cataloguer can search and import cataloguing records in MARC format for a particular document title or ISBN from other different library databases where the entry of that particular document has already been done and in this way we can prepare many entries within a limited time frame.[Fig:1]

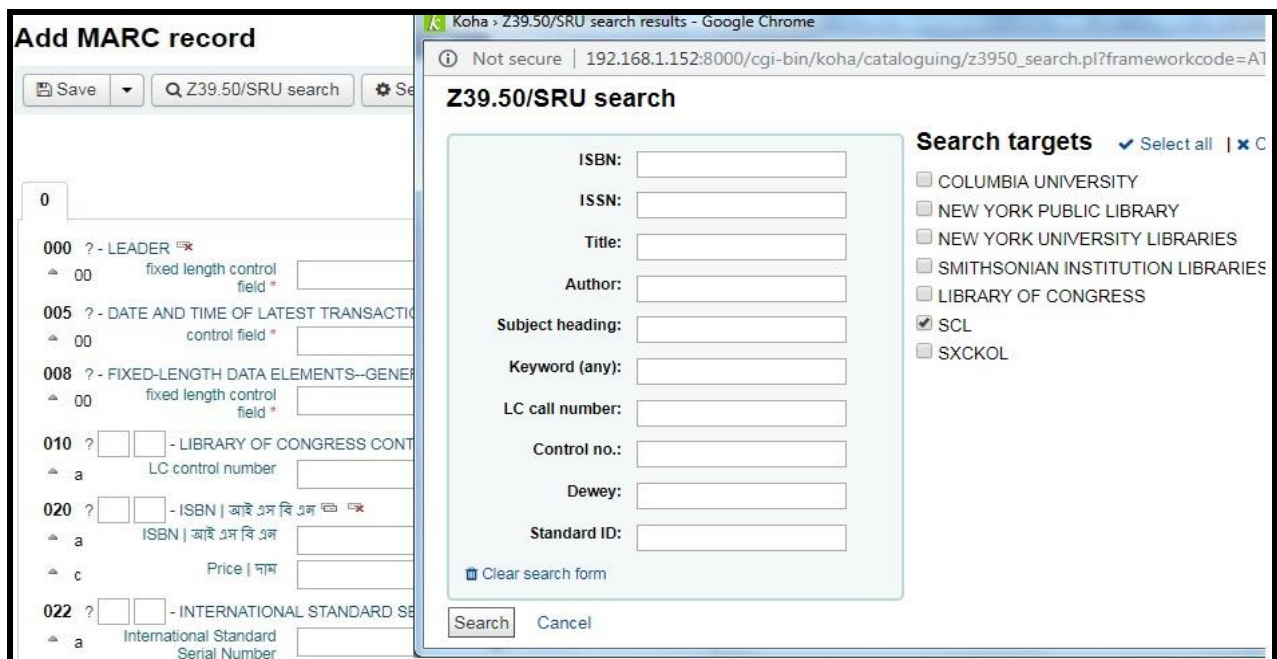


Fig: 1 Searching document title using Z39.50 at the time of cataloguing in Koha

➤ Table of Content (ToC) Service:

Using table of content service user can retrieve full content page of a book, journal in the OPAC interface. Using title and ISBN matching rules we have integrated our cataloguing

records with Cataloguing Distribution Service of LoC (Library of Congress). This facility provides table of contents of the book.

➤ **RSS Feed:**

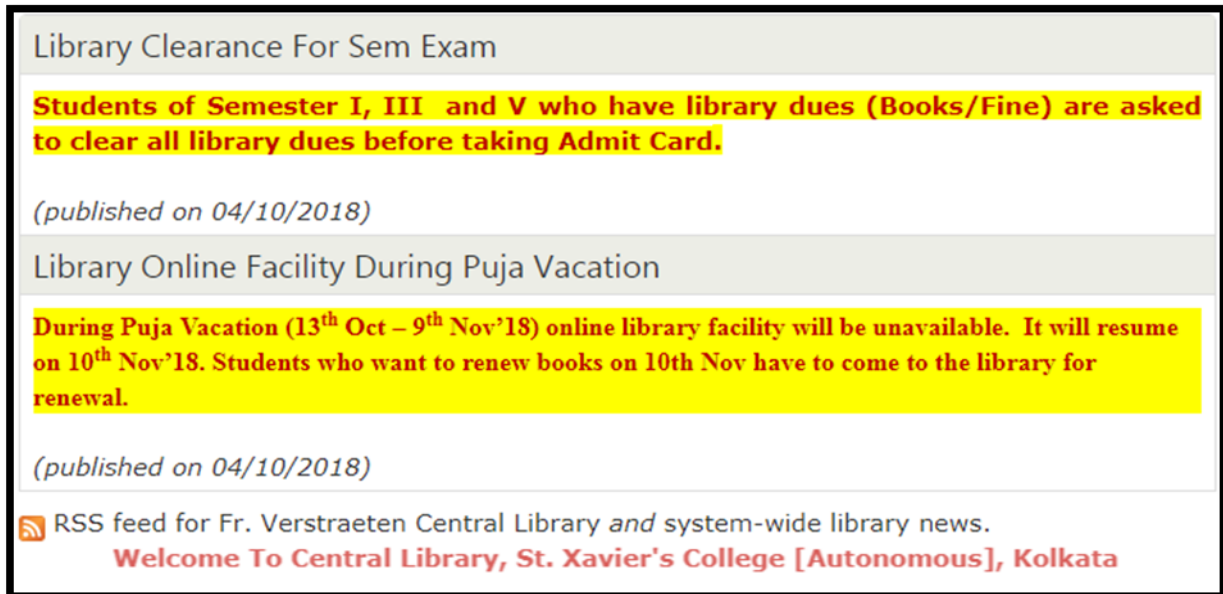


Fig:2 RSS Feed Services for User Community

Really Simple Syndication or Rich Site Summary (RSS), is a set of XML based web-content distribution and republication/syndication protocols. Koha provides excellent feature of RSS like new arrival list, list of individual interest, etc. to the library user community. Announcement of the availability of new books and other resources to the department / research scholar, promoting current library news, events, etc.(which is a marketing aspect for our library resources) for library users, enhancing library instruction using Library 2.0, Blogs, Wikis, Tagging, etc. and Mash Up library services using RSS feeds.[Fig:2]

➤ **Star Rating:**

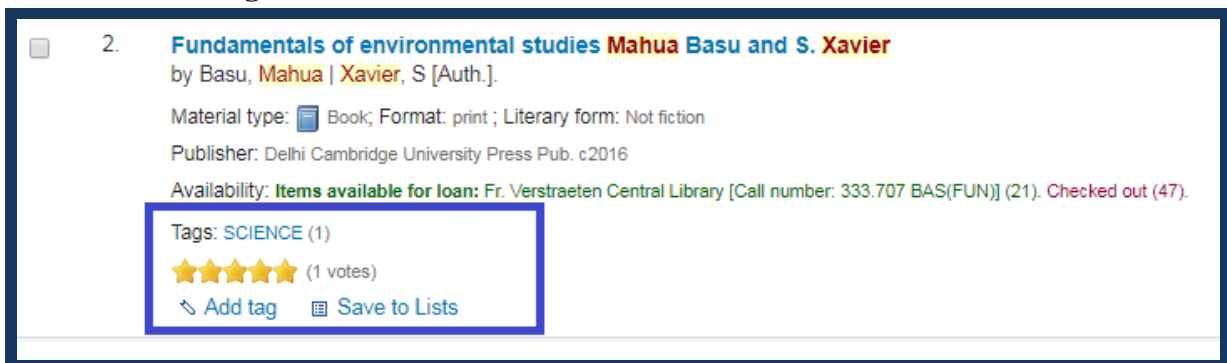


Fig: 3 Star Rating Facility to Library Books

In Koha users can give rating to library items i.e. books, journals, audio-visual materials etc. Users have to login using user's ID and password for the rating of any library material and then click on any number of the stars out of five. [Fig: 3]. It will reflect total counting of voting/person given rating to that particular library material in two different formats (Simple search page and item detail page) as given in the screen above.

➤ **Comment:**

The Koha ILMS provides an option to comment on the individual library items which may be helpful for the librarians and users also to properly evaluate or consult the books. For example a faculty may comment on the book and refer its student to the particular chapter of that book which may be according to the syllabus. [Fig: 4]

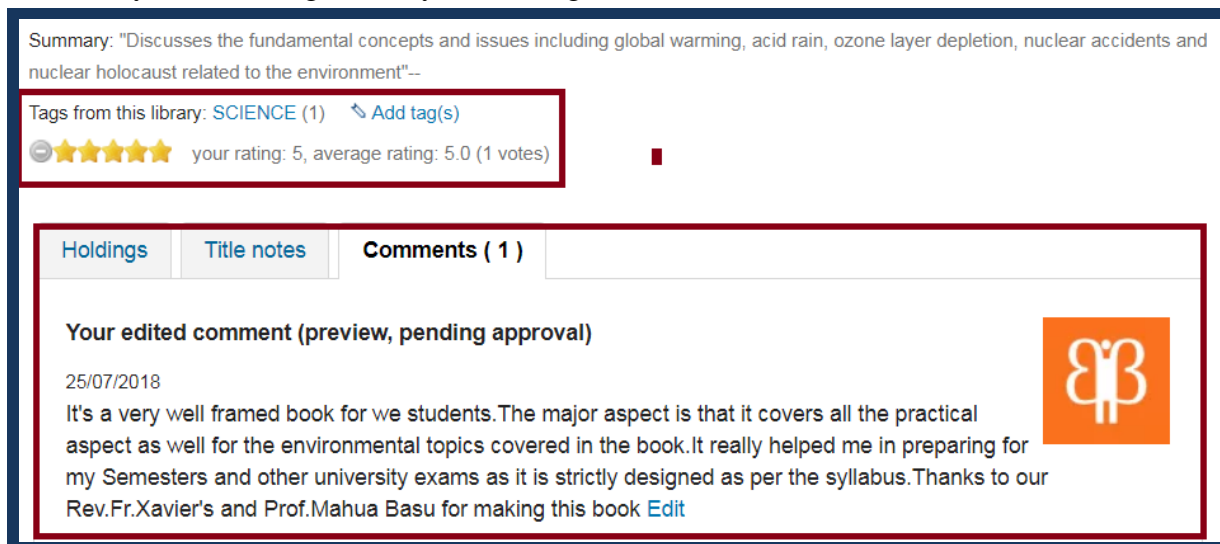


Fig: 4 Comment Facility on a Particular Book

➤ **Social Network Sharing Button :**

Now-a-days almost all the websites provide an option to share their products on various social networking websites for popularity and sharing their special features. Koha also has the same feature through which users can share a particular item on the various social networking websites like Facebook, Twitter, Google plus etc.

➤ **List:**

List creation is one of the important web 2.0 technology based features in Koha ILMS; it gives freedom to the user to create their own list, and user can manage their own private lists by browsing the lists options of their account. The lists are two types: - Private list that is managed by user and can be seen only by user himself and Public list that is managed by everybody. To view the contents of the list user has to click on the list name under the Lists button. The contents of the list will look similar to search results pages except different menu options across the top of the list. To place a hold on one or more list items click the 'Place Hold', to download the list content click the 'Download List', to email the list content click the 'Send List' and to print the content list click on the 'Print List' link. [Fig: 5]

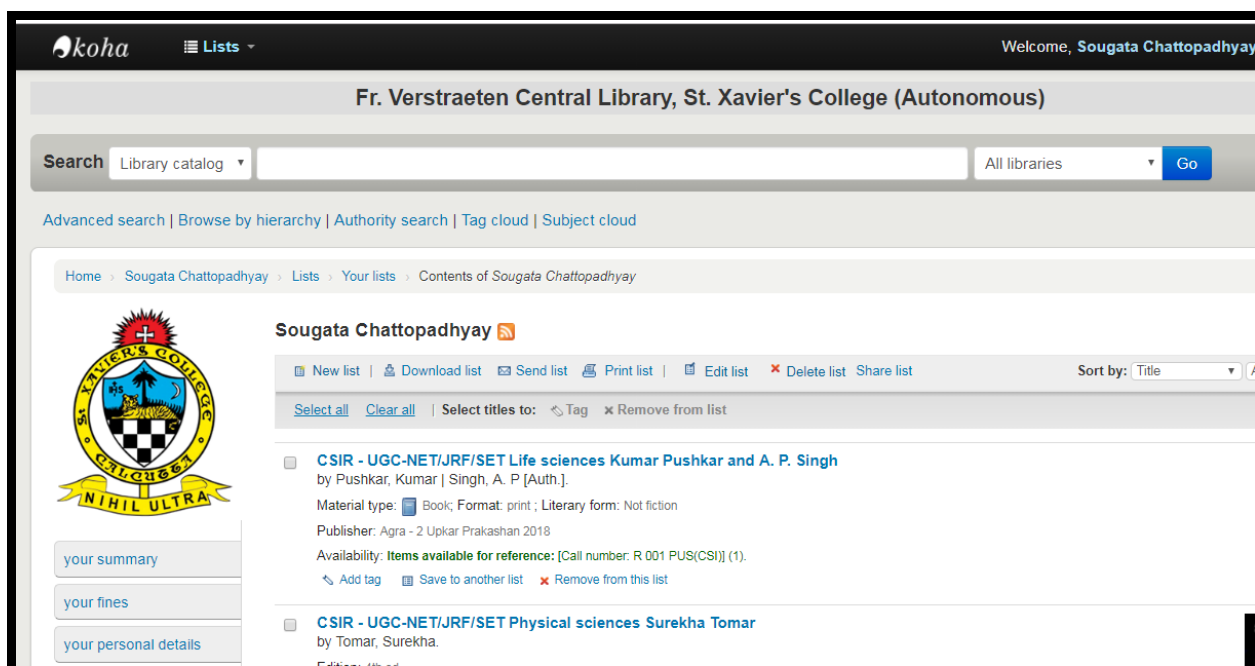


Fig: 5 Display of List in Web OPAC

➤ **Tag :**

Tag is a keyword or term assigned to some specific type of information such as conference proceedings, digital image, computer file, e-books etc. This kind of metadata helps describe an item and allows it to be found again by browsing or searching. This method of assigning keywords may also be called as social tagging, collaborative tagging, social indexing, or social classification and in library science perspective it is called as folksonomy. The provision of implementing tagging on a particular document increases the frequency of browsing document. [Fig: 6]



Fig: 6 Tagging on a particular document

➤ **Library Blogs:**

Library blogs [Fig: 7] is mainly used as a tool for promotion, publicity and for outreach library services. Through blogs libraries can disseminate up-to-date information to their users, make announcements of new resources and events. Blogs can be used for interactions with

library user communities. For better improvement, it can also be used for receiving feedback from the users about library services and resources.



Fig: 7 Central Library Blogs

➤ **Integration of Koha with Amazon Database:**

User can search their required documents from OPAC. The searching results become more attractive if the cover page of the book displayed in the search result. If a book catalogued in KOHA MARC 21 framework with correct ISBN number and title of the book and the same title and ISBN number is available in the Amazon database then the cover page will be displayed in the KOHA OPAC. Fig: [8]

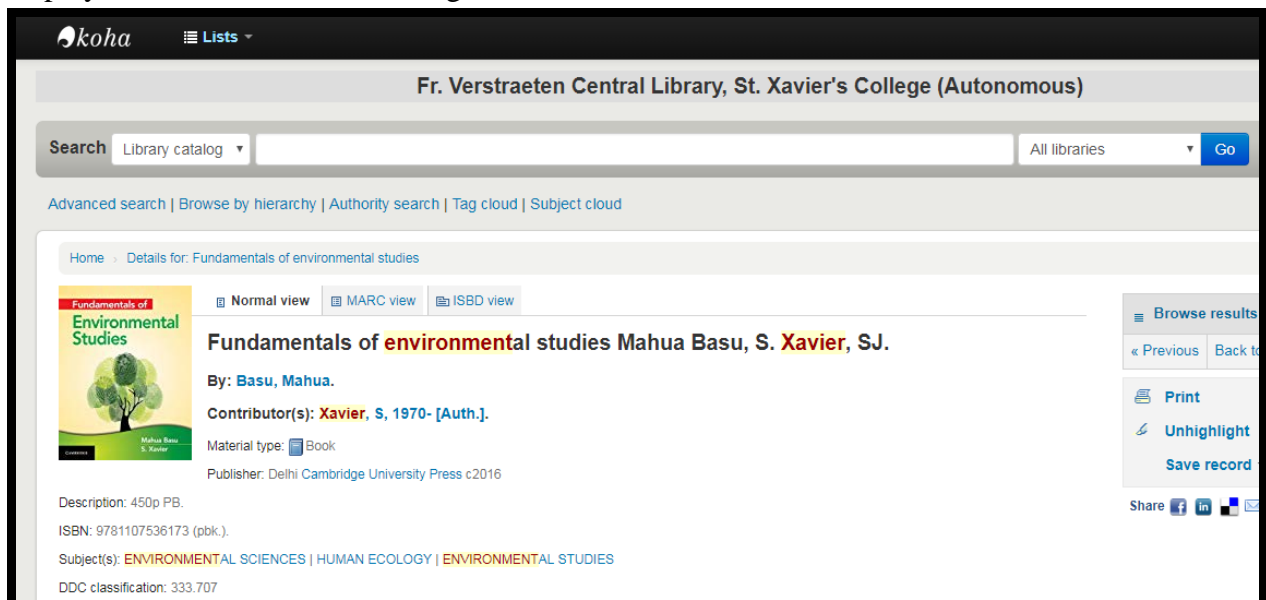


Fig: 8 Integration of Koha with Amazon

➤ **Integration of Google Map with Library Homepage:**

Using Google Mapping Technology libraries can incorporate Google Map [Fig: 9] into library homepage. The Central Library has also embedded Google Map into library OPAC main page

with place marks. When users click on the place marks, they are able to access description of the landmark along with photograph.

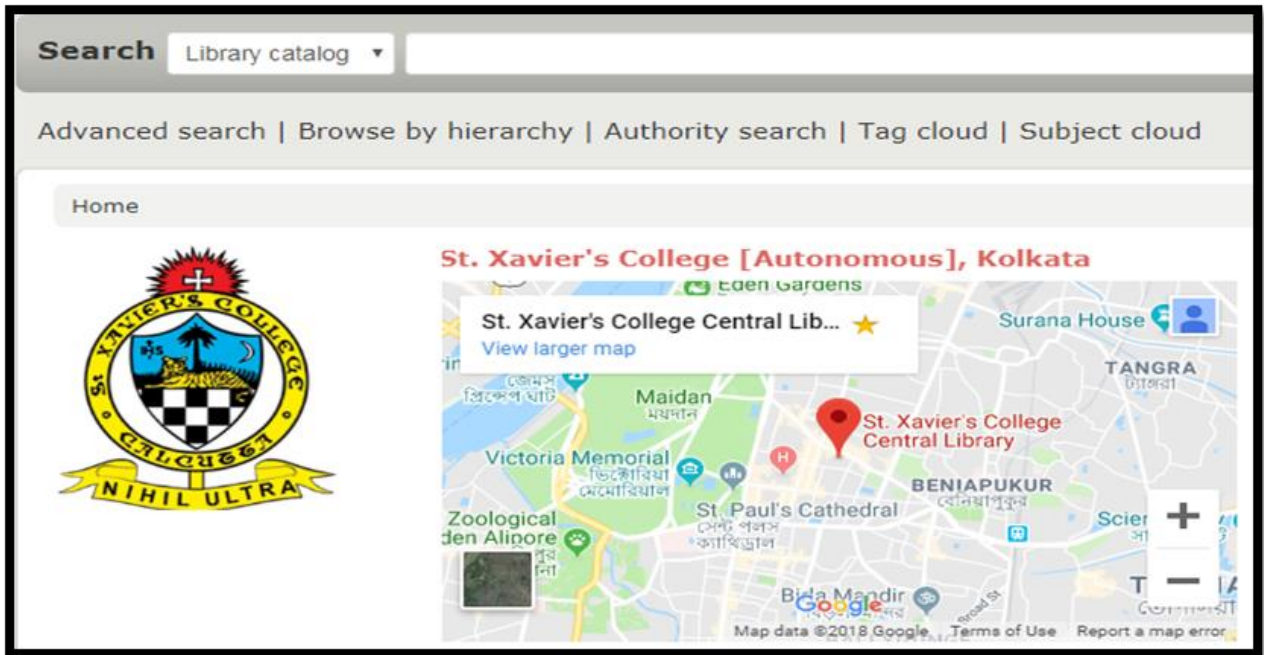


Fig: 9 Integration of Google Map with Library Homepage

➤ **Google Custom Search Engine:**

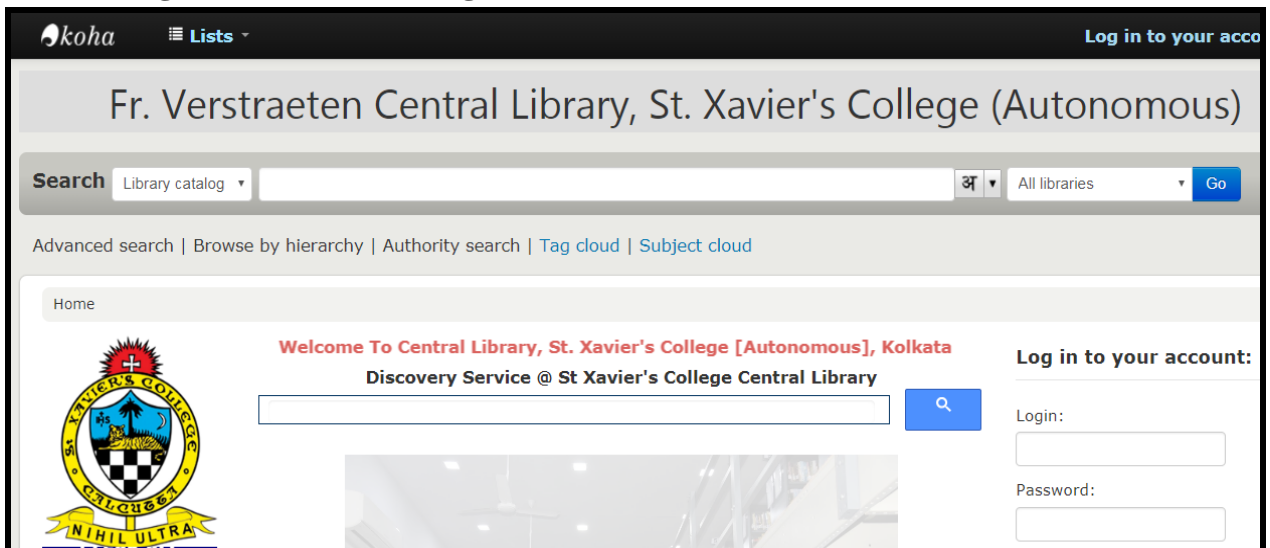


Fig: 10 Discovery Service Interface @ St. Xavier's College Central Library

Google Custom Search Engine is an online platform that allows creating a search engine for a website. This is single window search platform to retrieve subscribed resources as well as open access resources available on web from a single-window search interface. St. Xavier's College Library has a bibliographic database in Koha with around 80,000+ records and it subscribes to INFLIBNET – NLIST, DELNET, NDL, the Economist, etc. Apart from these resources, users need to consult different open access resources available in their domain of

interests. But these resources are distributed in library catalogue database, subscribed e-resources platform and also open access resources with their respective user interfaces through platform-specific retrieval techniques. As a result, end users are facing problems during retrieval of resources as they need to move from one search interface to another for comprehensive resource discovery. This situation can be dissolved by providing web 2.0 technology based single-window discovery service for the end users [Fig: 10, 11]

```

<html>
<center><b>Discovery Service @ St Xavier's College Central Library</b></center>
<body>
<script>
(function() {
var cx = '015073724203989272894:eye018kws0';
var gcse = document.createElement('script');
gcse.type = 'text/javascript';
gcse.async = true;
gcse.src = 'https://cse.google.com/cse.js?cx=' + cx;
var s = document.getElementsByTagName('script')[0];
s.parentNode.insertBefore(gcse, s);
})();
</script>
<gcse:searchbox-only></gcse:searchbox-only>
</body>
</html>

```

Fig: 11 Source Code for creating Google Custom Search- Engine in Koha OPAC

➤ **Notifications and Messaging:**

Koha has default mechanism to send messages to patrons. Libraries can send a variety of notices and alerts to patrons from Koha LMS using web 2.0 technology:

1. Overdue notices.
2. Serial Routing List
3. New patron registration notice
4. Item borrowed / returned notice.
5. Just-become-overdue notice. (Distinct from the regular overdue notice.)

Each of these notices are configured during system set-up. Administrators can also add more notices in the tools area. Notices are defined using in-built template system.

Using web2.0 technology we can enhance notification and messaging system in Koha like:

- Creating a messaging preferences tab in the OPAC interface so that patrons can control what types of messages they want to receive.
- Patrons will be able to configure some notifications in the public catalogue interface; some notifications will be configured by administrators only. Administrators will decide user specific notification for different type of patron category.
- Enhance the template by using header, footer, and repeating section templates.

4.0 Conclusion:

This article discusses only on the integration of web 2.0 technology with LMS Koha. In short it can be said that web 2.0 technology is a boon to the library and information science professionals. According to the need of the hour web 2.0 technology can further be integrated with Koha for the betterment of the library and information services.

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