

Information Literacy through Web 2.0 Integrated WebOPAC: An Experiment at Jaypee Group of Institutions

Shri Ram

Jaypee University of Information Technology, Solan-173 215
E-mail: shriram2576@gmail.com

ABSTRACT

Application of Web 2.0, 'The Second Generation of the Internet', has become one of the fastest growing communication technology and being adopted by corporate and service sector. The same is the case of library and information science service centres. Increasing popularity of Web 2.0 technology provides a prime opportunity to engage patrons in the virtual environment. It attracts users to communicate with similar interest people through networking and present myriad of resources and information in the form of multimedia, blogging, tagging, bookmarking, messaging, and social networking. This paper discusses some of the implication of the Web 2.0 application as an information awareness tool about the resources available in library and connecting to the other Jaypee Group of Educational Institutions.

Keywords: Web 2.0, WebOPAC, ICT applications, Web applications in libraries

1. INTRODUCTION

Information and Communication Technologies (ICTs) have changed the face of traditional library. The developments in and widespread adoption of web technology, web services, web-based search engines, federated search,¹⁻² meta-search³⁻⁴ and other internet tools and services along with emergence of Google Scholar⁵ in the retrieval of scholarly information have reduced the patrons' dependency on library. The emergence of Web 2.0 technology has added an element of flavour to the user's expectation to get tailor-made information.

Facing the challenges due to advancement of internet technologies, libraries are adopting new technologies of the web to provide better information services and match the user's expectations. Librarians realising that not only do their systems need to offer better discovery tools, but also, to address users' needs adequately, the systems must supplement the discovery process with precision-delivery tools. Librarians need to change their roles and the ways in which they provide services in response to the recent developments in web technologies. Furthermore, libraries need to make the research process engaging, and integrate it into users' normal workflow. Library automation processes in early seventies, in developed countries, and late eighties, in developing countries, were

started to automate and smoothen the work flow of the library services.⁶ Later in nineties, Internet changed this automation process in the new direction leading to web-based services. Again, during the last five to eight years, the Web 2.0 has revolutionised information communication in the form of faster information sharing, networking, and multimedia-based services. The evolution of social networks and social sharing has posed a challenge to libraries to adopt this technology in their routine services to meet users' expectation and immediate information delivery.⁷ In this context, the recent success of YouTube is not surprising. User's perception of FaceBook, Instant Messaging, E-mail, Really Simple Syndication (RSS) Feeds, and Tagging are results of such innovations in web technology.⁸ These developments and increased usage of web-based services have become necessity in the daily operation of the library activities.

2. NEED OF WEB-BASED SERVICES IN LIBRARY ACTIVITIES

Librarians need to understand why users prefer other sources of information despite their respect for and trust in a library's resources. This change in user's perception and their preference for Internet tools and services such as web search engines, e-mail, blogs, and RSS feeds are

the outcome of several factors. First, users assign great value to the ease of use, ease of access, and speed that characterise Internet tools and services. Although web search engines may lack the options available through library catalogues and scholarly databases, and may be less accurate, the web search engines are more fun to work with; offer immediate satisfaction and are easy to learn and use. Libraries must always think about innovative ways to reach out to students in an academic environment. Students have an unprecedented amount of information available to them, through Internet. Existence of this perceived wealth of information resource has caused significant decrease in in-person visits to the libraries. Furthermore, this decrease has accompanied by a parallel tendency by student to overlook the often more reliable electronic content by their libraries in favour of free information they find using commercial search engines. Users tend to prefer online material whenever possible and consider web tools more appropriate for finding and obtaining online information. Some web search engines have even started adopting or developing library-like features such as OpenURL awareness⁶ and the refinement tools of Google Scholar and provide these in a user-friendly way to suit the expectations and expertise of the targeted audience.

Facebook is a free-access social networking website to provide a variety of services such as displaying an RSS feed, searching an outside resource, or cataloguing a person's recently read books, to name a few. Libraries have taken a couple of approaches as they develop applications for FaceBook. The primary function of most, if not all, library applications is to provide a mean of searching the library's catalogue from a FaceBook profile. However, some libraries have gone beyond providing this basic service and have added additional features to their applications.⁹⁻¹²

Most library applications are simple catalogue search applications, but these can be further enhanced as reviews and discussion group of library books read by individuals, curriculum discussion, etc. Some applications provide a few links to library resources like Ask a Librarian (online chat and e-mail reference services), etc. along with display of other library's applications as a simple webpage, which includes a catalogue search box, links to several library resources including course readings, Inter-library loan (ILL) request forms, and online book renewals, as well as a small library news feed. All these links takes the user to pages created specifically for Web 2.0 applications.¹³⁻¹⁵

Jaypee Group of Institutions have established three state-of-the-art technical universities and institutions, one college of education, one post graduate college, one diploma college, two industrial training institutes and 16 schools. The academic excellence is met by highly rich learning resource centres equipped with modern library

technology such as 3M® library solutions and automation software. For the purpose of the automation process an international standard library software is being used. The group has taken care, especially Internet-based WebOPAC, to integrate the information for the purpose of resource sharing of all the centres—located at three distant locations of India—Jaypee Univesity of Information Technology, Solan (Himachal Pradesh), Jaypee Institute of Information Technology University, Noida (Uttar Pradesh) and Jaypee Institute of Engineering Technology, Guna (Madhya Pradesh).

3. METHODOLOGY

Web 2.0 technology has been adopted for the purpose of the information communication among the Jaypee Group of Educational Institutions. All the institutions libraries are using Alice for Windows® Library Management Software for management of data. The group is working on integration of different web features in to WebOPAC for maximum utilisation of the resources at individual institution as well as inter-institution levels. To reach this objective the group has upgraded this software to Liberty3®, a totally web-enabled library management software. The profiles of the each document is being created through centralised cataloguing system. For this, the group has taken initiative to fill all metadata entries of the resources with maximum information including images of the document (Fig. 1).

Images of the each document have been saved according to the ISBN numbers, which has helped to link resources to 'Syndetic' Solution Indexed Content Enrichment (ICE),¹⁶⁻¹⁷ an application which links the resource having the facility of providing information pertaining to cover image, book reviews, table of contents, summaries, first chapter, excerpts, series information, author notes, etc. While searching the OPAC (<http://172.16.73.16/scripts/afwiinq.dll>) through standalone machine as well as WebOPAC, user can see all the details of the documents plus images. At this point of time the user can submit his/her review, feedbacks, and rating the particular document referred by him by logging with his/her account (Fig. 2). This review and feedbacks are monitored by the librarian through catalogueing section of the main menu (Fig. 3). Once this review is approved, it is reflected at each OPAC terminal and can be used for judging the importance of book for further analysis and referencing by other students.

Whenever the library database is searched from WebOPAC, the result obtained is same as of standalone OPAC (Figs. 4 and 5). This WebOPAC system is being used by all the Centres for locating references and being utilised for ILL extensively, avoiding duplication of the resource, in turn, saving budget, and immediate supply of the document at desired location in the form of ILL, and any other preferred means.



Figure 1. Profile of document and reviews in catalogue.



Figure 2. User authentication on review page entry of the OPAC where users can post reviews on document searched.

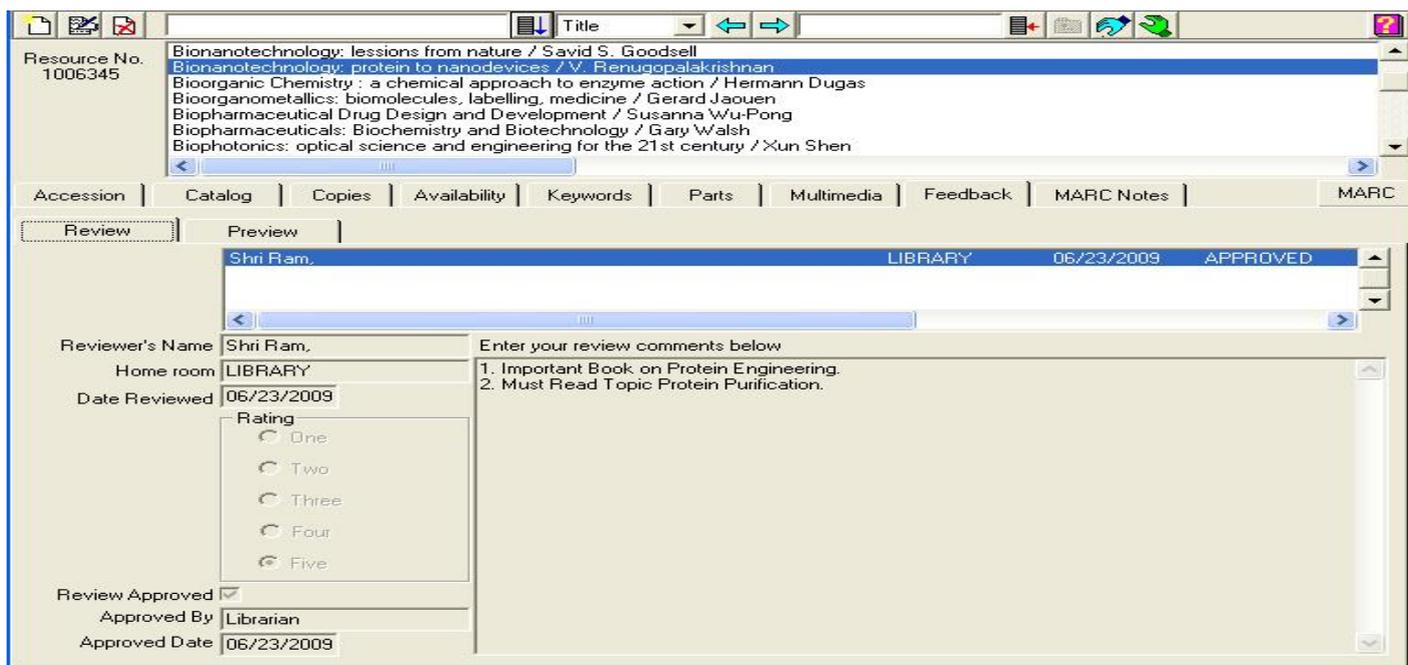


Figure 3. Screen shot of a user's feedback and reviews through main catalogue menu.

Resource - Windows Internet Explorer
<http://172.16.73.16/scripts/AFWIInq.dll?Details?action=0&site=0&brlk=1007128>

Resource	Availability
Title	Strategic Marketing Planning / Colin Gilligan
Names	Gilligan, Colin Wilson, Richard M.
Publisher	Elsevier India Pvt. Ltd. , New Delhi, 2006
Description	xii, 625p.
Subjects	Marketing Management
Country	India
ISBN	8131206637
Supplier	Prime Book Service; Ghaziabad (UP)
Cost	356.40
Notes	Contents : 1 Introduction 2 Strategic marketing planning and the marketing plan 3 Marketing auditing and the analysis of capability 4 Segmental, productivity and ratio analysis 5 Approaches to competitor analysis 6 Approaches to customer analysis 7 Missions and objectives 8 Market and environmental analysis 9 Market segmentation, targeting and positioning 10 The formulation of strategy 1: analysing the product portfolio 11 The formulation of strategy 2: generic strategies and the significance of competitive advantage 12 The formulation of strategy 3: strategies for leaders, followers, challengers and nichers



Add to RefWorks

Share On Facebook

Figure 4. Details of the document as accessed from WebOPAC where user can navigate to other Web 2.0 applications.

4. BENEFITS OF WEB 2.0-ENHANCED WEBOPAC

With the application of Web 2.0 technology, especially FaceBook in WebOPAC, the group has provided unique avenue between the library and its users as a librarian could notice trends and preferences within its user's reading activity and suggests books that would fit individual tastes (Figs. 4 and 5). Conversely, the user could see what is being added to the library or what has

been highlighted through the library FaceBook page. This could be an ideal forum for book discussion group for specialised streams and courses. Alternatively the library FaceBook is also helping in:¹⁸⁻²⁴

- ✧ Marketing of information resources.
- ✧ Enriching library online catalogue with the power of Web 2.0.
- ✧ Giving patron exciting new content, tag clouds



Learning Resource Center Internet Inquiry

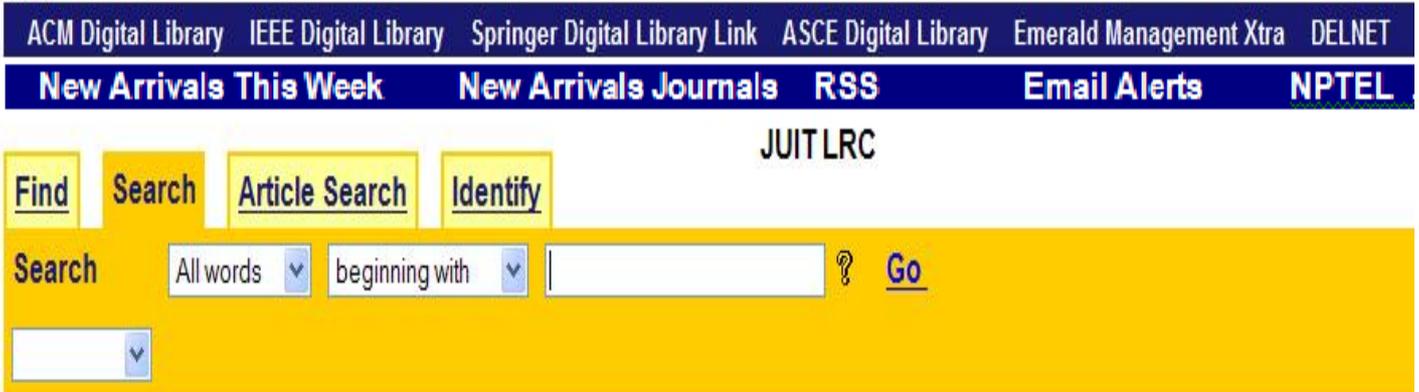


Figure 5. Linking of various Web 2.0-enabled online resources subscribed by library through WebOPAC.

- including recommendations, and ability to write reviews.
- ✘ Able to keep patron's interact.
- ✘ Bibliographic indexes, RSS feeds, open access repositories.
- ✘ E-mail alerts.
- ✘ Identifying associated information similar documents on other sites such as Amazon, Google Books etc.
- ✘ Collaboration with similar artifacts such as Google Documents.
- ✘ Disseminating results—Open access repositories, webinars.
- ✘ Institutional reputation, heightening corporate and personal brand.
- ✘ Growing a referral network of the related documents.

- ✘ Increase visibility, which improves influence and effectiveness internally within organisation as well as externally.

Library has also developed a Library Toolbar (Fig. 6) with the help of Conduit.com²⁵⁻²⁶. The single click library toolbar has incorporated various tools and services provided by the library such as linking of subscription of e-Journals (IEEE, ACM, Emerald, ASCE, Springer, DELNET), Digital Library, WebOPAC, RSS Feeds, New Arrivals, Chat with the Librarian, Link to Educational Radio Channels and Video Programs such as National Program on Technology Enhanced Learning (NPTEL)²⁷, E-mail notifications and links of popular national and international news dailies along with its RSS feeds, etc. This toolbar is being comprehensively used by the users around the globe. The results of the utilisation of the Toolbar are given in Figures 7, 8, and 9. Figure 7 gives an idea regarding the frequency of use of various service components provided by library. It can be noticed from the

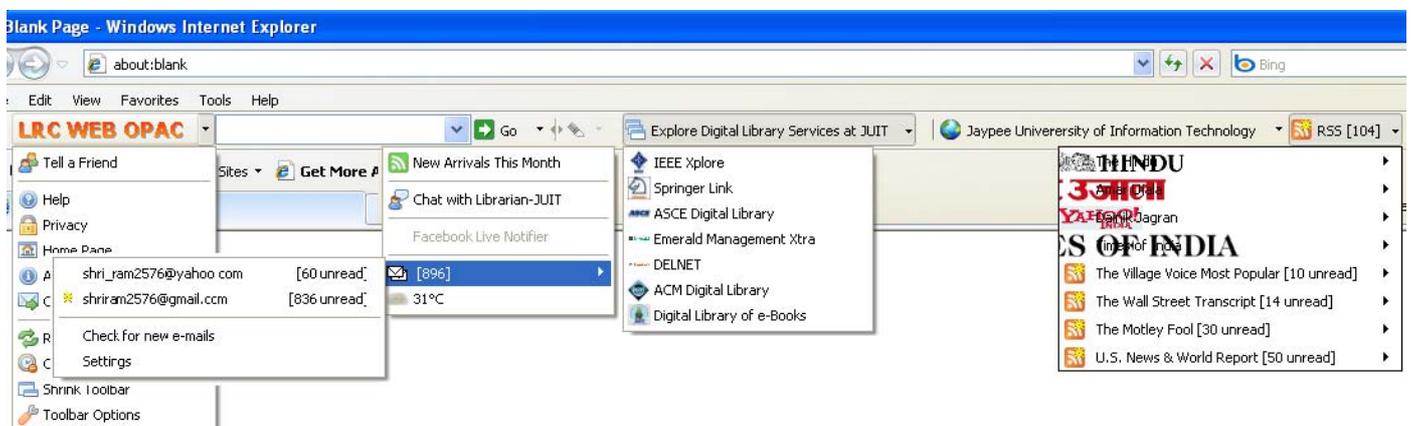


Figure 6. Library toolbar of JUIT.

Full Report					Views: Table Pie Columns
Component	Usage (clicks)	% of Total	% Change	Usage (clicks)	
Explore Digital Library Services at JUIT	130	32.42%	-		
Jaypee University of Information Technology	76	18.95%	-		
Search	71	17.71%	-		
Radio	44	10.97%	-		
LRC WEB OPAC	28	6.98%	-		
RSS	22	5.49%	-		
Chat with Librarian-JUIT	17	4.24%	-		
	8	2.00%	-		
New Arrivals This Month	5	1.25%	-		
Total	401	100.00%			

Export to:

Figure 7. Usage click of various components of library toolbar.

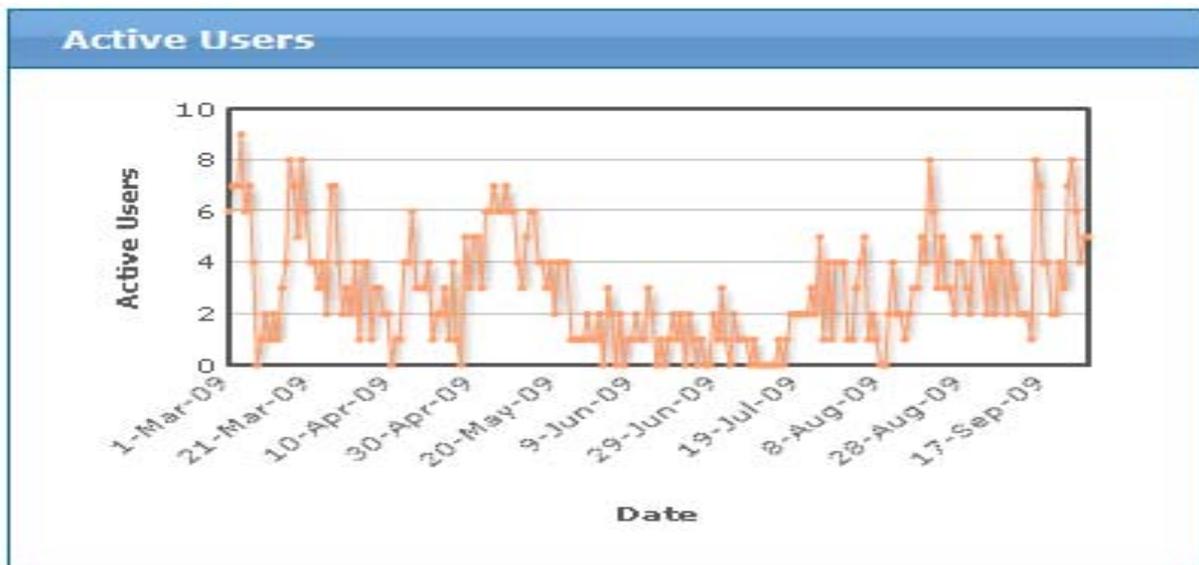


Figure 8. Active users of library toolbar.

table that the digital library service component of the library toolbar is being used maximum through library toolbar. Reason behind this can be the subscription of various e-resources such as IEEE Xplore, ACM, Emerald Management Package, ASCE, and Springer journals through INDEST consortia of IIT Delhi and AICTE along with DELNET for ILL and Digital Library of e-Books from SIAM. Awareness to these scholarly materials and utilisation is one of the major concerns for each librarian in this Internet era. This toolbar has provided an avenue for single-click link to the subscribed services so that the users need not to remember and type the URL of these products each time in their browser. The other services that are getting better utilisation are WebOPAC (single click link to library resource database), RSS Feeds, Radio Link, Chat with Librarian and New Arrivals of the

month. Figures 8 and 9 give an idea about the daily active user of library toolbar, total number of new installation of toolbar since it has been developed.

5. CONCLUSION

Each tool of Web 2.0, when applied within library system in a long-term perspective, beginning with user investigations of what users may claim on library and in turn being continued with propagation of information and training about information and knowledge dissemination, help them understand what Web 2.0 in turn Library 2.0 will give them. A library that uses Web 2.0 technology hopes that the use of the resources to which they provide access will increase, thus justifying their investment in their electronic holdings. The following Web 2.0 tools are

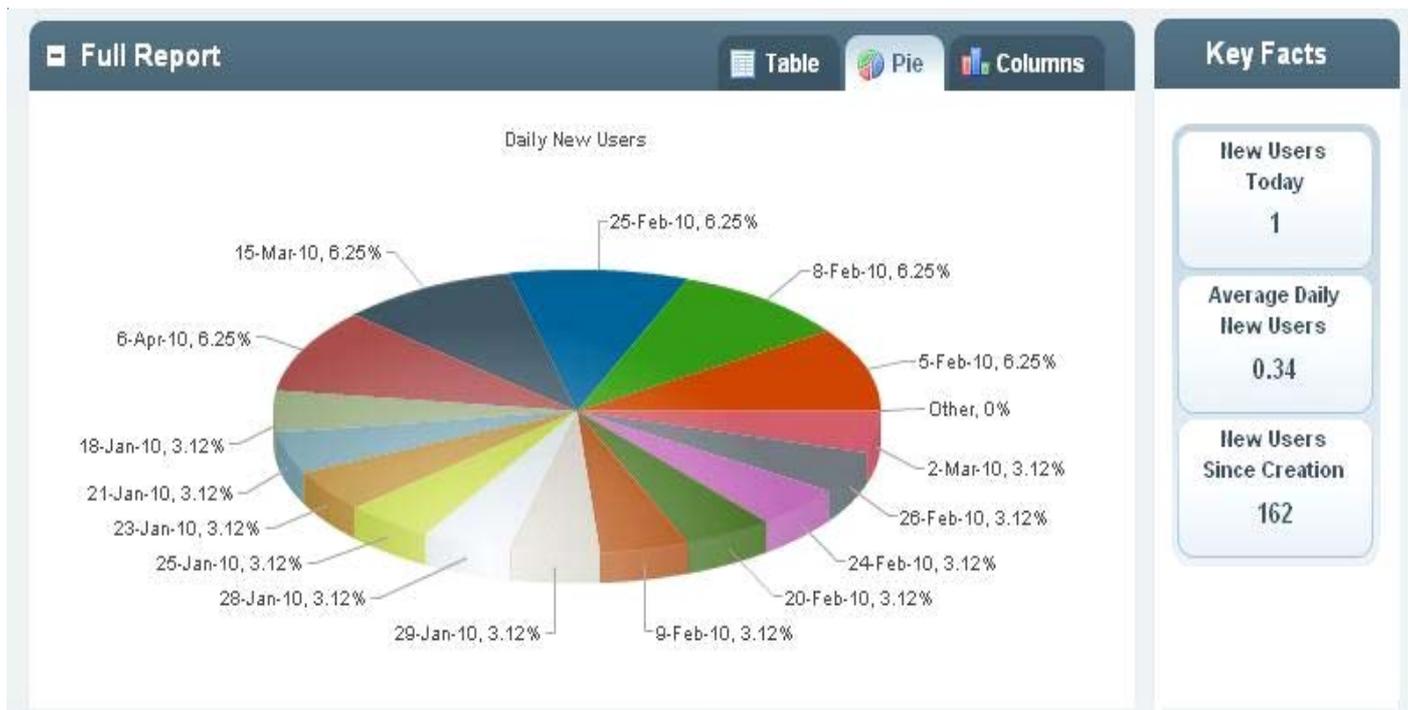


Figure 9. Daily new users since started.

being used or will be used by Jaypee Education System to promote library services among users:

- ✘ YouTube to show library publicity with the recent development in library activity with multimedia document creation and linking such as National Program on Technology Enhanced Learning (NPTEL) an initiatives of Indian Institute of Technology, Madras and Kharagpur. These real-time high quality educational videos of IITs are available on YouTube (<http://youtube.com/iit/>)
- ✘ Flickr to deliver pictures and resource navigation about the new arrivals, most read, etc.
- ✘ Podcasts to deliver information about the announcement and educational promos on different subject by agencies.
- ✘ FaceBook used for reference service and document feedback.
- ✘ e-Surveys to be applied to user investigations and satisfaction level of use of Web 2.0.
- ✘ LinkedIn/Plaxo to extend library services.
- ✘ RSS and Blogs for content alerts.

REFERENCES

1. Joint, Nicholas. Managing the implementation of federated search tool in academic library. *Library Review*, 2009, **58**(1), 11-16.
2. Oberhelman, David D. The time machine: Federated searching today and tomorrow. *Reference Reviews*, 2006, **20**(3), 6-8.
3. Sfakakis, Michalis. Eliminating query failures in a work-centric library meta-search environment. *Library Hi Tech*, 2009, **27**(2), 286-307.
4. Loew, Robert. Approaches for personalised knowledge retrieval. *Internet Research*, 2007, **17**(1), 49-60.
5. <http://scholar.google.com>.
6. Mahmood, K. The best library software for developing countries: More than 30 plus points of Micro CDS/ISIS. *Lib. Soft. Rev.*, 1997, **16**(1), 12-16.
7. Copper, Elisa F. Social Networking in Libraries. *New Lib. World*, 2007, **108**(7/8), 4803.
8. Jane Secker. Social software and libraries: A literature review from the LASSIE project. *Program: Eelectro. Lib. Inf. Syst.*, 2008, **42**(3), 215-231.
9. Jefferies, Scott. Social cataloguing tools: A comparison of application for librarians. *Library Hi Tech News*, 2008, **10**, 1-5.
10. Sadeh, T. Time for a change: New approaches for a new generation of library users. *New Library World*, 2007, **108**(7/8), 307-16.
11. Apps, Ann & MacIntyre, Rose. Why OpenURL. *D-Lib Magazine*, 2006, **12**(5). <http://www.dlib.org/dlib/may06/apps/05apps.html>.

12. Harris, Andrew & Lessick, Susan. Libraries get personal: FaceBook applications, Google gadgets and myspace profile. *Library Hi Tech News*, 2007, **8**, 30-32.
13. Scale, Mark-Shane. FaceBook as social search engine and the implications for the libraries in the twenty-first century. *Library Hi Tech*, 2008, **26**(4), 554-56.
14. Graham, Jamie M.; Faix, Allison & Hartman, Lisa. Crashing the Facebook party: One library's experiences in the students' domain. *Library Review*, 2009, **58**(3), 228-36.
15. Maxymuk, John. Whose space?. *The Bottom Line: Managing Library Finances*, 2007, **20**(2), 97-100.
16. <http://www.bowker.com/syndetics/>
17. <http://www.bowker.com/index.php/component/content/article/552>
18. Joint, Nicholas. The Web 2.0 challenge to Libraries. *Library Review*, 2009, **58**(3), 167-75.
19. Mi, Jia & Nesta, Frederick. Marketing library services to the net generation. *Library Management*, 2006, **27**(6/7), 411-22.
20. Hammond, T.; Hannay, T.; Lund, B. & Scott, J. Social bookmarking tools (I): A general review, *D-Lib Magazine*, 2005, **11**(4). <http://www.dlib.org/dlib/april05/hammond/04hammond.html>
21. Lund, B.; Hammond, T.; Flack, M. & Hannay, T. Social bookmarking tools (II). *D-Lib Magazine*, 2005, **1**(4). <http://www.dlib.org/dlib/april05/lund/04lund.html>.
22. Charnigo, L. & Barnett-Ellis, P. Checking out Facebook.com: The impact of a digital trend on academic libraries. *Inf. Technol. Lib.*, 2007, **26**(1), 23-34.
23. Raskin, R. Facebook faces its future. *Young Consumers*, 2006, **7**(2), 56-58.
24. <http://en.wikipedia.org/wiki/Facebook>
25. Jones, Elizabeth. Developing a library toolbar. *Library Hi Tech News*, 2008, **25**(9), 7-9.
26. <http://www.conduit.com>
27. <http://nptel.iitm.ac.in/>