

Application Of Web 2.0 In Library And Information Science: With Special Reference To RSS

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Abstract

The paper contains the substantial implication of the changing web as "web 2.0" for libraries and recognizes that while these implications keep very close to the history and mission of libraries. It describes the theory and definition to the practices of librarianship, specially addressing how RSS feed (popular tool of Web 2.0 technologies) might make changes in libraries provide access to their collection and user support for accessing the same. RSS aggregator applications installed in a library system, and coupled with the social network of the library, will enable users to have a single, customized personal library page that syndicates all the library content of interest to them and their research, elimination of irrelevant information. It also highlights the Download and installation of RSS reader software along with the activation process. Lastly, it provides the list of resources (both software & services) and libraries using these tools.

Keywords: Aggregators, Atom, DataPortability, RSS, List of feed aggregators, Podcasting, Syndication, Web Feed.

1. Introduction:

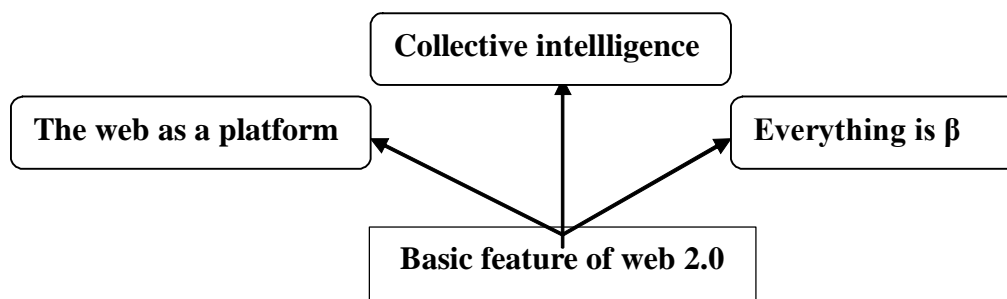
The generation rate of information is immeasurable and also the demand of information is also beyond control. The development rates of the society as a whole truly exist at highest degree. Library profession is simultaneously trying to utilize Information and Communication Technology more to enable it to satisfy the users demand properly. For this, by applying different software viz. library database Software (CDISIS), Integrated Library Management Software (LibSys, Soul, Bibliosys etc.) Digital Library Software (Dspace, Greenstone, Fedora, E-prints, Roads etc.) the library and information services shifted from its earlier existence to today's ICT based information services. Further, the research output of application of ICT in LIS field gradually produces the new concept of ICT based services. Web 2.0 is one of the valuable outputs of the same. This can again be subdivided on the basis of its edition / version to achieve the specific purpose to serve the clientele. A number of libraries, especially public libraries, are offering RSS (Really Simple Syndication or also known as Rich Site Summary or RDF Site Summary) "feeds" to their patrons. A "feed" is a broadcast to those who have subscribed to the service. In the case of libraries, the feeds can alert patrons to new acquisitions, library events, exhibitions, changes in hours, etc.

2. Web 2.0

web 2.0 is a network as a platform spanning all connected devices. Web 2.0 application are those that make the most of the intricate advantages of the platform. On the basis of the definition Radfar gives following characteristics of web 2.0:

- a) A platform enabling the utilisation of distributed services.
- b) It is the transmission of the web from a publication medium to a platform for distributed services.
- c) An entity that leverages, contributes or describes the transmission of web into a platform for services.

2.1. Basic feature of web 2.0:



2.1.1. The web as a Platform

It means we don't need to download and install on our own computer. In web 2.0 environment it is possible to put a document up on to the web and using web-based word processor all our colleagues can make changes to it. So actual document shared and application is shared on the web. For example we can create a power point presentation, then load to utility such as slideshare at www.slideshare.net and allow comments or even edit online.

2.1.2. Collective Intelligence

The web 2.0 resources are often referred to as ways in which "wisdom of the crowd" can be harnessed. This concept often referred to as "radical trust" and is at least in part based concept that people will either do nothing bad, or will act for the good for all. The role of user is much interesting and challenging now. User are able to combine materials for themselves to the extent that they do not need to know how to write websites or gather data from different sources while a user need to think about what they want to create.

2.1.3. Everything is β

We are all now fairly used to seeing products in "beta test mode". It means in an unfinished version. Google for example often keeps products in that state for months if not years. Improvements or changes will therefore be ongoing, with the product growing originally and changing according to the needs of the user over the course of time.

2.2. Objectives and principles of web 2.0

web 2.0 is all about user participation. It follows user at the centre stage model through participation, open applications and services. The term "open" in this context has two meanings-

1. It is technically open
 - ◆ Open architecture
 - ◆ Open source software
 - ◆ Open standard
2. Socially open with privileges to utilise and generate contents by any one.

Therefore design and development of technically and socially open system by using web as a platform is the primary objective of web 2.0.

2.3. Tools of web 2.0

1. RSS (really simply syndication)
2. Web blogs
3. Podcasts
4. Starpages
5. Social book marking
6. Personal search agent
7. Wiki's
8. Instant messaging
9. flickr
10. social networking tools
11. resource discovery tools
12. information mesaf
13. mapping services
14. web annotation

3. RSS Feed

RSS feeds and other related technologies provide users a way to syndicate and republish content on the Web. Users republish content from other sites or blogs on their sites or blogs, aggregate content on other sites in a single place, and ostensibly distill the Web for their personal use. Such syndication of content is another Web 2.0 application that is already having an impact on libraries, and could continue to do so in remarkable ways. Already libraries are creating RSS feeds for users to subscribe to, including updates on new items in a collection, new services, and new content in subscription databases. But libraries have yet to explore ways of using RSS more pervasively. A new product from a company called BlogBridge, BlogBridge: Library (BBL) "is a piece of software that you can

install on your own server, inside your firewall. It's not the content of the library (the books), it's the software to organize the library (the building)."

RSS is an XML-based tool for constantly scanning the content of a Web site for updates and then broadcasting those updates to all subscribers through a feed. While RSS feeds have been used primarily with news sites (BBC, CNN, Forbes, Wired, Salon, ZDNet, etc.) and blogs (a Web site that contains brief entries arranged in reverse chronological order and updated regularly), they can be used with any server to disseminate information. When an update is sent out to PCs, PDAs, and cell phones, it is limited to a headline and a small amount of text. The recipients need to click to read more.

The advantage of RSS over posting information on a Web site is that patrons do not have to log onto the Web site to look for information. The advantage over electronic newsletters for both libraries and their patrons is that the information is fed as soon as it is available, rather than sent at the next scheduled time. RSS stands for :

- ◆ Rich Site Summary,
- ◆ Really Simply Syndication,
- ◆ RDF (Resource Description Framework) Site Summary and even
- ◆ Read Some Stories, depending upon whom we talk to.

There is also another form of RSS that is referred to as atom, the main difference being that atom is rather more complex. Really Simply Syndication is a family of web feed formats used to published frequently news, headlines, or podcasts. An RSS document which is called "feed" or "web feed" or "channel" either a summary of content from an associated website or e-full text. RSS makes it possible for people to keep up with favorite websites in an automated manner that's easier than checking them manually. RSS content can be read using software called "RSS reader", "feed reader", or an "aggregator". The user subscribe to a feed by entering the feed link into reader or by checking an RSS icon in a browser that indicates the subscription process. The reader checks the user subscribed feeds regularly for new contents, download any updated that it finds.

3.1. History of RSS

RDF Site Summary, the first version of RSS, was created by Guha at Netscape in March 1999 for use on the My.Netscape.Com portal. This version became known as RSS 0.90. In July 1999, Dan Libby of Netscape produced a new version, RSS 0.91.

Winer published a modified version of the RSS 0.91 specification on the UserLand web site, covering how it was being used in his company's products, and claimed copyright to the document.

The RSS-DEV Working Group, a project whose members included Guha and representatives of O'Reilly Media and Moreover, produced RSS 1.0 in December 2000.

In December 2000, Winer released RSS 0.92. A minor set of changes aside from the introduction of the enclosure element, which permitted audio files to be carried in RSS feeds and helped spark podcasting. He also released drafts of RSS 0.93 and RSS 0.94 that were subsequently withdrawn.

In September 2002, Winer released a major new version of the format, RSS 2.0, that redubbed its initials Really Simple Syndication.

RSS 2.0 removed the type attribute added in the RSS 0.94 draft and added support for name spaces. One product of that contentious debate was the creation of an alternative syndication format, Atom, that began in June 2003.

3.2. RSS logo

Normally RSS logo is  RSS Filename extension is .rss, .xml

Internet media type application/rss+xml (Registration Being Prepared Extended from XML).

3.3. Versions of RSS

The different versions of RSS, falling into two major branches (RDF and 2.*). The RDF, or RSS 1.* branch includes the following versions:

- ◆ RSS 0.90 was the original Netscape RSS version. This RSS was called RDF Site Summary, but was based on an early working draft of the RDF standard, and was not compatible with the final RDF Recommendation.
- ◆ RSS 1.0 is an open format by the RSS-DEV Working Group, again standing for RDF Site Summary. RSS 1.0 is an RDF format like RSS 0.90, and since 1.0 is based on the final RDF 1.0 Recommendation so it is but not fully compatible with the earlier.
- ◆ RSS 1.1 is also an open format and is intended to update and replace RSS 1.0. The specification is an independent draft not supported or endorsed in any way by the RSS-Dev Working Group or any other organization.

The RSS 2.* branch (initially UserLand, now Harvard) includes the following versions:

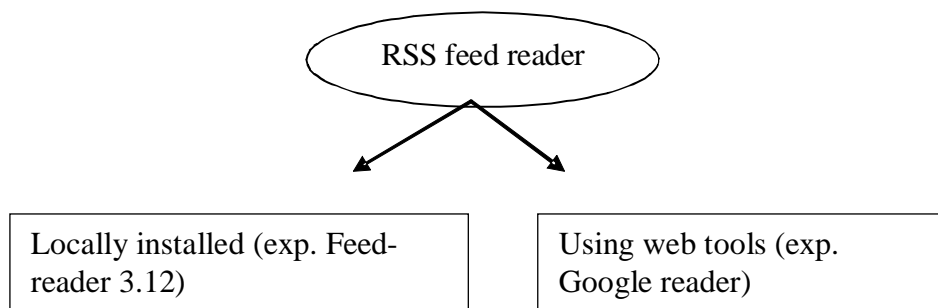
- ◆ RSS 0.91 is the simplified RSS version released by Netscape. This Netscape version was now called Rich Site Summary; this was no longer an RDF format, but was relatively easy to use.
- ◆ RSS 0.92 through 0.94 are expansions of the RSS 0.91 format, which are mostly compatible with each other and with Winer's version of RSS 0.91, but are not compatible with RSS 0.90.
- ◆ RSS 2.0.1 has the internal version number 2.0. RSS 2.0.1 was proclaimed to be "frozen", but still updated shortly after release without changing the version number. RSS now stood for Really Simple Syndication. The major change in this version is an explicit extension mechanism using XML namespaces.

3.4. Description of the Tools

RSS formats are specified using XML, a generic specification for creation of data formats. RSS feeds and other related technologies provide user a ways to syndicate and republish content on the web. Users;

- ◆ Republished content from other sites or
- ◆ Blogs on their sites or
- ◆ Blogs, aggregate content on other sites in a single place, and
- ◆ Ostensibly distill the Web for their personal use.

Such syndication of content is another web 2.0 application that is already having an impact on libraries, and could continue to do so in remarkable ways. Already libraries are creating RSS feeds for users to subscribe to, including updates on new services, and new content in subscription databases. They are also republishing content on their sites.



I. Locally Installed RSS Reader: We can download software for RSS reader and install it in our computer. The software may be open source, or free source, or commercial. In this case RSS reader can access in a particular P.C. example of this type of software is feedreader, rss reader, aggregator, etc.

II. Using Web Tools RSS Reader: Some web sites provide RSS reader services and we can read current content through out the web. We can access this RSS reader in any parts of the world. For example google reader provides this type of services. Here it need a google email account and by entering the google reader email address and its password we can access updated news at any parts of the country.

3.4.1. Download and Installation of RSS Reader Software

Here we download a RSS reader namely feedreader 3. The web address of the feedreader 3 is <http://www.feedreader.com/>. After download the feedreader 3, version 3.12 we may install the feedreader in our computer.

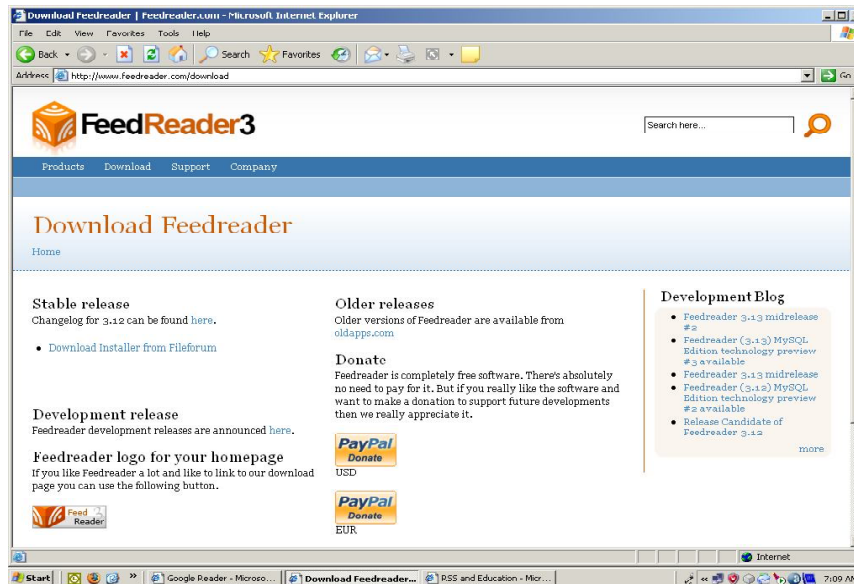


Figure 1: Feedreader3, a free software downloaded online for RSS services

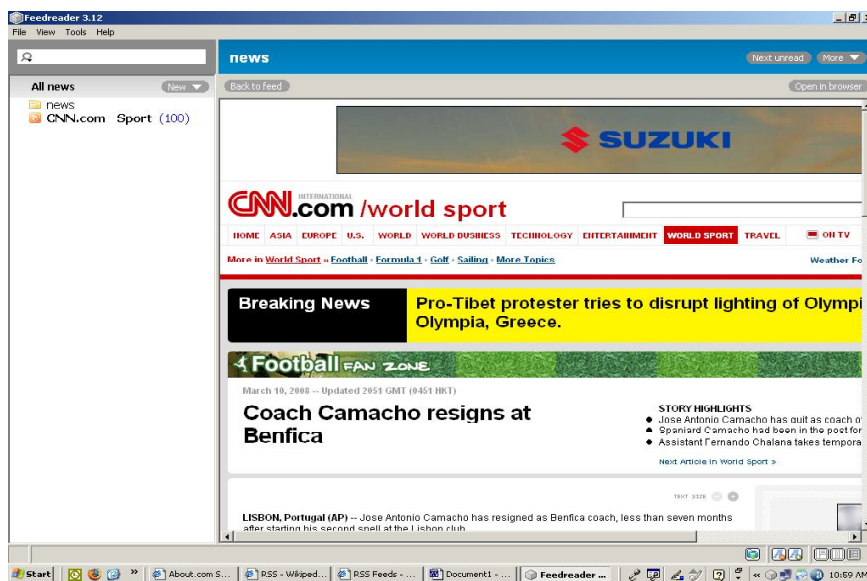


Figure 2: Interface of RSS service provided by Feedreader3

3.4.2. Web Tool

Here we open a google account to get the services from the google reader. The google reader web address is <http://www.google.co.in/reader>.

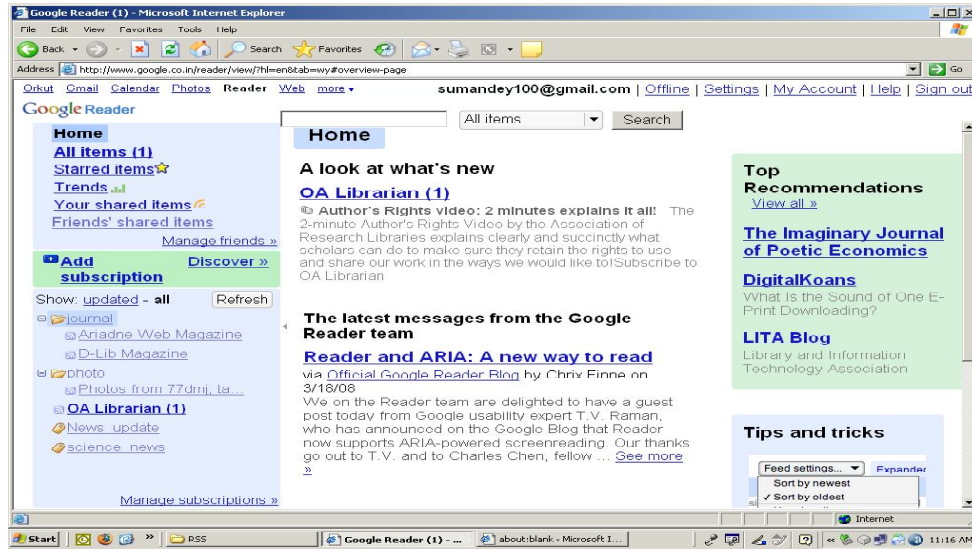


Figure 3: Online RSS service by google reader

3.5. How RSS Activated into a Feed Reader

Subscription of bibliosperu (ISSN 1562-4730) journal in our google reader:

In order to subscribe a RSS compliant online journal first step is to find RSS, or atom, or xml key. Then we have to copy the RSS address url.

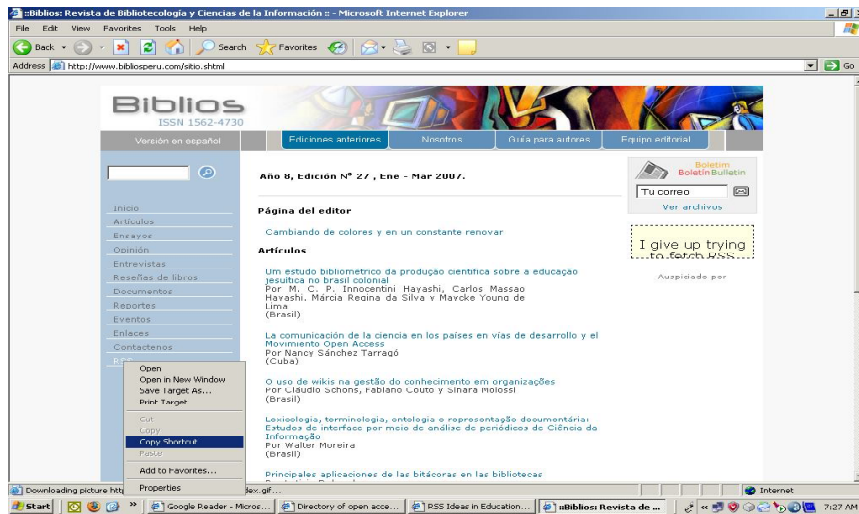


Figure 4: Interface of Biblios, a online journal which is RSS compliant.

RSS url for the journal biblios is <http://www.bibliosperu.com/apc-aa/biblios.xml>. Now we have to paste the RSS url in our "add subscription" and finally click on "add".

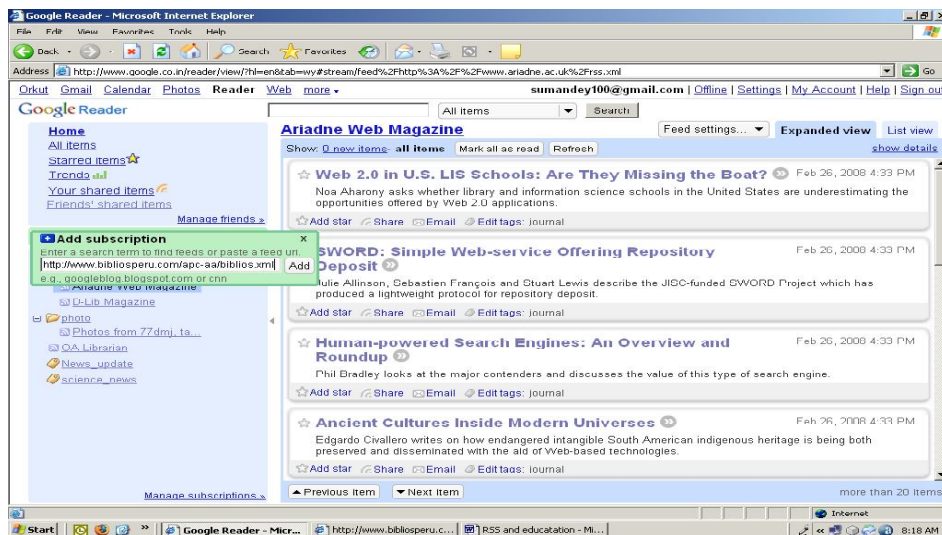


Figure 5: Interface of Google Reader showing subscription of Biblios

RSS Services through Google Reader

From the RSS feed reader service provided by the google reader we can directly linked to that particular web site.

3.6. Notable Feeds

Some notable feeds along with their respective site and RSS URL address may be cited as below;

S.I.No.	Popular site	Site address	RSS URL address
1.	Librarian.netPutting the rarain back in librarian since 1999	http://www.librarian.net/	feed://http://www.librarian.net/feed/
2.	LISNews Librarian And Information Science News	http://lisnews.org/	http://lisnews.org/rss.xml
3.	The Shifted Librarian	http://theshiftedlibrarian.com/	http://theshiftedlibrarian.com/rss.xml
4.	Slideshare	http://www.slideshare.net/	http://www.slideshare.net/rss/latest
5.	Tame the Web : Libraries & technology	http://tametheweb.com/	http://www.tametheweb.com/ttwblog/index.rdf
6.	Unshelved	http://www.unshelved.com/	http://www.unshelved.com/rss.aspx
7.	Gizmodo	http://gizmodo.com/	http://gizmodo.com/index.xml
8.	del.icio.us Social Bookmarking	http://delicious.com/	http://feeds.delicious.com/v2/rss/

9.	OA Librarian, an open access resources by and for librarians	http://oalibrarian.blogspot.com/	http://www.google.co.in/reader/view/feed/http%3A%2F%2Ffeeds.feedburner.com%2FOALibrarian?hl=en
10.	DESIDOC Journals of Librarian and Information Technology	http://publications.drdo.gov.in/ojs/index.php/djlit/index	http://publications.drdo.gov.in/ojs/index.php/djlit/feed/rss2
11.	Ariadne Web Magazine	http://www.ariadne.ac.uk/	http://www.ariadne.ac.uk/rss.xml
12.	D-Lib Magazine	http://www.dlib.org/	http://www.dlib.org/rss/dlib.rss
13.	Google news	http://news.google.com/nwshp?ned=us	http://news.google.com/?output=rss
14.	Biblios: e-journal	http://www.revistabiblios.com/ojs/index.php/biblios	http://www.revistabiblios.com/ojs/index.php/biblios/gateway/plugin/WebFeedGatewayPlugin/rss2

4. Generic use of Tools

- I. **Keep up to Date** : Probably the single most useful that we can do with RSS feeds is use them to keep up to date with those weblogs or news feeds that we can read on a regular basis.
- II. **Automating Searching** : There may be searches that we wish to keep up to date with what happenings in a subject area of interest and we may until now have been doing them manually. Live at www.live.com offer RSS feeds. <http://news.google.com> by visiting google news. www.icerocket.com allow user to run searches (in weblogs, web pages news or images).
- III. **Watching Specific Pages**: RSS feed can be created to do little more than keep you informed about when page is updated. Exp. <http://web.freeprint.com/forum/bar/list.php> forum for librarian to post questions and comments has an RSS feed that keeps subscribers informed about additional postings to the services. www.download.com, is a site that offer users the opportunity to download free software and it also has an RSS feed available that keeps subscribers up to date on what's available. www.flickr.com, The photograph sharing website which has feeds for various different options, such as group discussions and specific individuals' photograph streams. www.rsswhether.com information regarding a specific area find in an RSS format.
- III. **Miscellaneous resources**: A lot of website owners have realised that by providing RSS they are in fact leveraging their own site's value and importance. It is not possible to provide a full listing.

- ◆ <http://sophos.com>
- ◆ we can check virus alerts from this site.
- ◆ www.virusbnt.com/support/feed/index.html
- ◆ we can access virus bulletin from this site.
- ◆ <http://monster.com>
- ◆ job are advertised on the monster website which is RSS compliant.

5. **Use of RSS in library services:**

Information via RSS would no doubtly be doing a better and more effective job. More possible for the professional to become the publisher. Librarian now have been publishers on the net. RSS allows to take data that is one format and put into another.

- I. **Incorporating Content into our Site :** The various feed from the BBC and read them using a news aggregator. However it's also possible and indeed encouraged by a lot of publishers to take that content and place it on to our own site. DLIB, Ariadin, Ajour are the some of the major search engines are providing users with the opportunity of creating a search and the viewing and keeping up to date with the result via RSS.
- II. **Keeping people up to date with our doing:** Another obviousway in which librarians can make use of RSS is in conjunction with their weblog. Whatever new information included in a information centre be a new member of staff, identifying and highliting specific resources to help client answers queries all of this can be made available via RSS feeds. Web 2.0 based calender that can be created which will allow user to see when the library is open or closed, when particular events are taking place and so on. Here user can subscribe to the RSS feed that accompanies it, so they are always up to date what is going on.
- III. **Providing feeds for other people:** Social book marking services such as del.icio.us or furl can create RSSfeeds. Social book marking services are in a nutshell the opportunity to share our blkmarks or favourities with other people.
- IV. **Utilising content from commercial providers:** Commercial publishers of data clearly have a role to play in the greater provision of their material and content of their subscribers.

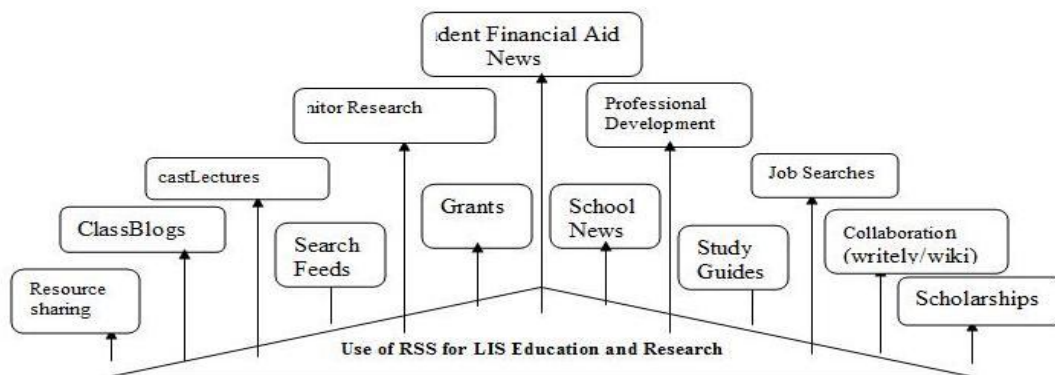
6. **Use of RSS for LIS education and research:**

Library science is an interdisciplinary science incorporating the humanities, law and applied science to study topics related to libraries, the collection, organization, preservation and dissemination of information resources, and the political economy of information.

This includes how information resources are organized to serve the needs of select particular user groups, how people interact with classification systems and technology, how information is acquired, evaluated and applied by people in and outside of libraries as well as cross-culturally, how people

are trained and educated for careers in libraries, the ethics that guide library service and organization, the legal status of libraries and information resources, and the applied science of computer technology used in documentation and records management. Academic courses in library science typically include Collection management, Information Systems and Technology, Cataloging and classification, Preservation, Reference, Statistics and Management.

Adding Web 2.0 studies to the curriculum may also serve to improve the position of LIS programmes when competing for student attention against other programmes of study and career options. This Librarian 2.0 understands the power of RSS. Librarians 2.0 connect users to experts' discussions and to communities of practice. RSS tool can be very useful to provide library services. Library science is also a discipline. RSS is also very useful to library and information science education and research purpose in the following way:

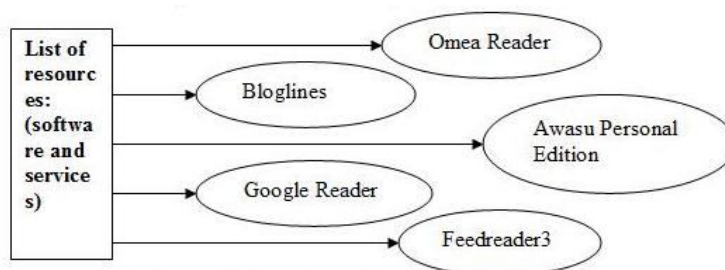


- I. **Resource Sharing** : Library and information school can be used social bookmarking websites to share quality websites that relate to their area of expertise with LIS students. Such as Delicious - <http://del.icio.us> social book marking system can be setup to use as shared bookmarks.
- II. **Class Blogs** : From elementary schools to university blogs, online journals have flourished. Instructors have used blogging as a teaching tool. Helping students learn writing and reporting skills while understanding how to use technology. Many educational bloggers use RSS as a means to syndicate blog posts.
- III. **Podcast Lectures** : Podcasts can be used as study guides or even as class preview for LIS students contemplating their course selections or choice of professors.
- IV. **Monitor Research** : Students involved in cutting edge research projects can use RSS to monitor news and search engines for specific keywords by creating search feeds.
- V. **Professional Development** : RSS can be used for remote LIS education. Teachers can lose less class time while still staying current on the latest techniques, trends and information in their field of expertise.

- VI. Job Searches** : Professors and teachers can create job search feeds. The RSS feed will update each time a position that meets their criteria becomes available.
- VII. Collaboration (writely/wiki)** : Universities in particular actively participate in collaborative projects and research. New tools have never made collaboration easier. RSS can be used in conjunction with many of the online collaboration tools to notify other contributors of changes.
- VIII. Search Feeds** : Students' writing papers or working on research papers on specific topics can create search feeds, so that each time that topic is mentioned they receive notification in their custom search feed.
- IX. Study Guides** : Many web sites that are focused on studying. There are feeds for "word of the day" or "problem of the day". Students can subscribe to the feed and integrate long term studying into their daily routines.
- X. Scholarships** : Library science students can monitor high school and college scholarship opportunities using RSS feeds.
- XI. School News** : Library and information science department can use RSS to communicate departmental news with their students, announcing staff changes, new courses or any other news that is relevant and of interest to the student population.
- XII. Student Financial Aid News** : Students and parents can listen to podcasts that assist with financial aid, student loans and financial podcasts that tackle difficult topics like how to make college more affordable.
- XII. Grants** : Researchers can monitor funding and grant opportunities RSS feeds.

7. List of resources (software and services)

List of resources: (software and services)



- I. Omea Reader - Free RSS News Feed Reader**: Omea Reader makes staying up to date with RSS feeds, Usenet news and web pages a smooth experience tailored to your reading style and organizing talent with search folders, annotations, categories and workspaces.
- II. Bloglines - Free RSS News Feed Reader**: Bloglines is a great, web-based way to read RSS feeds. There's no software to wrestle with, and using Bloglines is smooth and easy. Unfortunately, searching and a few other features are missing.

III. Awasu Personal Edition - Free RSS News Feed Reader: Awasu Personal Edition is an extremely feature-rich RSS feed reader. The option to enhance it with plug-ins and hooks in particular makes Awasu a powerful aggregator, in spite of some limitations.

IV. Google Reader - Free RSS News Feed Reader: Google Reader is a decidedly simple yet very usable and, thanks to a flexible labeling system, quite comprehensive web-based RSS feed reader.

V. Feedreader3- Free RSS Reader

8. List of Libraries using the Tools

The number of libraries that are using is very few in Indian perspectives, but gradually it is in increasing stage. In international level the picture is quiet reverse. Here we enlist a Few examples of libraries that are using blogs and RSS:

Sl. No.	Name of the Libraries	Functions/ purposes	Site
a	The St. Joseph County Public Library	Focuses on upcoming releases in publishing and entertainment index.html	http://homepage.mac.com/nrdtsjcl/ B1732759005/
b	Roselle Public Library's Blogger Book Club	An online book discussion group for kids to share their thoughts about books.	http://bloggerbookclub.blogspot.com
c	LISNews.com	Focuses on news for information professionals and is a collaborative Weblog.	http://www.lisnews.com
d	Library News	A Weblog featuring library-related news, events, and resources for Georgia State University.	http://www.library.gsu.edu/news/index.asp
e	Engineering Library Blog	News and events in one column of the library home page.	http://library.usask.ca/engin
f	Stark County Law Library Blog	For legal community of Stark County, Ohio.	http://temp.starklawlibrary.org/blog
g	Urbana Free Library	Construction News featuring photos and updates on the building underway.	http://urbanafreelibrary.org/bldgblog.html
h	Jenny Levine's Shifted Librarian	Looks at how to make libraries more portable to serve users better.	http://www.theshiftedlibrarian.com
i	Peter Scott's Library Blog	Offers links and news about library resources and libraries around the world.	http://blog.xrefer.com

9. Conclusions

The library's collection will change, becoming more interactive and fully accessible. The library's services will change, focusing more on the facilitation of information transfer and information literacy rather than providing controlled access to it. RSS is one of the absolute fundamentals of a Web 2.0 environment. Without RSS either many of the tools like weblog, slideshare, flickr, open access journals, social bookmarking etc would not work properly, or their use and value would be so limited as to make them almost useless.

RSS has become one of the major elements of the Internet, along with e-mail and web page. Increasing numbers of information services utilize the value of it, and new resources incorporate it into the way that they work automatically. Although it's not the easiest thing to grasp, and the differing names have not helped its cause (and I suspect that before very long the word 'feed' or 'newsfeed' will replace the formidable acronym, once you have a basic understanding of RSS both the power and the value of the resource become clear very quickly.

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