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Web 2.0 Applications in library

Umrav Singh*

Librarian, Sri Aurobindo Institute

Technology, Indore

umravsingh2@gmail.com

Dr. GHS Naidu**

Librarian & HOD, School of Library

Information Science

ghsnaidu@gmail.com

ABSTRACT

This Article defines that the Web 2.0 is a new version of the World Wide Web that emphasize user-generated content, usability, and interoperability. Web 2.0 the second phase in the Web's evolution, is attracting the attention of IT professionals, businesses, and Web user. This term was devised by Tim O'Reilly and Dale Dougherty at the O'Reilly Media Web 2.0 Conference in 2004. The popularity of the term Web 2.0, along with the increasing use of blogs, wikis, and social networking technologies, has led many in academia and business to append a flurry of 2.0's to existing concepts and fields of study.

Keywords: Web 2.0, Library 2.0, World Wide Web, Blog, RSS, and Social Networks.

1.0. Introduction:-

“Web 2.0” does not have a precise definition. To many people, the phrase refers to special web application technologies and websites, such as weblogs and wikis, which use the Internet in a collaborative way to provide services to users. Web 2.0 relies in large part on the user-as-publisher model of interaction and allows for user-created content to be developed and implemented by large groups of individuals. These technologies are increasingly being used by companies for better staff collaboration and communication. O'Reilly outlined seven principles that can help distinguish the core features of Web 2.0 applications. A number of Web 2.0 services and sites have appeared in the recent years. Some popular services are YouTube, Face book, MySpace, etc. The term ‘Web 2.0’ was coined to define an emerging pattern of new uses of the Web and approaches to the Web development, rather than a formal upgrade of Web technologies as the 2.0 version number may appear to signify. The key Web 2.0 concepts include:

It's an attitude, not a technology: An acknowledgement that Web 2.0 is not primarily about a set of standards or applications, but a new mindset to how the Web can be used.

A network effect: This describes applications which are more effective as the numbers of users increase. This effect is well-known in computer networks, with the Internet providing an example of how network traffic can be more resilient as the numbers of devices on the Internet grow

Openness: The development of more liberal licensees (such copyright licenses such Creative Commons; open sources licenses for software) can allow integration of data and reuse of software without encountering legal barriers.

Trust Your Users: Rather than having to develop complex access regimes, a more liberal approach can be taken who can make it easier for users to make use of services.

Network as a platform: The Web can now be used to provide access to Web applications, and not just informational resources. This allows users to make use of applications without having to go through the cumbersome exercise of installing software on their local PC.

Always beta: With Web applications being managed on a small number of central servers, rather on large numbers of desktop computers, it becomes possible for the applications to be enhanced in an incremental fashion, with no requirements for the user of the application to upgrade their system.

1.1. What is Web2.0?

The term Web2.0 refers to the development of online services that encourage collaboration, communication and information sharing. It represents a shift from the passive experience of static “read only” web pages to the participatory experience of dynamic and interactive web pages. In other words, Web2.0 reflects changes in how we use the web rather than describing any technical or structural change. Many Web2.0 services, such as the examples provided, are often referred to as “social media” due to their role in supporting communication and building online communities.

| Service type | Example |
|-------------------------|---------------------------|
| Social networking | Facebook, Orkot, Chatting |
| Video and photo sharing | YouTube, Flickr |
| Blogging | Blogger, Wordpress |
| Microblogging | Twitter, Tumblr |
| Social bookmarking | del.icio.us, Digg |
| Wikis | Peanut Butter, TikiWiki |
| Resource organising | Pageflakes, Netvibes |

1.2. Why use Web2.0?

Web2.0 services are increasingly becoming embedded in many areas of life as more people, from teenagers to national governments, recognise and harness these powerful communication tools. Similarly, libraries and librarians all over the world are using Web2.0 technologies to promote services, share information, engage with users and network with colleagues, on a global scale. As such, social media websites have great potential to enhance the delivery of library services and to contribute to the professional development of library staff. As service users increasingly come to expect interactive online services in all spheres of life, libraries must keep pace with developments elsewhere in order to ensure a responsive service for the future.

- They support collaboration across time and space.
- They are easily accessible and easy to use.
- Many people already have a comfort level using them.
- They are low-cost (sometimes even free).
- They do not require much IT support.
- They have very little “downtime.”
- Because they are inexpensive and easy to use, there is little risk in trying them.

1.3. Benefits of Web2.0

3.1. Reaching your audience:- The global nature of web based services means that libraries can reach a vast audience, serving more people in the virtual sphere than would be possible at a physical location. For example, by establishing a presence on social media websites, libraries can reach beyond the ‘walled garden’ to interact with users in online spaces that they are already visiting, rather than passively waiting for users to seek us out. This presents opportunities to appeal to difficult to reach user groups, such as teenagers or young males, who are traditionally less likely to visit the physical library building. A strong web presence, including representation on social media sites, improves awareness of library services and contributes to a progressive and modern image, which may in turn lead to increased physical visits.

Developing services:- Webpages are useful for presenting information about your service but don’t allow for the interaction of users. The integration of Web2.0 services, however, could enable you to deliver parts of your service online. You could try hosting book discussion groups using a blog or wiki and providing service updates or marketing events using Twitter. Some libraries have produced promotional videos for YouTube, which are inexpensive to make and could appeal to difficult to reach groups. For more ideas and examples, see the Slainte2.0 website.

3.3. Raising awareness and promotion:- Web2.0 services can be updated quickly and published instantly. This means that time delays associated with traditional web publishing, where IT departments often retain control over website content, can be sidestepped. For example, by using blogs or microblogs, librarians can go straight to the user with news and up to date information related to new services, materials or service developments. A presence on social media websites can provide cost effective marketing opportunities and invaluable PR for your library service. This is particularly significant given the serendipitous nature of such services, which increases the chance of your message reaching a new audience.

3.3. Professional development:- Librarians have been using the internet to communicate, share ideas and offer support for a long time, mainly by using the email network. The advent of Web2.0 technologies presents new opportunities for large scale professional collaboration and cooperation. Many librarians now use Twitter, for example, to get information about activities and initiatives going on elsewhere; and to share ideas or ask colleagues for support. This rapidly expanding network draws on the experience of colleagues at an international level, allowing for the widespread sharing of information and expertise, which then feeds into service developments at a local level. Believe that participation in this online community can significantly improve staff development, skills and motivation, leading to direct benefit for library services.

1.4. What is Web 2.0 technology?

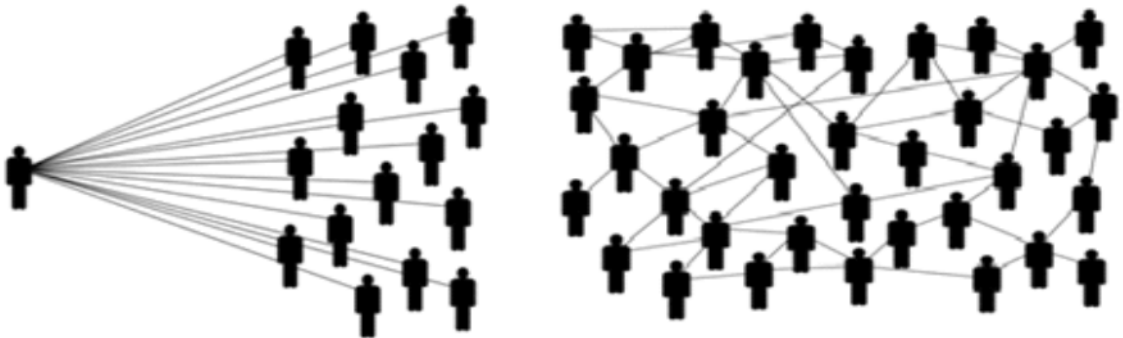
Web 2.0 is the term used to describe a variety of web sites and applications that allow anyone to create and share online information or material they have created. A key element of the technology is that it allows people to create, share, collaborate & communicate. Web 2.0 differs from other types of websites as it does not require any web design or publishing skills to participate, making it easy for people to create and publish or communicate their work to the world. The nature of this technology makes it an easy and popular way to communicate information to either a select group of people or to a much wider audience. The University can make use of these tools to communicate with students, staff and the wider academic community.

It can also be an effective way to communicate and interact with students and research colleagues. There are number of different types of web 2.0 applications including wikis, blogs, social networking, folksonomies, podcasting & content hosting services. Many of the most popular websites are Web 2.0 sites such as Wikipedia, YouTube, Face book, MySpace, Flickr.

1.5. LIBRARY 2.0

The idea of Library 2.0 was first generated by Michael Casey and published on his blog, library crunch in 2006. The idea is a transformation of the library services-the way they are delivered to the user community, basically allowing the library services to operate in an interactive, collaborative atmosphere driven by community needs. The earlier version of the web-based library instruction and services were text-based and non-interactive where library users have very limited freedom in terms of their interaction with library staff and user community. Web world is, therefore, a great source and channel of information to share ideas and experiences. It is recommended that librarians should welcome and adapt this new concept Web 2.0 in the changing technological world.

- We are losing the interest of our users.
- We no longer consistently offer the services our users want.
- We are resistant to changing services that we consider traditional or fundamental to library service.
- We are no longer the first place many of our current and potential customers look for information.



1.6. Use of Web 2.0 tools in libraries

Library staff use Web 2.0 tools for professional and personal development however, Web 2.0 at the institutional level. identified Wiki, blog, Really Simple Syndication (RSS), Instant Messaging (IM) and podcast as the prominent Web 2.0 tools for Libraries. In addition to these, it discusses the use of vodcast because the researchers are working in an open and distance learning system. The potential of vodcast can be harnessed for providing services to distance learners. The following segments define and explain the various Web 2.0 tools which can be used in libraries at the institutional level.

6.1. RSS Feed

Really simple syndication is a family of web formats used to publish information about frequently updated works such as blog entries, news feeds, live audio, and video in the standard formats noted the important role of RSS in keeping users updated with the latest information. RSS feeds update users about the additions or changes which take place on websites of interest, providing updates from one source instead of accessing individual websites. Students can subscribe to those RSS feeds that cater to their academic and research needs. For example, the Library of University of Southampton provides news feed on RSS to inform students about activities and events held in the University. King and Brown noted the similarity in the functioning of RSS and e-mail and predicted the likelihood of increased use and popularity of RSS feeds in the future.

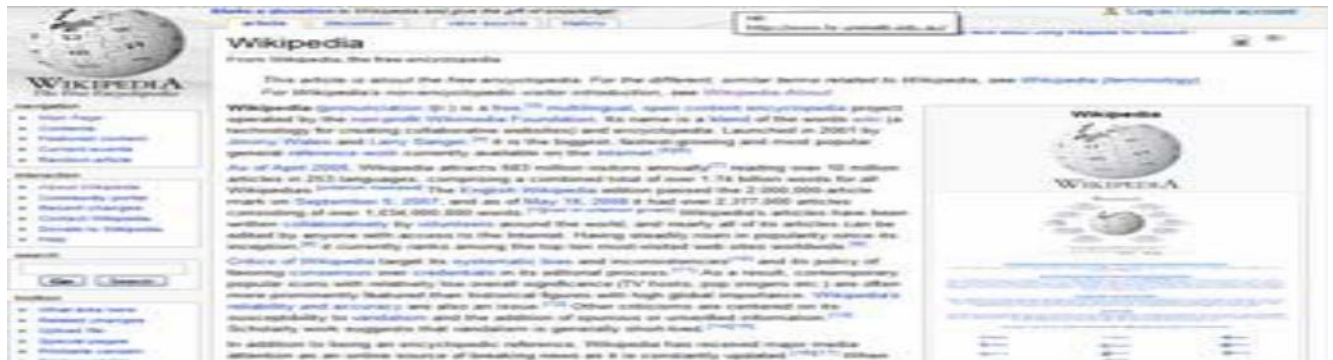


6.2. BLOGS

Current awareness and customized catalogue searches. used for personalizing libraries' outreach services. emphasized that blogs are equally popular for internal as well as external communication. "Blogs are a natural for librarians." Blogs are hosted on public domains, which are available without charge.

6.3. Wikis

A wiki is a collaborative website that anyone within the community of users can contribute to or edit. A wiki can be open to a global audience or can be restricted to a select network or community. Wikis can cover a specific topic or subject area. Wikis also make it easy to search or browse for information. Although primarily text, wikis can also include images, sound recordings & films. Wikipedia <http://en.wikipedia.org> the free internet encyclopedia is the most well known wiki.



6.4. Social Networking

Social networking allows an individual to create a profile for themselves on the service and share that profile with other users with similar interests to create a social network. Users can choose to have public profiles which can be viewed by anyone or private profiles which can only be viewed by people that the users allow. Users can usually post photographs, music and videos on their site. Popular social network services include Face book www.facebook.com and MySpace www.myspace.com. Del.icio.us, Frappr, and Flickr.



6.5. Content Hosting Services

Content hosting or content sharing sites allow users to upload content that they have created for others to view. Two of the most popular of these sites are YouTube www.youtube.com for videos and Flickr www.flickr.com for photographs. Users can also create an individual profile and list their favorite photos or videos. Users are able to rate and comment on the videos or photos posted and provide feedback to the creator and other users. Copyright infringement is an issue for some of these services as many users do not upload original content.



6.6. Streaming Media

Streaming Media is another important Web 2.0 enhancement which has an influence on the library services. Streaming media is a “Sequential delivery of multimedia content over the network” mostly on request, providing the requested media instantaneously. In traditional libraries many short films, music, and different forms of streaming media are catalogued and given to the users to be used offline. These are potential material which are marked for streaming media for the users. More and more ILS and OPAC 2.0 services are including the streaming media in their services.

6.7. Tagging

Another Web 2.0 feature which is becoming common in library community is called tagging. Tagging is described as the process by which the resources in a collection are assigned tags in the form of words, phrases, codes or other strings of characters. This allows users to add and change the data and metadata and at times give a local flavor to the data and metadata. The advantage of user tags is that it helps the data to be more easily searchable. Flickr and Del.icio.us are some of the web based examples of tagging. As the Web 2.0 re-emphasises the importance of users and their impact on services the impact of tagging in library services are greatly anticipated. The tagging service from the university of Pennsylvania library catalogue illustrates how tagging is been tried in a library catalogue. Most of the advocates for tagging argue that tagging characterizes the following principles:

- It is user-oriented
- It empowers the library users
- It makes the library service more democratic
- It makes the process very affordable
- It makes the process more collaborative
- The process is more distributed
- The process is more dynamic
- The process is instructive for the users as well as the providers

6.8. News Feeds

The advancement of web has brought news feeds directly into our desktops. The advent of news feeds which are called as RSS (Relatively Simple Syndication) has seen that the news service come to the user. The emerging library services seem to have captured this novel idea into the development of library services and have imbedded them in the library services. In olden days the libraries ran a service called SDI (Selective Disseminating of Information). Those services can be very effectively automated to serve users with news feed. For a multimedia library catalogues and dynamic library catalogues like music catalogue the RSS Feeds are good choices

6.9. Podcasting/ Vodcasting

Podcasting can be defined as the process by which the digital audio files are distributed over the internet using either feeds or by any other distribution media. Vodcasting is the video format of the same kind of service. Mostly the media casting which includes both audio and video is done either through the “media on demand” or through subscription services. These services allow the users to have a higher level of control over what media they want as it works on the demand and supply chain of activity.



1.7. Web 2.0 Application Areas

The key application areas which embody the Web 2.0 concepts include:

Blogs: A Web site which is commonly used to provide diaries, with entries provided in chronological order. Blogs can be used for a variety of purposes, ranging from reflective learning by students and researchers through to dissemination channels for organizations.

Wikis: A wiki refers to a collaborative Web-based authoring environment. The term wiki comes from an Hawaiian word meaning ‘quick’ and the origins of the name reflect the aims of the original design of wikis to provide a very simple authoring environment which allows Web content to be created with the need to learn the HTML language or to install and master HTML authoring tools.

Syndicated content: RSS and Atom formats have been developed to enable content to be automatically embedded elsewhere. RSS was initially developed to support reuse of blog content produced. RSS’s success led to the format being used in other areas (initially for

the syndication of news feeds and then for other alerting purposes and general syndication of content). The Atom format was developed as an alternative to RSS.

Mashups: A mashup is a service which contains data and services combined from multiple sources. A common example of a mashup is a Google Maps mashup which integrated location data was a map provided by the Google Maps service.

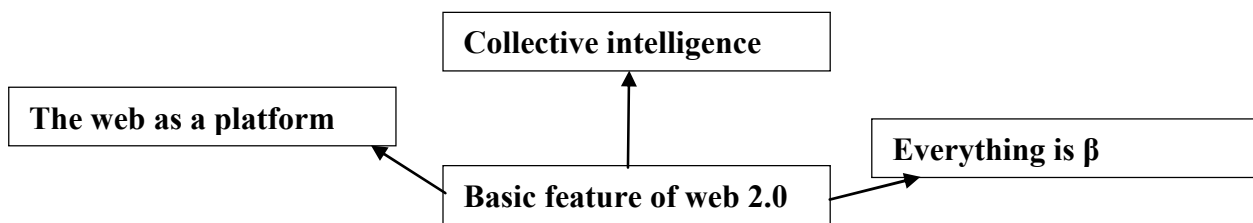
Podcasts: A podcast initially referred to syndicated audio content, which can be transferred automatically to portable MP3 players, such as iPods. However the term is sometimes misused to describe a simple audio file.

Social sharing services: Applications which provide sharing of various types of resources such as bookmarks, photographs, etc. Popular examples of social sharing services include del.icio.us and Flickr.

Social networks: Communal spaces which can be used for group discussions and sharing of resources.

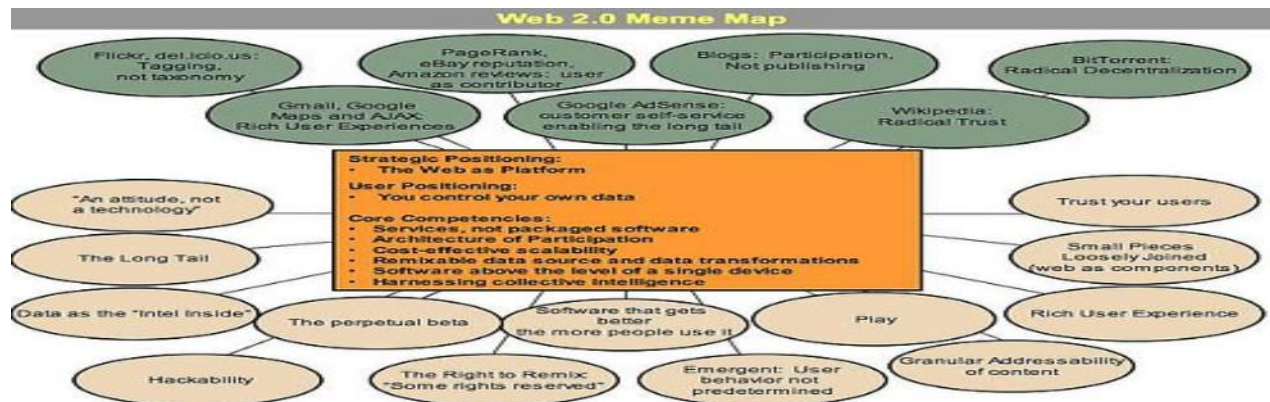
Folksonomies and tagging: A bottom-up approach to providing labels for resources, to allow them to be retrieved.

1.8. Basic feature of web 2.0:



8.1. 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 slide share at www.slideshare.net and allow comments or even edit online.



8.2. 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.

8.3. 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. Improve ments or changes will therefore be ongoing, with the product growing orginally and changing according to the needs of the user own the course of time.

1.9.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 meaning-

9.1. It is technically open

- Open architecture
- Open source software
- Open standard

1. Socially open with privileges to utilize 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.

1.10. The Characteristics of Web 2.0

Web 2.0 websites allow users to do more than just retrieve information. Instead of merely reading a user is invited to write as well or contribute to the content available to everyone in a user friendly way. By increasing what was already possible in Web 2.0.

- **Information Search:** Search engine helps in finding relevant information for the keywords entered. It includes website designing, website ranking in search engine, Keywords research, etc.
- **Links:** Low-barrier social tool. It includes one- way linking, Link exchange, etc.
- **Authoring:** This gives the right to create, publish and upload content, videos, audios of your own. It includes blogs, press releases, articles, newsletters, etc.
- **Tags:** These are one word descriptions of the entire content written by the owner.
- **Extensions:** It is software that makes web an application platform as well as a document server.
- **Signals:** It is the use of syndicate technology that informs users of content changes. RSS Really single syndication, is a tool from where you can get the latest updates of your area of interests

2.1. Advantage of Web 2.0

- Social Media marketing and search engine optimization.
- Equal Chance to all to post their views and comments.
- Increase the circle of of friends and contacts through social networking
- Latest update and content can be received if you are a RSS reader.
- Online Promotion of businesses, products and services .
- Engaging the customers. Customers can write their views about the products and services.
- Create a large and strong network.
- Increase in number of friends.
- More interaction leads to higher exchange of knowledge.
- Build strong relationship.

2.2. Disadvantage of web 2.0

- Information overload. Too much information is daily posted by many people with different thought. This creates confusion for the readers and the quality of the content is not reliable.
- Freedom to post views and comments provides good opportunities for competitors and rivals to post negative comments about other companies.
- Too many fake ID'S and spammers.
- Forgeries and hackers commit crimes.
- People are highly dependent on internet to network
- Wastage of time
- High number of frauds and hackers.

2.3. Example of Web 2.0 Website

1. **You Tube-** It allows the users to upload their videos and share it with everyone.



2. **Wikipedia-** It is online encyclopedia wherein the users contribute by writing the articles, definitions, etc. It is completely edited and maintained by the users.



3. **Twitter-** It is an online social networking and micro blogging service that enables users to send and read "tweets" which are text messages limited to 140 characters.



4. **Flickr-** It is a photo sharing website which allows users to upload their photographs and share it with anyone and everyone.



5. **Instagram-** It is an online photo-sharing, video sharing and social networking service that enables its users to take pictures and videos, apply digital filters to them.



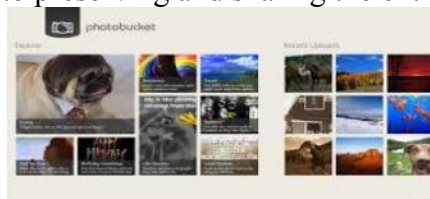
6. **Tumblr-** It is a micro blogging platform and social networking website that allows users to post multimedia and other content to a short form blog.



7. **eHow-** It is online how to guide with articles and videos offering step by step instructions. Users can leave comments or responses, but only contracted writers can contribute changes to articles.



8. **Photobucket-** It is an image hosting and video hosting website, web services suite, and online community dedicated to preserving and sharing the entire photo and video lifecycle.



2.4. Specific Web 2.0 Applications

1. **del.icio.us:** a social bookmarking service allowing users to save, share, and search

- favorite websites via the Internet. Similar to **BlinkList**, **Shadows**, **Furl**, and **clipmarks**.
2. **Digg**: a website allowing users to determine the content of the site by submitting, rating, and sharing content. Similar to **Gabbr**.
 3. **Flickr**: a site allowing users to access pictures from various platforms, organize images, add notes and comments to images, and find images from other users. Similar to **Slide** and **Zoto**.
 4. **Gabcast**: a podcasting service allowing users to upload audio files and to record audio files by phone or Voice over Internet Protocol. Similar to **Odeo**.
 5. **Omnidrive**: online file storage available from any internet-connected device. Similar to **Xdrive** and **Avvenu**.
 6. **YouTube**: a site allowing users to store, tag, search for, and view video content online. Similar to **VideoEgg** and **Google Video**.
 7. **Google Docs and Spreadsheets**: word processing and spreadsheet applications allowing multiple users to view and edit documents online. Similar to **Zoho Writer** and **Zoho Sheet**.
 8. **gliffy**: collaborative tool for drawing diagrams.
 9. **Splashcast**: allows users to upload video, audio, PDF, PPT, text, and image files, record audio narratives, and publish as a multimedia presentation.

2.5. Tools of web 2.0

1. RSS (relay simply syndication)
2. Web blogs
3. Podcasts
4. Star pages
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

Conclusion:

Use of Web 2.0 technologies and applications will constitute a meaningful and substantive change in the history of libraries. 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. The best conception of Library 2.0 at this point in time would be a social network interface that the user designs. It is a personalized OPAC that includes access to IM, RSS feeds, blogs, wikis, tags, and public and private profiles within the library's network. It is virtual reality of the library, a place where one can not only search for books and journals, but interact with a community, a librarian, and share knowledge and understanding with them. While Library 2.0 is a change, it is of a nature

close to the tradition and mission of libraries. Library 2.0 will revolutionize the profession. Rather than creating systems and services for patrons, librarians will enable users to create them for themselves. A profession steeped in decades of a culture of control and predictability will need to continue moving toward embracing facilitation.

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