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WEB 2.0 Awareness among Library and Information Science Professionals of the Engineering Colleges in Chennai City: A Survey

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ABSTRACT 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 uses, 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. A web 2.0 site gives its users the free choice to interact or collaborate with each other in a social media dialogue as creators of user generated content in a virtual community, in contrast to websites where users are limited to the passive viewing of content that was created for them. Examples of Web 2.0 include social-networking sites, blogs, wikis, video-sharing sites, hosted services, web applications.

INTRODUCTION

A profound change is happening on the cutting-edge of web development: we are relinquishing control of information. No longer are sites working independently from each other; no longer is information sitting in isolation with no interaction between sites. Rather, the best web programmers are now creating sites that allow information to be reused anywhere. The Web, version 1.0, and the forgo-profit-for-market share companies that inflated it past the bursting point are now distant memories. Today, a new set of internet technologies and fresh philosophies on how to harness the interconnected nature of the network are gaining significant attention from consumers and venture capitalists. It's the web, version 2.0, or Web 2.0 as it has been dubbed by many.

The internet and web technology has changed the way people interact, communicate, share and acquire knowledge. However, when the web was created it did not have features and facilities for users to interact. With the evolution of internet and communication technology, Web 2.0 has evolved into a dynamic, interactive and collaborative platform that facilities exchange of knowledge and information amongst its users. The concept of Library 2.0 has been borrowed form that of Web 2.0.

In 2004, we realized that the Web was on the cusp of a new era, one that would finally let novators who were driving it. When O'Reilly's Dale Dougherty came up with the term "Web 2.0" during a brainstorming session, we knew we had the name for the conference. What we didn't know was that the industry would embrace the Web 2.0 meme and that it would come to represent the new Web. Web 2.0 is much more than just pasting a new user interface onto an old application. It's a way of thinking, a new perspective on the entire business of software from concept through delivery, from marketing through support. Web 2.0 thrives on network effects: databases that get richer the more people interact with them, applications that are smarter the more people use them, marketing that is driven by user stories and experiences, and applications that interact with each other to form a broader computing platform.

The trend toward networked applications is accelerating. While Web 2.0 has initially taken hold in consumer-facing applications, the infrastructure required to build these applications, and the scale at which they are operating, means that, much as PCs took over from mainframes in a classic demonstration of Clayton Christensen's "innovator's dilemma" hypothesis, web applications can and will move into the enterprise space. Two years ago we launched the Web 2.0 Conference to evangelize Web 2.0 and to get the industry to take notice of the seismic shift we were experiencing. This report is

for those who are ready to respond to that shift. It digs beneath the hype and buzzwords, and teaches the underlying rules of Web 2.0 what they are, how successful Web 2.0 companies are applying them, and how to apply them to your own business. It's a practical resource that provides essential tools for competing and thriving in today's emerging business world. I hope it inspires you to embrace the Web 2.0 opportunity.

Libraries and Web 2.0

Use of the technically imprecise but no doubt seductive term "Web 2.0" is stimulating libraries to think through what they need to deploy for and through their websites in ways unimaginable in the dark days of a few years ago. Web 2.0 and social media applications such as blogs, wikis and social networking sites offer the promise of a more vibrant, social participatory internet. There is a growing interest within the library community in debating the potential impact that such services might have within libraries and such debates have gathered around the moniker of 'Library 2.0'. The use of web 2.0 applications by libraries is having several effects on the way their services and products are made available to the public, as well as on the way they operate. Such impacts vary and depend on the type of applications, their characteristics and functionalities, and the way they are used and kept. One of the immediate efforts of the use of these applications is the growing number of public they reach. Apart form the increase in the number of users reached, there are other less immediate but nonetheless beneficial effects from the use of Web 2.0 applications. These are

- increased importance of the library to the user;
- improvement in the library's image;
- potential of new interactive services to raise the level and quality of the service provided;
- increased involvement of users and improved communication of the library with such users;
- improvement in communication among librarians;
- greater ability to find quick solutions to meet the needs of users;
- improvement in shared knowledge and collaboration.

There are hundreds of web 2.0 websites which can be used by a Librarian to render effective and efficient services. To quote the most popular are Facebook, founded in February 2004, is owned by Facebook, Inc. It is a social network that allows people to communicate and share information within a context of social interaction. Facebook's mission is to give people the power to share and make the work more open and connected. Some archives opted to emphasis the Facebook utilities to communicate with the public.

Flicker, founded in 2004, is now the property of Yahoo Inc. It is a photograph and video-hosting site, as well as a Web service site. It is also an online community of professional and amateur photographers for users who wish to publish and share their images and videos on the web. Its use is free of charge, but there is also the option of subscription offering an account with additional functionality. Flickr allows users to store, edit, organize, share, geo-preference, generate products with images, define forms of access to images, take part in discussion forums and maintain contact within an online photography community. The use of Flicker may allow archives and libraries to generate new means of access to an interaction with their patrons, as well as broaden the knowledge of such heritage to a larger and more diverse audience.

YouTube, founded in February 2005, is now owned by Google Inc. It is a free video-sharing community that offers access to and the sharing of videos, films, video clips and amateur material that, in turn, can be disseminated through blogs and other Web locations. The use of You Tube by archives and libraries can represent a new type of exposure with a worldwide impact, at little cost and with wide access; it is also powerful tool for raising the institutional profile worldwide and a promising channel when exploited in the marketing operations of such institutions.

Characteristics of Web 2.0

- Web 2.0 permits the building of virtual applications, drawing data and functionality from a number of different source as appropriate.
- Web 2.0 is participative. The traditional web has tended to be somewhat one- sided with a flow of content form provider to

viewers, it allows the user to actively participate online by means of blogging, sharing file or equivalent.
- Web 2.0 applications are modular, with developers and users able to pick and choose from a set of inter-operating components in order to build something that meets their needs.
- User can own the data on a Web 2.0 site and exercise control over that data.
- Web 2.0 is smart application which will be able to capture user's knowledge and deliver services to satisfy their needs.
- Web 2.0 is built upon trust, whether that is trust placed in individuals, in assertions or in the users and reuse of data.
- Web 2.0 is about sharing: code, content, ideas.

Weakness of Web 2.0

The emergence of web 2.0 has brought with it collaboration on a global scale, which has been a really great thing that has led to sites like Wikipedia, but it also has a dark side: copyright infringement. One issue with web 2.0 copyright infringement is that most of the offenders do not even realize what they are doing or that it is wrong. The popularity of blogging and the ease at which articles and images can be passed around have made it very simple to inadvertently commit copyright infringement. Creative commons is a popular alternative to the "all rights reserved" copyright license that we are all familiar with. Creative commons allows the copyright holder to choose from multiple licenses that describe what rights are being offered in very simple language that is easy to understand. The copyright holder can choose to offer rights for any use, or just non-commercial uses, and they can even offer the right to modify the work to suit the needs of those using it. There are some basic etiquette guidelines that can be followed. For articles, users only use a small part of the text and then link to the rest of the article. In this way, it falls under "fair use", and most writers are happy to have the link back. Clip marks is also usually used since it 'clipped'. For images, one should always check to see what sort of copyright restrictions or Creative Commons license is being used for the image. When in doubt, user can attribute the image with a link back to the original and let the copyright owner know that he has linked the work so that they can speak up if they have any objections (Mangala Hirwade 2010).

Literature Review

Redish and Chisnell (2004) reviewed a large number of articles, books, presentations, Websites and papers published between 2000 and 2004 relating to web design for older adults. They were looking for broad usability issues for older Web users, while this review aims to identify opportunities to extend the existing WAI technical, education, and outreach work to accommodate the overlapping needs of people with disabilities and older adults with age-related functional limitations. Redish and Chisnell were not surprised to find that much of what they found in the literature about older adults on the Web is good usable design for everyone – consistent navigation, clear writing, skim-able text with lists, etc. Another aspect of the elderly that their study reinforced is that older adults are not a homogenous group – something that many others have also commented on (e.g. Gregor et al. 2002; Fox 2004; Morrell 2005).

Czerwinski and Larson (2002) discuss some basic principles from cognitive science that should be applied to Website design, in particular how grouping and symmetry can be applied to leverage visual perception and attention, and the use of spatial layout to leverage human spatial memory. This later principle supports Jacob Nielsen's suggestions that "users prefer your site to work the same way as all the other sites they already know" (Nielsen 2000). Czerwinski and Larson (2002) also raise an interesting phenomenon of cognition and the Web that applies to many users, but may apply particularly to elderly users, and is particularly relevant with the move to scripted partial page updates. The phenomenon is "change blindness", where small changes on a page are not noticed by the user. This 'blindness' may be due to distraction, or may be related to concentration and perception. For some users it may actually not even be within the current view, depending on the size of the current browser window and how much of the page is actually displayed. Hudson (2001) suggests that form validation is a particular problem area.

Berkov (2007) in a small study of Web users

with Mild Cognitive Impairment (average age 82 years) who were regular computer users, found that having too many choices on the home page (i.e. a broad navigation system) was confusing for this group.

Objectives

The present study has been carried out with following objectives:

- To make a survey in order to assess awareness of web 2.0 among the library and information science professionals of engineering colleges.
- To find out the use of wikis, blogs and social networks by the library and information science professionals of engineering colleges.

METHODOLOGY

The present study was carried out to assess the awareness of web 2.0 concept among library and information science professionals of the Engineering colleges in Chennai city. Research method followed was a survey method. Questionnaire tool was used to collect the data. The sample consists of twenty selected Engineering colleges in the city.

ANALYSIS OF DATA

Table 1 shows the list of selected twenty engineering Colleges in Chennai City and affiliated to Anna University, Chennai considered for the study.

The distribution of category according to their designation is shown in table 2. It could be noted that out of the total 120 respondents, 16.67 per cent of them are librarians and 26.67 per cent of them are assistant librarians. In this study, 35.83 per cent of the respondents were library assistants and 20.83 per cent of them were the technical staff. It is observed that 35.83 per cent of the respondents were library assistants. It is concluded that more library assistants followed by assistant librarians were the respondents in the study.

Library and information science professionals use internet at various places like home, college, internet café and library. A study of data in table 3 indicates the category wise respondents' preferred place to access to internet. The category wise analysis examines the following facts. The technical staff respondents occupy the first position with respect to their overall preference place to access internet as their secured mean score is 4.26 on a 5 point rating scale. The library assistant respondents take the second position in their overall preference place to access internet as their secured mean score is 4.12 on a 5 point rating scale. The assistant librarian respondents rank in the third position in their overall preference place to access internet as their secured mean score is 4.10 on a 5 point rating scale. The librarian respondents rank in the last position in their overall preference place to access internet as their secured mean score is 3.79 on a 5 point rating scale. It could be seen clearly from the above discussion that technical staff respondents take the first position in their overall preference place to access internet, library assistant respondents the second, assistant librarian respondent the third, librarian respondents the last.

Table 1: General information about colleges under study

S. No.	*Name of the engineering college*	*Abbreviations used*
1	A.M.S. College of Engineering	AMSCE
2	Anand Institute of Higher Technology	AIHT
3	Crescent Engineering College	CEC
4	DMI College of Engineering	DMICE
5	EVP Engineering College	EVPEC
6	Easwari Engineering College	EEC
7	Hindustan College of Engineering	HCE
8	Jaya Engineering College	JEC
9	Kalsar College of Engineering	KCE
10	Kings Engineering College	KEC
11	Madha Engineering College	MEC
12	P.B. College of Engineering College	PBCEC
13	Rajalakshmi Engineering College	REC
14	Rajiv Gandhi College of Engineering	RGCE
15	SKR Engineering College	SKREC
16	SSN College of Engineering	SSNCE
17	Sri Lakshmi Ammal Engineering College	SLAEC
18	Sri Sai Ram Engineering College	SSREC
19	Tagore Engineering College	TEC
20	Vellammal Engineering College	VEC

Table 2: Distribution of respondents

Category	*No. of respondents*	*Percentage*
Librarians	20	16.67
Assistant librarians	32	26.67
Library assistants	43	35.83
Technical staff	25	20.83
Total	120	100.00

Table 3: Preferred place to access to internet

Location	*Category*				*Total*
	Librarians	*Assistant librarians*	*Library assistants*	*Technical staff*	
Home	4.10	4.22	4.36	4.52	4.15
College	3.36	3.79	3.89	3.92	3.37
Internet café	4.10	4.26	4.36	7.44	4.06
Library	2.56	3.79	3.82	3.77	3.16
Total	3.79	4.10	4.12	4.26	3.96

Library and information science professionals' frequency of use of internet per week can be seen from the study of data in table 4 which indicates the category wise respondents' frequency of access to internet per week. The category wise analysis examines the following facts. The librarian respondents occupy the first position with respect to their overall frequency of use of internet per week as their secured mean score is 4.15 on a 5 point rating scale. The library assistant respondents take the second position in their overall frequency of use of internet per week as their secured mean score is 3.78 on a 5 point rating scale. The technical staff respondents rank in the third position in their overall frequency of use of internet per week as their secured mean score is 3.52 on a 5 point rating scale. The assistant librarian respondents rank in the last position in their overall frequency of use of internet per week as their secured mean score is 3.16 on a 5 point rating scale. It could be seen clearly from the above discussion that librarian respondents take the first position in their overall frequency of use of internet per week, library assistant respondents the second, technical staff respondents the third, assistant librarian respondents the last.

Table 4: Use of internet per week

No. of hours per week	*Category*				*Total*
	Librarians	*Assistant librarians*	*Library assistants*	*Technical staff*	
Up to 10	4.36	4.16	3.90	3.90	4.23
11 to 20	3.66	2.66	2.65	2.89	2.99
21 to 30	3.42	2.42	2.28	2.79	2.90
31 to 40	3.49	3.67	3.96	3.89	3.81
Above 40	3.88	2.90	3.11	2.52	3.04
Total	4.15	3.16	3.78	3.52	3.77

The library and information science professionals were asked question about the purpose for which they access Internet. A study of data in table 5 indicates the category wise respondents' purpose for using internet. The category wise analysis examines the following facts. The technical assistant respondents occupy the first position with respect to their overall purpose for using internet as their secured mean score is 4.56 on a 5 point rating scale. The library assistant respondents take the second position in their overall purpose for using internet as their secured mean score is 4.33 on a 5 point rating scale. The assistant librarian respondents rank in the third position in their overall purpose for using internet as their secured mean score is 4.26 on a 5 point rating scale. The librarian respondents rank in the last position in their overall purpose for using internet as their secured mean score is 3.99 on a 5 point rating scale. It could be seen clearly from the above discussion that technical assis-tant respondents take the first position in their overall purpose for using internet, library assistant respondents the second, assistant librarian respondents the third, librarian respondents the last.

Table 5: Purpose for using internet

Purpose	*Category*				*Total*
	Librarians	*Assistant librarians*	*Library assistants*	*Technical staff*	
Acquiring information	3.90	4.05	4.10	4.42	4.02
Study	3.56	4.10	4.22	4.56	3.75
Entertainment	3.89	4.15	4.19	4.20	3.65
Contact with others	4.10	4.16	4.26	4.33	4.10
Online community	4.26	4.41	4.51	4.58	4.33
Online shopping	2.89	2.99	3.85	3.52	2.99
e-banking	2.52	3.36	3.52	3.72	2.90
Free resources	3.77	4.01	3.58	4.27	3.81
Online action	2.96	3.39	3.96	2.79	3.04
Others	3.66	3.77	4.11	4.21	3.77
Total	3.99	4.26	4.33	4.56	4.15

Awareness about Web 2.0

Study was carried out to know the awareness regarding web 2.0 tools like blogs, Wikipedia,

Flikr, Rss Feed, Social Networks etc. A weblog, or simply a blog, is basically a journal that is available on the web. The activity of updating a blog is "blogging" and someone who keeps a blog is a "blogger". Blogs are typically updated daily using software that allows people with little or no technical background to update and maintain the blog. Postings on a blog are mostly arranged in chronological order with the most recent additions featured most prominently. The analysis is depicted in table 6. It is observed that only 42 % of the LIS professionals have their own blog, 81.66 % of LIS professionals read blogs while 56.66 % LIS professionals add posts to blogs.

Table 6: Knowledge about blogs

Information about blogs	*Yes*	*%*	*No*	*%*
LIS professionals have their own blog	42	35.00	78	65.00
LIS professionals who read blog	98	81.66	22	18.34
LIS professionals who add posts to blog	68	56.66	52	43.34

Wikipedia is the world's largest collaboratively edited source of encyclopedic knowledge. But in spite of its utility, its contents are barely machine-interpretable. Structural knowledge, e. g. about how concepts are interrelated, can neither be formally stated nor automatically processed. Also, the wealth of numerical data is only available as plain text and thus can not be processed by its actual meaning. As far as awareness regarding Wikipedia is concerned, it is observed from table 7 that 73.33% of LIS professionals read entries from Wikipedia, 45 % of the LIS professionals add entries from Wikipedia and 30 % of LIS professionals edit entries in Wikipedia.

Table 7: Knowledge about Wikipedia

Information about Wikipedia	*Yes*	*%*	*No*	*%*
Who read entries from Wikipedia	88	73.33	32	26.67
Who add entries in Wikipedia	54	45.00	66	55.00
Who edit entries in Wikipedia	36	30.00	84	70.00

RSS (most commonly expanded as Really Simple Syndication) is a family of web feed formats used to publish frequently updated works such as blog entries, news headlines, audio, and video in a standardized format. A RSS document (which is called a "feed", "web feed", or "channel") includes full or sum-marized text, plus metadata such as publishing dates and authorship. Web feeds benefit publishers by letting them syndicate content automatically. They benefit readers who want to subscribe to timely updates from favored websites or to aggregate feeds from many sites into one place. RSS feeds can be read using _software called an "RSS reader", "feed reader", or "aggregator", which can be web-based, desktop-based, or mobile-device-based. A standardized XML file format allows the information to be published once and viewed by many different programs. The user subscribes to a feed by entering into the reader the feed's URI or by clicking an RSS icon in a web browser that initiates the subscription process. The RSS reader checks the user's subscribed feeds regularly for new work, downloads any updates that it finds, and provides a user interface to monitor and read the feeds. It is observed from table 8, that 73.33% of the LIS professionals visited Photo sharing websites, 46.66% added pictures to Flicker and 40.00% of the LIS professionals use RSS.

Table 8: Knowledge about photo sharing web sites, Flicker, RSS

Information about photo sharing web sites, Flicker, RSS	*Yes*	*%*
No. of LIS professionals who visited photo sharing websites	88	73.33
No. of LIS professionals who added pictures to Flicker	56	46.66
No. of LIS professionals who use RSS	48	40.00

There are a variety of social networking websites, including Facebook, Myspace, LinkedIn, Orkut, Ping, and Twitter. These sites facilitate online communication through a variety of media. The interactive, interlinking environment supports the creation of personal and business webpages where information, photos and videos are shared. In February 2010, Google released Google buzz, a service for sharing thoughts, multimedia, and social media website feeds using the existing email service, Gmail. Google buzz is an open environment that adheres to open standards, meaning that developers will be able to create applications for buzz across many platforms. Social

bookmarking sites, such as Delicious and Digg, allow people to discover, organize and share content on the web and to access their own favorites from any personal computer. It is observed from table 9, that 65 % of LIS professionals participate in social Network, 93.33 % of the librarians think that they will use web 2.0 in future, only 30 % of LIS professionals use P2P software and 71.66 % use ICQ, MSN, other Instant Messenger.

Table 9: Knowledge about social network

Information about social network	*Yes*	*%*
No. of LIS professionals participate in social network	78	65.00
No. of LIS professionals who will use web 2.0	112	93.33
No. of LIS professionals who use P2P software	36	30.00
No. of LIS professionals who use ICQ, MSN	86	71.66

It is only three years since YouTube was quietly launched in June 2005 with a video humbly entitled 'Me at the zoo', but in that time the video sharing website has grown at an extraordinary and, it seems, accelerating rate. It now hosts around 85 million videos; just as 'Google' has entered the vernacular as a generic term for online searching, so 'you tube' has become synonymous with video online. It has been observed from table 10, that 78.33% of LIS professionals from different engineering colleges watch Video on You Tube and other video sharing devices and 43.33 % of LIS professionals upload videos on it.

Table 10: Knowledge about YouTube

Information about YouTube	*Yes*	*%*
No. of LIS professionals who watch video on YouTube or other video – sharing Websites	94	78.33
No. of LIS professionals who uploaded videos on YouTube or other video – sharing websites	52	43.33

CONCLUSION

Web 2.0 is user centered; a multi-media experience; socially rich; and communally innovative. It also focuses a definition for the term: "The application of interactive, collaborative, and multi-media web-based technologies to web based library services and collections." Library 2.0 is virtual reality of the library, a place where one can not only search for books and journals, but interact with community, a librarian, and share knowledge and understandings with them. The emergence of web 2.0 is being positively perceived by libraries as an opportunity to advance their services and offerings. It is concluded from the study that the library and information science professionals of the engineering college in Chennai city are well aware with the modern concepts like web 2.0. They use these concepts. But they implement it very less as far as rendering or library services are concerned.

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