Awareness of Web 2.0 among Medical College Librarians in Tamil Nadu

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ABSTRACT

Internet's rapid growth and broad penetration, along with affordable enabling Web 2.0 technologies, has not only democratized access to information but also catalyzed open access publishing which has contributed majorly to the explosion of freely available digital information. This phenomenon poses tremendous challenges, and opportunities, for Libraries and Librarians in delivering on their core mission of facilitating research, teaching, and learning in discovering, collecting, organizing and preserving invaluable knowledge from this vast information base. In this paper, we explore how Web 2.0 technologies can be effectively harnessed for the evolution of libraries to their 2.0 version. The profession of Librarianship and the field of LIS have been in a constant state of flux. Today, the buzzword or phrase in the technology is "Web 2.0" which facilitate today's libraries to be more dynamic institutions. Web 2.0 is the popular term for advanced Internet technology and applications including blogs, Wikis, RSS and social book marking. The two major components of Web 2.0 are the technological advances enabled by Ajax and other new applications such as RSS and Eclipse and the user empowerment that they support.

Keywords: Web 2.0; Library 2.0; Facebook; Flicker; YouTube; Copyright; Wikis and Social networking sites; Bulletin Board Service (BBS).

INTRODUCTION

Libraries use a variety of tools and techniques to devise services to support the requirements of their users. Computer-based linking of sources and users has become more pronounced. The accessibility of electronic resources tempts users to satisfy their information needs beyond the four walls of the library. As the Internet has become an integral part of everyday life, librarians, like any other professional group, must attempt to make sense of these changes within their domain of expertise and engage with the opportunities and challenges raised. The library has not escaped considerable discussion about the potential change afforded by ICT, particularly "Web 2.0" and social media. It is hard to sell this concept in most developing countries, since half the libraries are unequipped or / and many librarians have not been trained to make these changes. Libraries of developing countries differ greatly. Some who are trying to implement innovations find it hard because only a small percentage of the population uses the Internet or computers regularly. Most users are not familiar with how modern libraries operate.

Web 2.0

The old World Wide Web was based on the "Web 1.0" paradigm of web sites, email, search engines, and surfing. Web 2.0 is about the more human aspects of interactivity. It's about conversations, interpersonal networking, personalization and individualism. The term "Web 2.0" refers to second generation of web development and

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design that aims to facilitate communication, secure information sharing, interoperability and collaboration on WWW. Web 2.0 encapsulates the idea of the proliferation of interconnectivity and interactivity of web-delivered content. The term Web 2.0 was first used by Dale Dougherty and Craig Cline and shortly after became notable after the O'Reily, Media Web 2.0 conference in 2004. According to Tim O'Reily[1] "Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as a platform, and an attempt to understand the rules for success on that new platform".

Web 2.0 + Library = Library 2.0

Libraries were once the guardians of knowledge and the point at which those seeking existing knowledge would engage with it. With the rise of Google, Amazon, Wikipedia and more, there is an oft-stated fear that many users, much of the time, will bypass processes and institutions that they perceive to be slow, unresponsive, unappealing and irrelevant in favor of a more direct approach to services offered by others that just might be 'good enough' for what they need to do. Libraries should be seizing every opportunity to challenge these perceptions, and to push their genuinely valuable content, services and expertise out to places where people might stand to benefit from them - places where a user would rarely consider drawing upon a library for support.

Web 2.0's principles and technology offer libraries many opportunities to serve their patrons better, and to reach out beyond the walls and web sites of the institution to reach potential beneficiaries where they happen to be, and in association with the task that they happen to be undertaking. With these approaches, we take our existing wealth of data, and make it work much harder. We begin to break down the internal silos of the separate systems within a single library, and connect those components to one another, and to related components and services far beyond the building. At a technical level, we make it possible for searchers to be presented with choices to view online, borrow locally, request

from afar, buy or sell as appropriate to their needs and circumstance. The beauty of Web 2.0 and Library 2.0 is the level of integration and interoperability that is designed into the interface through the library portal or intranet. That's where the real power to enhance the user experience is. In order to take advantage of the concepts inherent in Library 2.0, all the advanced functionality and features of Web 2.0 should be integrated into the content.

Characteristics of Web 2.0

• Every aspect of Web 2.0 is driven by participation. The transition to Web 2.0 was enabled by the emergence of platforms such as blogging, social networks, and free image and video uploading, that collectively allowed extremely easy content creation and sharing by any one.

• Standards providing essential platform for Web 2.0 common interfaces for accessing content and applications are the glue that allows integration across the many elements of the emergent web.

• Web 2.0 is decentralized in its architecture, participation, and usage. Power and flexibility emerges from distributing applications and content over many computers and systems, rather than maintaining them on centralized systems.

• The world of Web 2.0 has only become possible through a spirit openness whereby developers and companies provide open transparent access to their applications and content.

• Web 2.0 is the antithesis of the monolithic. It emerges from many, many components or modules that are designed to link and integrate with others, together building a whole that is greater than the sum of its parts.

• A primary direction of Web 2.0 is for users to control the content they create, the data captured about their web activities, and their identity. This powerful trend is driven by the clear desires of participants.

• Identity is a critical element of both Web 2.0 and the future direction of the Internet. We can increasingly choose to represent our identities however we please, across interactions, virtual worlds, and social networks. We can also own and verify our real identities in transactions if we choose.

Applications of Web 2.0 in Libraries

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 coin a flurry of 2.0s, including Library 2.0, Social Work 2.0, Enterprise 2.0, PR 2.0, Classroom 2.0, Publishing 2.0, Medicine 2.0, Telco 2.0, Travel 2.0, Government 2.0, and even Porn 2.0. Many of these 2.0s refer to Web 2.0 technologies as the source of the new version in their respective disciplines and areas. Blogs, wikis and RSS are often upheld as exemplary manifestations of Web 2.0. A reader of a blog or a wiki is provided with tools to add a comment or even, in the case of the wiki, to edit the content. This is what we call the Read / Write web. The Library 2.0 means harnessing this type of participation so that libraries can benefit from increasingly rich collaborative cataloguing efforts, such as including contributions from partner libraries as well as adding rich enhancements, such as book jackets or movie files, to records from publishers and others.

Literature Review

Chu and Meulemans (2008)[2] report that online social networking sites are very popular among students. They highlight that Myspace and Facebook-two widely adopted social networking sites-can be used in university libraries for imparting library instruction, reference and outreach. The literature survey shows that most of the experts have highlighted the Web 2.0 and s applications. Many of the experts have asserted that it is more of a social phenomenon than a major stride in technology Mangala Hirwade (2010)[3].

Clyde (2004)[4] studied 55 web logs and found that those were used for providing news, information and links to the Internet resources for library users. Clyde highlighted that very few of them provided interactive services and less than half of them provided RSS feeds. Stephens (2006)[5] states that the library blogs can be used as tools for getting feedback from the users on important aspects, and transparency can be maintained in the organization. Frumkin (2005)[6],Chawner and Lewis (2006)[7], Clyde (2005)[4]and Stephens(2006)[5] have studied the importance and application of wikis in the libraries.

The Web 2.0 tools which can enhance library services are wikis, blogs, RSS, IM ,pod casts and vodcasts. This view is being echoed by Maness (2006b). Singer and Sherrill (2007)[8]; Mascaskill and Owen (2006)[9]. Linh, Nguyen Cuong (2008)[10] studied the application of web2.0 and their features in 32 Austraian libraries.

Redish and Chisnell (2004)[15] reviewed a large number of articles, books, presentations, web sites and papers published between 2000 and 2004 relating to web design for the ealderly. 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 the ealderly with age-related functional limitations. Redish and Chisnell were not surprised to find that much of what they found in the literature about the ealderly 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 the ealderly are not a homogenous group – something that many others have also commented on Gregor (2002)[12]; Fox (2004)[13]; Morrell (2005)[14].

Czerwinski and Larson (2002)[15] discuss some basic principles from cognitive science that should be applied to Web site 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 latter 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)[16].

OBJECTIVES

The present study was carried out with the following objectives:

§ To make a survey in order to assess awareness of Web 2.0 among the library and information science professionals of Medical Colleges in Tamil Nadu.

§ To find out the use of wikis, blogs, and social networks by the library and information science professionals of Medical Colleges in Tamil Nadu.

Population Study

METHODOLOGY

The present study was carried out to assess the awareness of Web 2.0 concept among library and information science professionals of the Medical Colleges in Tamil Nadu. Research method followed was a survey method. Questionnaire tool was used to collect the data. The sample consisted of fifteen selected Medical Colleges in the State.

Analysis

Analysis of data is the ultimate step in research process. It is the link between raw data and significant results leading to conclusions. This process of analysis has to be result oriented.

Table 1. General Information about colleges under study

Sl. No.	Name of the Medical College	Abbreviations Used
1	KAP Viswanatham Medical College, Trichy	KAPVMC
2	Mohan Kumaramangalam Medical College, Salem	MKMC
3	Chengalpattu Medical College, Chengalpattu	CMC
4	Thoothukudi Medical College , Thoothukudi	TMC
5	Coimbatore Medical College, Coimbatore	CBEMC
6	Madras Medical College and Research Institute, Chennai	MMCRI
7	Stanley Medical College, Chennai	SMC
8	Kilpauk Medical College, Chennai	KMC
9	Government Vellore Medical College, Vellore	VMC
10	Kanyakumari Government Medical College	KGMC
11	Meenakshi Medical College, Kanchipuram	MMC
12	Vinayaka Mission's Kirupananda Variyar Medical College, Salem	VMKVMC
13	Rajah Muthiah Medical College, Annamalainagar	RMMC
14	Sree Balaji Medical College and Hospital, Chennai	SBMCH
15	Christian Medical College, Vellore	CMCV

Table 1 shows the list of selected fifteen Medical Colleges in Tamil Nadu considered for the study.

Table 2. Distribution of Respondents

Category	No. of Respondents	Percentage
Librarians	15	13.64
Assistant Librarians	30	27.28
Library Assistants	38	34.54
Technical Staff	27	24.54
Total	110	100.00

The distribution of respondents was according to their designation as shown in Table 2. It can be noted that out of the total 110 respondents, 13.64 per cent of them are librarians and 27.28 per cent of them are assistant librarians. In this study, 34.54 per cent of the respondents are library assistants and 24.54 per cent of them are technical staff. It is observed that 34.54 per cent of the respondents are library assistants. It is concluded that more library assistants followed by assistant librarians are the respondents in the study.

Internet Access

Table 3. Importance of Internet

Importance of Internet	No. of Respondents	Percentage
Very Important	87	79.09
Quite Important	16	14.55
Neutral	7	6.36
Not Important	0	-
Total	110	100.00

A question was asked to these library professionals in order to trace the importance of Internet in their life. No matter you use the Internet or not, how important is the Internet in your life? The responses are shown in Table 3. It is observed that 79.09% of the library professionals responded that Internet is very important in their life, 14.55% library professionals responded Internet is quite important, 6.36% Librarians were neutral to answer this question, and no library professionals said that it is not important.

Table 4. Preferred place to access Internet

| Location | Category | | | | |
	Librarians	Assistant Librarians	Library Assistants	Technical Staffs	Total
Home	3.79	3.89	4.10	4.22	4.36
College	2.79	2.52	3.36	3.79	3.89
Internet café	3.37	3.87	4.10	4.26	4.36
Library	2.52	2.42	2.56	3.79	3.82
Total	3.76	3.77	3.79	4.10	4.12

Library and information science professionals use Internet at various places like home, college, Internet café and library. A study of data in Table 4 indicates the category-wise respondents' preferred place to access 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 4.10 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 3.79 on a 5-point rating scale. The assistant librarian respondents rank third in their overall preference place to access Internet, as their secured mean score is 3.77 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 3.76 on a 5 point rating scale. It can be seen clearly from the above 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, and librarian respondents the last.

Table 5. Use of Internet per week

| No. of hours per week | Category | | | | Total |
	Librarians	Assistant Librarians	Library Assistants	Technical Staffs	
Up to 10	2.52	2.42	2.56	3.79	3.82
11 to 15	3.76	3.77	3.79	4.10	4.12
16 to 20	2.11	2.21	2.36	2.86	3.39
21 to 25	3.37	3.56	3.89	4.11	4.26
Above 25	2.14	2.16	2.56	2.76	3.36
Total	3.52	3.76	3.99	4.01	4.11

Library and information science professionals frequency of use of Internet per week.

A study of data in Table 5 indicates the category-wise respondents' frequency of accessing Internet per week. The category wise analysis shows following facts. The technical staff respondents occupy the first position with respect to their overall frequency of use of Internet per week, as their secured mean score is 4.01 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 3.99 on a 5-point rating scale. The Assistant Librarian respondents rank third in their overall frequency of use of Internet per week, as their secured mean score is 3.76 on a 5-point rating scale. The librarian respondents rank last in their overall frequency of use of Internet per week, as their secured mean score is 3.52 on a 5-point rating scale. It is clear from the above discussion that technical staff respondents take the first position in their overall frequency of use of Internet per week, library assistant respondents the second, assistant librarian

Table 6. Purpose for using Internet

| Purpose | Category | | | | Total |
	Librarians	Assistant Librarians	Library Assistants	Technical Staff	
Acquiring information	2.89	2.99	3.85	3.52	2.99
Study	2.52	3.36	3.52	3.72	2.90
Entertainment	3.77	4.01	3.58	4.27	3.81
Contact with Others	2.96	3.39	3.96	2.79	3.04
Online community	4.26	4.41	4.51	4.58	4.33
Online Shopping	4.11	4.31	3.71	3.72	3.52
e-Banking	3.42	3.51	2.35	2.36	2.26
Free Resources	4.20	4.32	3.82	3.85	3.89
Online Action	3.39	3.42	3.51	2.36	2.44
Others	3.66	3.77	4.11	4.21	3.77
Total	4.10	4.16	4.26	4.33	4.15

respondents the third, and librarian respondents the last.

The Library and information science professionals were asked about the purpose for which they access Internet. A study of data in Table 6 indicates the category wise respondents' purpose for using Internet and the analysis reveals 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 4.33 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 4.26 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 4.16 on a 5-point rating scale. The librarian respondents rank last in their overall purpose for using Internet, as their secured mean score is 4.10 on a 5 point rating scale. Thus, the technical assistant respondents take the first position in their overall purpose for using Internet, library

Awareness about Web 2.0

Table 7. Knowledge about blogs

Information about Blog	Yes	%	No	%
LIS Professionals have their own blog	30	27.27	80	72.73
LIS Professionals who read blog	76	69.09	34	30.91
LIS Professionals who add posts to blog	64	58.18	46	41.82

assistant respondents the second, assistant librarian respondents the third, and librarian respondents the last.

The study also looked into 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 7. It is observed

Table 8. Knowledge about Wikipedia

Information about Wikipedia	Yes	%	No	%
Who read entries from Wikipedia	67	60.90	43	39.10
Who add entries in Wikipedia	42	38.18	68	61.82
Who edit entries in Wikipedia	34	30.90	76	69.10

that only 27.27 % of the LIS professionals have their own blog, 69.09 % of LIS professionals read blogs, while 58.18 % LIS professionals add posts to blogs.

Wikis are essentially open web-pages, where anyone registered with the wiki can publish to it, amend it, and change it. Much as blogs, they are not of the same reliability as

traditional resources, as the frequent discussions of Wikipedia (an online encyclopedia where any registered user can write, amend or otherwise edit articles) in the library world well note, but this of course does not eliminate their value; it merely changes librarianship, complicates collection, development, and information literacy

instruction. The lack of peer review and editorship is a challenge to librarians, not in that users should avoid wikis, but only in that they should understand and be critical about depending on them. Wikis, as items in a collection, and the associated instruction of users in the evaluation of them, are almost certainly part of the future of libraries. In addition, a library wiki as a service can enable social interaction among librarians and patrons, essentially moving the study group room online. As users share information and ask questions, answer questions, and librarians do the same within a wiki, a record of these transactions is archived perhaps for perpetuity. And these transcripts are in turn resources for the library to provide as reference. Furthermore, wikis and blogs will almost certainly evolve into a more multi-media environment as well, where both synchronous and asynchronous audio and video collaborations will take place. Blogs are

new forms of publication, and wikis are new forms of group study rooms.

Ultimately, blogs and wikis are relatively quick solutions for moving library collections and services into Web 2.0. This beginning of Library 2.0 makes collections and services more interactive and user-centered, enables information consumers to contact information producers and become co-producers themselves. It could be that Library 2.0 blurs the line between librarian and patron, creator and consumer, authority and novice. The potential for this dramatic change is very real and immediate, a fact that places an incredible amount of importance on information literacy. In a world where no information is inherently authoritative and valid, the critical thinking skills of information literacy are paramount to all other forms of learning. As far as awareness regarding Wikipedia is concerned, it is observed from Table 8 that 60.90% of LIS professionals read entries from Wikipedia,

Table 9. 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	72	65.45
No. of LIS Professionals who added pictures to Flicker	56	50.91
No. of LIS professionals who use RSS	48	43.63

38.18% of the LIS professionals add entries from Wikipedia and 30.90% of LIS professionals edit entries in Wikipedia.

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. An RSS document (which is called a "feed", "web feed," or "channel") includes full or summarized 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 9, that 65.45% of the LIS professionals visited Photosharing websites, 50.91% added pictures to Flicker and 43.63% of the LIS professionals used RSS.

Web 2.0 is collaborative and interactive. Social networking services enable users to share information within a network of colleagues through user profiles, linking users to others posting similar information. A social

Table 10. Knowledge about Social Network

Information about Social Network	Yes	%
No. of LIS Professionals participate in Social Network	68	61.81
No. of LIS Professionals who will use Web 2.0	96	87.27
No. of LIS professionals who use P2P Software	43	39.09
No. of LIS professionals who use ICQ, MSN	72	65.45

network thus can be formalized into a net structure comprising nodes and edges. Nodes represent individuals or organizations. Edges connecting nodes are called ties, which represent the relationships between the individuals and organizations. By enabling this, digital libraries will build a network among the interested group in discussing the common interest, and users can add the information to the digital library like book reviews and comments etc. It is observed from Table 10, that 61.81% of LIS professionals participated in social network, 87.27% of the

Table 11. Knowledge about YouTube

Information about You Tube	Yes	%
No. of LIS professionals who watch video on YouTube or other video – sharing Websites	75	68.18
No. of LIS professionals who uploaded videos on YouTube or other video – sharing websites	46	41.81

librarians thought that they would use Web 2.0 in future, only 39.09% of LIS professionals used P2P software and 65.45% used ICQ, MSN, other Instant Messenger.

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 YouTube 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 a powerful tool for raising the institutional profile worldwide and a promising channel when exploited in the marketing operations of such institutions. It has been observed from Table 11, that 68.18%

Table 12. Knowledge about Bulletin Board Service (BBS)

Information about BBS	Yes	%
No. of LIS professionals who added a post in BBS	37	33.63
No. of LIS professionals who posted opinion when reading news online	68	61.81
No. of LIS professionals who participated in e-polling	56	50.90
	42	38.18

of LIS professionals from different engineering colleges watched Video on YouTube and other video sharing devices and 41.81% of LIS professionals uploaded videos on it.

It is observed from Table 12, that 33.63% of library professionals added posts to blog, 61.81% of library professionals posted opinions when reading news online, 50.90% participated in e-polling, and 38.18% of the library professionals provided news clues to mass media.

CONCLUSION

Web 2.0 websites allow users to do more than just retrieve information. By increasing what was already possible in "Web 1.0", now

Web 2.0 provides the user with more user-interface, software and storage facilities, all through their browser. The library's collection is changing, becoming more interactive and fully accessible. The library's services are changing, focusing more on the facilitation of information transfer and information literacy rather than providing controlled access to it.

It is concluded from the study that the library and information science professionals of the Medical Colleges in Tamil Nadu are well aware the modern concepts like Web 2.0 and use these concepts. But they implement it very less as far as rendering or library services are concerned. It is clear that all surveyed participants recognized this innovation in information evolution as a global trend that requires a local responsiveness that would align local players quickly enough to keep them relevant. The use of Web 2.0 technologies will constitute a meaningful and substantive change in the history of libraries. Developing countries need to capture this vision and participate in order to remain relevant.

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