A Survey Study of the Social Networking Sites Used By Libraries and Their Rankings

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ABSTRACT

A survey was conducted to determine the level of awareness of library professionals working in engineering and technological institution libraries in Karnataka regarding web technology and social media sites in particular. The researcher designed a structured questionnaire using Google Forms and sent it to 204 engineering colleges affiliated with Visvesvaraya Technological University, Belagavi. There is a reasonable amount of awareness and acquaintance with social media sites among working library professionals. Analysis and interpretation are performed with the standard statistical tool (SPSS). The result of this study could provide library professionals with useful insights on how to use social media sites to promote library services.

1. Introduction

A new generation of tech-savvy library and information users has been introduced to information through the use of information technology (Thomas & Mcdonald, 2005). If they approach the traditional values of libraries, they may find that the library's policies, services, and values conflict with their expectations. Consequently, the Web has developed into Web tools that are more social, interactive, and dynamic.

The ability to collaborate and share information is made possible by technology platforms that are interactive and enable communication. Libraries worldwide are integrating a variety of Web tools into their websites so they can become more functional and attractive. For example, social networking services, blogs, wikis, multimedia sharing services, content syndication, podcasting, and content tagging can all be integrated into library websites. In the past, librarians would have been unable to develop personalized new services, especially due to the lack of Web tools.

In today's digital age, academic libraries can no longer ignore the rapid development of technology, globalization, resource scarcity, and changing educational needs affecting educational systems and

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institutions. As the web becomes more engaging, interactive, and participatory, library staff are also adapting to changes on the web to meet users' changing information needs (Maness, 2006). The focus is on "less focus on developing secure storage systems and more on implementing collaborative discovery systems". Users can use Web 2.0 technology for two-way communication and knowledge sharing in the library.

According to (Maness, 2006), "As society changes, libraries should not only change with them, but should allow users to change libraries". Academic libraries around the world are rapidly becoming leading service providers, incorporating Web 2.0 technologies in the design and delivery of their services. The researchers focused on using Web 2.0 tools to improve library services. Almost all Web 2.0 technologies allow for easy customization and better user engagement based on the needs of the organization. According to (Chua & Goh, 2010), when implemented in libraries, Web 2.0 "has the potential to facilitate the creation of participatory networks where librarians and users can communicate, collaborate and co-create content".

1.1 Scope and Limitation of the Study

Web technology tools cover most aspects of web technology. The purpose of this study was to investigate the impact of social media tools such as Facebook, Twitter, YouTube, Google+, LinkedIn and Instagram. It also investigated the awareness of these tools among library professionals about adoptability of the web tools in library services. The investigation took place in the state of Karnataka in India. The survey is limited to engineering and technological institutions.

1.2 Objectives

- The purpose of this survey is to determine how aware engineering college librarians are of social media sites and its adoptability in library services.
- To investigate any differences with gender, qualification, experience and designation towards awareness about social media sites.
- To rank the social media sites according to its awareness.

1.3 Methodology

The purpose of this study was to determine the level of awareness of library professionals in engineering college libraries in Karnataka about web technology tools, specifically social media sites. A structured questionnaire was used to collect data for the study. Data was collected using an online questionnaire designed in Google Forms. The questionnaire was distributed to 204 engineering college libraries, and 140 responses were received.

The questionnaire tried to extract the respondent's demographic information and interrogated on awareness that they can adopt the social media sites or tools for library service purpose. The survey was conducted from January to June 2021.

2. Literature Review

The term 'Web 2.0' was coined by Tim O'Reilly in 2004. According to (O'Reilly, 2006), Web 2.0 represents "a business revolution in the computer industry caused by the move to the internet as platform" and its essence is to "build applications that harness network effects to get better the more people use them". It involves changes "within internet technology, as well as in the way we think about and use the web" (Wiggins, 2009). A wide range of Web 2.0 tools and applications are available, including blogs, wikis, social networking sites, social tagging, instant messaging, RSS, and file-sharing and social bookmarking sites. Web 2.0 tools and technologies allow users to "generate, describe, post, harvest, search, annotate and exchange online content" in various forms ranging from music, bookmarks to photographs and documents (Macaskill & Owen, 2006). According to (Stephens M, 2006), Web 2.0 affords connections among people leading to the creation and redistribution of content in numerous ways. (Liu S, 2008) mentions that "in the Web 2.0 era, the relationship between users and information is transformed from stand-alone, separate silos to mutually inclusive, mutually reliant, and reciprocal action-and-reaction".

(Baro et al., 2013a) this paper aimed to analyze the extent of library staff in Nigeria's university libraries use of web tools and are aware of them. It emerged that the librarians were aware of social networking sites, instant electronic communication, media sharing sites, blogs and wikis. the recognition of those, web tools the most often utilized by librarians. Web 2.0 tools like Flickr, RSS feeds, podcasts, social bookmarking, were among the smallest amount used. The study unconcealed that librarians use web 2.0 tools largely for reference services on-line, library news/events, coaching resources, and image and video sharing. (Baro et al., 2013a) Lack of facilities like computers with web access, lack of skills, and lack of time were indicated as a number of the barriers to the use of the web 2.0 librarians in university libraries in Nigeria. These analysis results may be consulted by interested librarians as they commit to implementing web 2.0 applications in their libraries.

(Oni et al., 2018) messaging, and wikis. According to the study, the most commonly used Web 2.0 tools by library librarians in African universities are Facebook, instant messaging, blogs, Twitter, and wikis. As revealed in the study, librarians use Web 2.0 tools for announcing library news/events, providing online reference services, offering training resources, and allowing their users to share images and videos. In summary, there are a number of challenges that librarians cited related to using Web 2.0 tools, including a lack of skills, power failures, a lack of computers with Internet access and a lack of time. The results of these studies can also be used by librarians planning to build Web 2.0 applications at their libraries. An overall picture of the Web 2.0 applications in university libraries in Africa is presented in this study that is intended to provide these libraries with helpful information to better understand how their colleagues elsewhere are using Web 2.0 technologies to render library services.

(Aiyebelehin et al., 2020) This study looked at how librarians in selected Edo State universities utilize cloud computing services. A questionnaire was used and a descriptive survey design was employed. A total of 132 professionals and para-professionals were included in the study. Due to the manageable size of the population, we chose the total enumeration method. Analyzing

the data collected, percentages, frequency counts, and means were calculated. Cloud computing services and technology were found to be used by librarians for collection development and cataloging tasks. Based on the findings, the management of libraries should financially support librarians to acquire and maintain infrastructure for cloud computing by providing funding to the libraries.

(Saibakumo, 2021) The provision of expanded and updated information services is critical to the survival and use of academic libraries in the digital age. In academic libraries, technological developments are driving libraries to adopt a comprehensive, user-friendly and technology-driven approach to service delivery. New technologies seem to fill this perceived void. (Baro et al., 2013b) This study investigated the awareness, adoption, preference and willingness of university libraries in Nigeria to incorporate innovative technologies. The number of new technologies approved is small and awareness is high, but the speed of adoption is slow. New technologies are ready and widely pursued, but full implementation by regulatory and funding agencies as well as parent institutions is limited by insufficient funding.

3. Data Analysis and Interpretation

View and analyze study observations using different statistical procedures for data analysis. In this study, researcher first collected the data on the basis of questionnaires with *two points, three point and five-point Likert scale*. Then the weights are allotted like the score *5 was allotted if the response is strongly agreed, 4 is given to agree, 3 for neutral or very aware and high use, 2 for disagree or Aware and average use, 1 for Not aware and low use and finally the score 0 was allotted for the response 'no' for each item* (Kumbar & Mulla, 2021).

The total scores were calculated accordingly and taken/considered as a quantitative character for good and strong statistical analysis. The suitable statistical methods have been used such as frequencies, percentages, sample mean, standard deviation, independent two sample t test, one way of variance (ANOVA), and product moment correlation coefficient.

In the beginning, the summery of statistical analysis of the respondent's demographic profile is done followed by the inferential analysis of librarians working in engineering colleges affiliated to Visvesvaraya Technological University (VTU), Belagavi, Karnataka, India is done subsequently with interpretations. The selected demographic profiles of librarians working in engineering colleges were compared through independent t-test, one way ANOVA followed with respect to overall awareness and its dimensions i.e., awareness towards social networking sites.

According to the objectives and hypotheses, these different kinds of statistical tools are of the great help in analyzing and establishing the related variables. The variables are measured both on isolated and group basis. The principle of the handiness, the different sections of this analysis of the study has been organized under different headings.

Table 1. Distribution of Respondents by Gender

Gender	No. of Respondents	Percentage
Male	112	80.00
Female	28	20.00
Total	140	100.00

From the results of the above table, it can be seen that, out of a total of 140 respondents from various engineering colleges, in which 112 (80.00%) are male respondents and 28 (20.00%) are female respondents. Hence, the male respondents or professionals are dominating in work place of institution libraries with 80% responses.

Table 2. Distribution of Respondents by Educational Qualification

Educational Qualification	No. of Respondents	Percentage
M. Lib.	97	69.29
M. Lib. & M. Phil	18	12.86
M. Lib. & Ph. D.	20	14.29
M. Lib. & NET or SLET	5	3.57
Total	140	100.00

From the results of the above table, it can be seen that, out of a total of 140 respondents in which, a maximum of 97 (69.29%) of respondents have M. Lib. as a postgraduate degree and a minimum of 5 (3.57%) of respondents have M. Lib. & NET (National Eligibility Test) or SLET (State Level Eligibility Test) degree followed by 18 (12.86%) respondents have M. Lib. & M. Phil degree and 20 (14.29%) respondents have M. Lib. & Ph. D. degree.

Table 3. Distribution of Respondents by Years of Professional Experience

Professional Experience	No. of Respondents	Percentage
00-10 yrs	34	24.29
11-20 yrs	63	45.00
21-30 yrs	30	21.43
31 and Above yrs	13	9.29
Total	140	100.00

From the results of the above table, it can be seen that, out of 140 respondents in which, a maximum of 63 (45.00%) respondents have 11-20 years of experience and a minimum of 13 (9.29%) respondents have 31 and above years of experience followed by 34 (24.29%) of respondents have 0-10 years of experience and 30 (21.43%) of librarians have 21-30 years of experience.

Table 4. Distribution of Respondents by Designations

	No. of Respondents Designations	Percentage
Chief Librarian	34	24.29
Librarian	93	66.43
Assistant Librarian	13	9.29
Total	140	100.00

From the results of the above table, it can be seen that, out of 140 respondents in which, a maximum of 93 (66.43%) of respondents are working as Librarian and a minimum of 13 (9.29%) of respondents are working as Assistant Librarians followed by 34 (24.29%) of respondents are working as Chief Librarian.

Level of awareness about the social media sites and its use for library facilities by library professionals. In this section, researcher analyzed the data related to components of awareness about the social media sites by respondents of engineering colleges according to gender, educational qualifications, and years of professional, designations by applying the independent t-test and one way ANOVA and the results are presented.

Table 5. Respondents' Awareness about Different Social Media Sites

Social networking sites	Not aware and low use	%	Aware and average use	%	Very aware and high use	%
Facebook	4	2.86	65	46.43	71	50.71
Twitter	12	8.57	59	42.14	69	49.29
YouTube	9	6.43	51	36.43	80	57.14
LinkedIn	10	7.14	53	37.86	77	55.00
Google+	7	5.00	49	35.00	84	60.00
Instagram	14	10.00	59	42.14	67	47.86

The objective of the above table is to know the awareness about different social networking sites by respondents of engineering colleges. It clearly shows that, out of 140 respondents, 50.71% of respondents are very aware and very usefulness of Facebook and 46.43% of respondents are average aware and average use of Facebook. It means that, almost all (97.14%) respondents are aware about the Facebook that they can use it for library services. 49.29 % of respondents are very aware and very use of Twitter and 42.14 % of respondents are average aware and average use of Twitter. It means that, almost all (91.43%) respondents are aware about the Twitter as it could be used in library services.

57.14% of respondents are very aware and very use of YouTube and 36.43% of respondents are average aware and average use of YouTube. It means that, almost all (93.57%) respondents are aware about the YouTube as it is adoptable for library services. 55.00% of respondents are very aware and very use of LinkedIn and 37.86% of respondents are average aware and

average use of LinkedIn. It means that, almost all (92.86%) respondents are aware about the LinkedIn.

60.00% of respondents are very aware and very use of Google+ and 35.00% of respondents are average aware and average use of Google+. It means that, the almost all (95.00%) respondents are aware about the Google+ about its application in libraries. 47.86% of respondents are very aware and very use of Instagram and 42.14% of respondents are average aware and average use of Instagram. It means that, the almost all (90.00%) respondents are aware about the Instagram.

Table 6. Ranking of Different Social Networking Sites on the Basis of Awareness

Sl. No.	Social Networking Sites	Mean	SD	Rank
1	Google+	2.55	0.59	1
2	YouTube	2.51	0.62	2
3	Facebook	2.48	0.56	3
4	LinkedIn	2.48	0.63	4
5	Twitter	2.41	0.64	5
6	Instagram	2.38	0.66	6

According to the above table, the objective is to identify the level of awareness about different social networking sites among librarians of engineering colleges in the study. The statements are given in the table on a three-point scale from not aware and low use, aware and average use; very aware and high use. The mean and standard deviation scores of individual items were calculated. Based on the mean scores, the ranks are assigned and presented in the above table. It clearly shows that, the highest mean was seen in the item related to Google+ (2.55±0.59), YouTube (2.51±0.62), Facebook (2.48±0.56), LinkedIn (2.48±0.63), Twitter (2.41±0.64) and least mean was seen in Instagram (2.38±0.66).

3.1 Hypothesis Tests

3.1.1 Null Hypothesis

There is no significant difference between male and female respondents with respect to awareness towards the social media sites and its use. Results of t-test between male and female respondents with respect to awareness towards the web tools and its use and its components.

Variables	Summery	Male	Female	Total	t-value	p-value
Awareness towards social networking sites	Mean	12.66	13.36	12.80	-0.8395	0.4027
	SD	3.98	3.71	3.92		

The mean of awareness towards component of awareness i.e., social networking sites in the study is (12.80±3.92), in which, the mean awareness towards social networking sites in male respondent is 12.66±3.98 and female is 13.36±3.71. The difference is not found to statistically significant (t=-0.8395, p=0.4027) at 5% level of significance. It means that, the mean awareness towards social networking sites is similar in male and female respondents of engineering colleges.

3.1.2 Null Hypothesis

There is no significant difference between educational qualifications of the respondents with respect to awareness towards the web technology tools and its use and its components i.e., Awareness towards social networking sites.

Results of one-way ANOVA test between educational qualifications (Table 2) of respondents of engineering colleges with respect to awareness towards the web technology tools and its use and its components.

Variables	Summery	M. Lib.	M. Lib. & M. Phil	M. Lib. & Ph. D.	M. Lib. & NET or SLET	F-value	p-value
Awareness towards social networking sites	Mean	12.36	13.22	15.25	10.00	4.1962	0.0071*
	SD	3.83	4.31	3.32	2.45		

*p<0.05

The results of the above table show the following:

The mean awareness score is highest in respondents with M. Lib. and Ph. D. degree is 91.35±7.58 and lowest in respondents with M. Lib. & NET or SLET degree 75.80±10.33 as compared to respondents with M. Lib. 83.46±11.78 and respondents M. Lib. with M. Phil degree 83.46±11.78. The difference is found to be statistically significant F=4.0870, p=0.0082 at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. This means the mean score of awareness towards web tools and its use is significantly higher in respondents with M. Lib. & Doctoral degree and lowest among respondents with a M. Lib. degree. & SET or SLET degree than others.

3.1.3 Null Hypothesis

There is no significant difference between years of experiences of respondents with respect to awareness towards the web tools and its use and its components i.e., Awareness towards social networking sites.

To test the above null hypothesis, the one-way ANOVA test was applied and the results are presented in the following table. Results of one-way ANOVA test between years of experiences of respondents with respect to awareness towards the web tools and its use.

Variables	Summery	0-10yrs	11-20 yrs	21-30 yrs	31 & above yrs	F-value	p-value
Awareness towards social networking sites	Mean	10.18	11.59	16.60	16.77	37.2595	0.0001*
	SD	3.03	3.34	2.14	1.92		

*p<0.05

According to the above table, the following can be seen:

The mean awareness score towards dimension i.e., social networking sites is highest in respondents with 31 & above years of experience is 16.77±1.92 and lowest in respondents with 0-10yrs of experience is 10.18±3.03 as compared to respondents with 11-20 yrs of experience 11.59±3.34 and respondents with 21-30 yrs of experience is 16.60±2.14. The difference is found to be statistically significant F=37.2595, p=0.0001 at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. Consequently, the mean awareness score towards social networking sites is significantly higher in respondents with 21-30 years of experience and lowest in respondents with 0-10yrs of experience.

3.1.4 Null Hypothesis

In terms of awareness of social networking sites, there are no significant differences between respondents' designations.

To test the above null hypothesis, the one-way ANOVA test was applied and the results are presented in the following table. ANOVA results on the awareness of social networking sites of respondents by their designations (Chief Librarian, Librarian, and Assistant Librarian).

Variables	Summery	Chief Librarian	Librarian	Assistant Librarian	Total	F-value	p-value
Awareness towards social networking sites	Mean	12.91	12.69	13.31	12.80	0.1586	0.8535
	SD	4.45	3.71	4.21	3.92		

*p<0.05

The interpretation of the above table result is falls as below:

Assistant librarians of engineering colleges have the highest awareness score towards social networking sites (13.31±4.21) and lowest among librarians (12.69±3.71) as compared to Assistant librarians of engineering colleges (12.91±4.45). The difference is found to be statistically not significant F=0.1586, p=0.8535 at 5% level of significance. As a result, the null hypothesis is accepted and the alternative hypothesis is rejected. Accordingly, the mean awareness score towards social networking websites is similar among the Chief Librarian, Librarian and Assistant Librarian of engineering colleges.

4. Findings and Discussion

The research finds are 97.14 percentage of respondents were aware about the Facebook that they can adopt it for library purpose, 93.57 percentage of respondents were aware of Twitter, 92.86 percentage of respondents' were aware of YouTube, 95.00 percentage of respondents' were aware of Google+, and 90.00 percentage of respondents' were aware of Instagram. There was no difference with regards to gender, qualification, experience about the awareness and knowledge regarding the social media websites.

According to the findings of the study, there is no difference between the respondents' regarding their awareness of the use of social networking sites in libraries and social networking sites were used to serve library users by providing services such as paper clippings, current awareness services, and new arrivals' alerts.

It is explicitly mentioned that the majority of library professionals know how to use most of the social media sites to assist users. As the present generation has become more active on social media sites, hence library professionals can use these in a positive way to reach the present generation of library users.

Researchers hypothesized that there is no marginal or zero difference existed with respect to awareness that web tools like social media are effective tools for reaching quickly and disseminating information.

5. Conclusion

From the findings of the research that it can be conclude that professionals are handsomely aware about that they can adopt the social media tools to serve the library users.

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