Survey on the Use of Innovative Tools of Google Services: A Study

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ABSTRACT

In this survey research, library professionals of engineering and technological institutions in Karnataka State, INDIA are examined about the awareness level of Google Services. The Google Services are ranked according to the awareness level on the basis of Mean scores. A structured questionnaire was designed in Google Form. The researcher distributed 204 institutions and received 104 responses in a stipulated time. The standard analytical tool was used for analysis and interpretation of the data. This study could give library professionals useful insight into various Google Services to adopt in library services.

The mean and standard deviation scores were used for ranking the various Google Services. The questionnaire was distributed through email in a google form with a link. The study conclude that the library professionals must be trained to make them technically skilled in utilizing the Google services for library purpose. The hypothesis study is done between the demographic variables and google services awareness.

KEYWORDS

Web Technology, LIS Survey, Library Services, Web Tools, Google Services, Google Products

1. Introduction

Web technology is the term which indicates description of the latest developments in the use of the World Wide Web for various purposes and services in diverse service sectors. Web design is with the objective of enlarging and supporting ingenuity, sharing information and dissemination with secured transactions, and amplified teamwork, also to improvise the use of the web technology or tools in various fields of services like library. (Kannappanavar, 2005) Web technology provides an exceptional opportunity for library professionals as well as library users to serve or receive the library services from the library users and to connect the resources among the users. This is the only technology which allows communicating among the same community as it may be like library professionals, doctors, teachers, researchers, scientists, decision makers, marketers, promoters etc.

The word "Web 3.0" was first used by John Markoff of the New York Times in 2006". This web development has led to the rapid development in the increase of web communities and some kinds of services that are hosted by several people, such as social networking sites, for instance Facebook, MySpace, Instagram, and video sharing sites such as YouTube, Vimeo, and others like wikis, blogs, RSS Feeds, etc.

There is a potential for using these in libraries to provide services to the patrons of engineering and technological institutions to communicate with their users in a rapid way. Web Technology or web tools have offered various facilities like posting, messenger, live chatting, alerts etc. which libraries can utilize it to interact with their users or patrons. By applying these technologies in libraries, library professionals can encourage users to increase the usability of the library, invite participation, and collaborate in seeking valuable feedback and suggestions from the users.

It could remove many hurdles or barriers between library professionals and library users. The hurdles between library professionals and users are language, communication gaps, distance and timely service, time-consuming etc. The technology cannot replace the existing technologies or the theory and concepts, but can add more value to the library professionals which is provided by them.

During recent years, the topics of web technologies in teaching and learning process, digital library, virtual learning possibilities, e-learning, has become the major topics of research. There are many opinions of experts in technology that by adopting it can enhance the learning process through the expressive power of the learning process with description of learning content. Users, professionals and the services also need to match these all very intelligently.

These technological developments have made library users, a way of accessing information and utilizing it for their personal lives too (Pomerantz & Marchionini, 2007). Web technology also entirely changed the way of communication between library professionals and library users, interaction about the problems they face while accessing information, acquisition of information and sharing it among the users, examination and formation of knowledge content and reusing it.   At the beginning of this technology, there were no facilities for user's interaction. The inception of the World Wide Web has made the platform to use these for business and sharing information among library users.

Web access has become from static to dynamic by using programming languages like Java and XML, from one side ' interaction to both sides ' interaction by applying the latest programming languages (Jazayeri, 2007)). The present shift from static to dynamic and adopting technologies of the web 2.0 and series has given facilities like collaboration, interaction and communication between. This technology has given a small clue and assured that in near prospect for librarians and libraries is the adaptation of technology as Library 2.0. After the arrival of this technology, has changed the environment of the library as digital library and virtual library as well as resources as the new and latest

form of resources all over the world. The latest technology Library 2.0, permits user' comments and feedback on the usability of the procured library resources through various communication platforms.

Library 2.0 web technology provides the opportunity to promote the library services through image sharing, creating blogs for the library, using social networks like Facebook, Instagram, using many kinds of widgets like bookmarking, micro-blogging, social book marking, video sharing like YouTube, Vimeo etc., and the document sharing facilities which are become boom for the libraries to promote as well as market effectively among the library users or worldwide to explore their library. However, in most developing countries, there is a need for awareness and a need for training to make use of the library 2.0 technologies for their library purpose.

2. Literature Review

(Shastri & Chudasma, 2021) In a situation where most libraries were inaccessible globally, technology played a crucial role in enabling people to continue creative, professional, and academic activities. It is the objective of this study to determine the level of ICT skills, competencies, technologies used, and challenges faced by Gujarati library professionals. In order to disseminate information to library patrons and adapt to the Internet's omnipresence, the rapid expansion of e-resources, and the pandemic situation, library professionals must acquire ICT skills.

(Shahzad & Iqbal, 2020) To provide suggestions for the effective use and application of the most recent technological tools by University Librarians of Lahore, Pakistan. If libraries do not adopt the latest technologies, they cannot serve their users effectively. In the libraries of Pakistan, IT is not being utilized properly. Information technologies are not being utilized by library practitioners in a productive way due to lack of proper training. There is a lack of IT resources in Pakistan's libraries. It is clear from the problems cited by the respondents that formal training is needed to use IT and that sufficient funds must be.

(Khan et al., 2012) The role of the librarian has changed significantly with the advent of the Internet, World Wide Web, and the proliferation of online catalogs. (Baro, 2015) They study is a systematic review of current literature on the application ofWeb2.0 tools to library services. The use of Web 2.0 tools to render library services is still in its infancy in Africa. However, a few university libraries have started using them in an effort to reach out to users wherever they are. A number of challenges, such as lack of skills, power failure, lack of time, lack of facilities (computers with Internet access), conservative attitudes of some librarians, and a lack of policy guidance were identified as deterrents to the use of Web 2.0 tools in Africa. Based on the findings of this study, library staff and professionals who are considering embracing Web 2.0 tools as a part of their system may find the findings useful as they consider librarians' experience with Web 2.0 tools.

3. Objectives of the Study
- To investigate library professional's awareness on different Google Services

- To rank Google Services on the basis of awareness with mean and standard deviation scores
- Finding any differences between respondents' demographic variables and awareness on Google Services

4. Methodology

Survey research methods and techniques were used to collect data from the respondents. The structured questionnaire was used for the study, which was designed using Google Forms and distributed its URL link to the respondent's email.

The questionnaire was distributed to 204 engineering college libraries and 140 responses were received from the respondents. The standard statistical tool used to analyze and interpret the data collect.

In the study, researchers used a three-point scale. The total scores were calculated accordingly and taken/considered as a quantitative character for aware and strongly aware statistical analysis. Suitable statistical methods have been used, such as frequencies, percentages, sample mean, standard deviation.

5. Scope and Limitations of the Study

Under the Visvesvaraya Technological University (VTU) Belagavi, there are 204 (100%) engineering colleges in Karnataka state and there are 4 regional divisions as Belagavi, Bengaluru, Kalaburagi and Mysuru, from each division samples were taken. Total 140 (68.62) samples were selected from all four divisions.

Web Technology is broader in coverage as it includes web development programs like HTML, CSS, JavaScript, JQuery, AJAX, XML, JSON, Bootstrap, PHP, ASP, SQL, etc. Web technology tools like Social Medias such Facebook, Instagram and Twitter, RSS Feeds, Google Services, Instant Messenger, Blogs, and Websites etc. which are well known and frequently used in Indian scenario are covered in this research work. These web tools are relevant and not much more coding and technology expertise is not required to adopt in the library services.

6. Need of the Study

Present generation is technologically equiped and technology natives. The libraries and the professionals required to serve such young and technological equiped users. The generation is enganged in emails and messengers and such web based services. To serve such wel versed users in the engineering and technological instiutions, the library professionals should adopt the latest web tools like various Google Services to attract the users and reach them. In this regard there is lack of follow-up about the topic in the Karnataka region especially in engineerigna and technological institutions. So, there is a need to explore and bring some light on the problems and issues faced by the working professionals in the instiions.

7. Results and Discussion of the Study

This section consists of the presentation and analysis of the observed findings of the study using a various statistical procedure which are used for data analysis. In the study, researcher first collected the data on the basis of questionnaire with three-point scale. Then the weights are allotted like 3 for very aware and high use, 2 for 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. 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 respondents is done subsequently with interpretations. The selected demographic profiles of respondents working in engineering colleges were compared through independent t-test, one way ANOVA followed with respect to awareness towards Google Services.

7.1 Demographical Information of the Respondents

In this section, we presented and discussed the Demographic Information of respondents of engineering colleges affiliated Visvesvaraya Technological University (VTU), Belagavi.

Table -1 : Total Number of Respondents

No. of Questionnaire Distributed	No. of Responses Received	Percentage
204	140	68.62

To gain precise responses, the researcher had sent questionnaires by email as link (Google Form) telephonic follow-ups. The mode of collection of data, its representation, analysis and interpretation are presented in the form of tables and graphs.

Table 2: Distribution of Respondents by Gender

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

Based on the results of the above table, it is evident that, out of a total of 140 respondents, in which 112 (80.00%) are male respondents and 28 (20.00%) are female.

Table 3: Distribution of Respondents by Highest Educational Qualification

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

Based on the results of the above table, it is evident that, out of a total of 140 respondents, in which, a maximum of 97 (69.29%) of respondents have M.Lib. as a highest qualification and a minimum of 5 (3.57%) of respondents have M. Lib. & NET or SLET degree followed by 18 (12.86%) of respondents have M. Lib. & M. Phil degree and 20 (14.29%) of respondents have M. Lib. & Ph. D. degree.

Table 4: Distribution of Respondents by Professional Experience

Professional Experience	No. of Respondents	Percentage
0-10yrs	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

Based on the results of the above table, it is evident that, out of a total of 140 respondents, in which, a maximum of 63 (45.00%) of respondents have 11-20 years of experience and a minimum of 13 (9.29%) of 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 respondents have 21-30 years of experience.

Table 5: Distribution of Respondents by Designations

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

Based on the results of the above table, it is evident that, out of a total 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.

7.2 Infrastructure Information of Library and Colleges

In this section, researcher presented and discussed the Infrastructure Information of Library and Institutions affiliated to Visvesvaraya Technological University (VTU), Belagavi and presented in the following table.

Table 6: Distribution of Engineering Colleges by Types of Institution

Types of Institution	No. of colleges	Percentage
Private	124	88.57
Government	5	3.57
Autonomous	11	7.86
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 respondents, in which, a maximum of 124 (88.57%) of respondents are working in private engineering colleges and a minimum of 5 (3.57%) of respondents are working government engineering colleges followed by 11 (7.86%) of respondents are working in autonomous engineering colleges.

Table 7: Distribution of Engineering Colleges by Courses Offered

Courses offered	No. of colleges	Percentage
Bachelor Degree	33	23.57
Bachelor Degree, Master Degree	52	37.14
Bachelor Degree, Master Degree, Doctoral Degree	55	39.29
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 engineering colleges, in which, a maximum of 55 (39.29%) of engineering colleges are offered Bachelor Degree, Master Degree and Doctoral Degrees and a minimum of 33 (23.57%) of engineering colleges are offered Bachelor Degree only followed by 52 (37.14%) of engineering colleges are offered Bachelor Degree and Master Degree.

Table 8: Distribution of Engineering Colleges by Total Number Library Users

Total number library users	No. of colleges	Percentage
1-500 users	6	4.29
501-1000 users	31	22.14
1001-1500 users	37	26.43
1501 and above users	66	47.14
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 engineering colleges, in which, a maximum of 66 (47.14%) of engineering colleges have 1501 and above library users and a minimum of 6 (4.29%) of engineering colleges have 1-500 library users followed by 31 (22.14%) of engineering colleges have 501-1000 library users and 37 (26.43%) of engineering colleges have 1001-1500 library users.

Table 9: Distribution of Engineering Colleges by Regional Divisions

Regional divisions	No. of colleges	Percentage
Belagavi Division	23	16.43
Bengaluru Division	56	40.00
Kalaburagi Division	13	9.29

Mysuru Division	48	34.29
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 engineering colleges, in which, a maximum of 56 (40.00%) of engineering colleges from Bengaluru Division and a minimum of 13 (9.29%) of engineering colleges from Kalaburagi Division followed by 23 (16.43%) of engineering colleges from Belagavi Division and 48 (34.29%) of engineering colleges from Mysuru Division.

Table 10: Distribution of Engineering Colleges by Internet Access Facility

Internet access facility	No. of colleges	Percentage
LAN Only	27	19.29
Wi-Fi Only	4	2.86
Both of the Above	109	77.86
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 engineering colleges, in which, a maximum of 109 (77.86%) of engineering colleges have both LAN and WIFI internet access facility and a minimum of 4 (2.86%) of engineering colleges have Wi-Fi only internet facility followed by 31 (22.14%) of engineering colleges have LAN internet access facility only and 27 (19.29%) of engineering colleges have WIFI internet access facility.

Table 11: Distribution of Engineering Colleges by Number of Computers for Library Users

Number of computers for library users	No. of colleges	Percentage
1-10 computers	28	20.00
11-20 computers	37	26.43
21-30 computers	32	22.86
31-40 computers	15	10.71
41-50 computers	19	13.57
>=51 computers	9	6.43
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 engineering colleges, in which, a maximum of 37 (26.43%) of engineering colleges have 11-20 computers for library users and a minimum of 9 (6.43%) of engineering colleges have >=51 computers for library users followed by 28 (20.00%) of engineering colleges have 1-10 computers, 32 (22.86%) of engineering colleges have 21-

30 computers, 15 (10.71%) of engineering colleges have 31-40 computers and 19 (13.57%) of engineering colleges have 41-50 computers.

Table 12: Distribution of Engineering Colleges by Status of Library Automation

Library automation	No. of colleges	Percentage
Automated	136	97.14
Manual	4	2.86
Total	140	100.00

Based on the results of the above table, it is evident that, out of a total of 140 engineering colleges, in which, a maximum of 136 (97.14%) of engineering colleges have automated library and only of 4 (2.86%) of engineering colleges have manual.

7.3 Respondents' Awareness Level about Google Services

Table 13: Respondents Awareness about Different Google Services

Google Services	Not aware and low use	%	Aware and average use	%	Very aware and high use	%
Google books	17	12.14	14	10.00	109	77.86
Google translator	27	19.29	11	7.86	102	72.86
Image search	23	16.43	14	10.00	103	73.57
Google scholar	14	10.00	8	5.71	118	84.29
Google forms	9	6.43	14	10.00	117	83.57
Google drive for online backup and storage	9	6.43	17	12.14	114	81.43
Feedburner	11	7.86	46	32.86	83	59.29
Google docs	5	3.57	16	11.43	119	85.00
Gmail	25	17.86	6	4.29	109	77.86

The objective of the above table is to know the awareness about different Google services. It clearly shows that, out of 140 respondents,

77.86% respondents are very aware and high use of Google Books and 10.00% respondents are average aware and average use of Google books. It means that, the 87.86% respondents are aware about the Google books. 72.86% respondents are very aware and high use of Google Translator and 7.86% of respondents are average aware and average use of Google Translator. It means that, the 80.72% respondents are aware about the Google Translator. 73.57% respondents are very aware and high use of Image search and 10.00% of respondents are average aware and average use of Image search. It means that, the 83.57% respondents are aware about the Image search. 84.29% respondents are very aware and very use of Google Scholar and 5.71% respondents are average aware and average use of Google Scholar. It means that, the 90.00% respondents are aware about the Google scholar. 83.57% of respondents are very aware and high use of Google Forms and 10.00% respondents are average aware and average use of Google Forms. It means that, the 93.57% respondents are aware about the Google Forms. 81.43% respondents are very aware and high use of Google drive for online backup and storage and 12.14% respondents are average aware and average use of Google drive for online backup and storage. It means that, the 93.57% respondents are aware about the Google drive for online backup and storage. 59.29% respondents are very aware and high use of Feedburner and 32.86% respondents are average aware and average use of Feedburner. It means that, the 92.15% respondents are aware about the Feedburner. 85.00% respondents are very aware and high use of Google Docs and 11.43% respondents are average aware and average use of Google Docs. It means that, the 96.43% respondents are aware about the Google docs. 77.86% respondents are very aware and high use of Gmail and 4.29% of respondents are average aware and average use of Gmail. It means that, the 82.15% respondents are aware about that it can used for library services purpose.

Table 14: Ranking of Google Services on Basis of Awareness Mean Scores

Sl. No.	Google Services	Mean	SD	Rank
1	Google docs	2.81	0.47	1
2	Google forms	2.77	0.55	2
3	Google drive for online backup and storage	2.75	0.56	3
4	Google scholar	2.74	0.63	4
5	Google books	2.66	0.69	5
6	Gmail	2.60	0.78	6
7	Image search	2.57	0.76	7
8	Google translator	2.54	0.80	8
9	Feedburner	2.51	0.64	9

The objective of the above table is to know the awareness level about different Google services which in engineering colleges in the study. The statements are given in the above table in the three-point scale from not aware and low use, aware and average use; very aware and high use. The mean and SD 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 docs (2.81±0.47), Google forms (2.77±0.55), Google drive for online backup and storage (2.75±0.56), Google scholar (2.74±0.63), Google books (2.66±0.69), Gmail (2.60±0.78), Image search (2.57±0.76), Google translator (2.54±0.80) and least mean was seen in Feedburner (2.51±0.64). The mean scores are also presented in the following figure.

Null hypothesis: There is no significant difference between male and female respondents of engineering colleges with respect to awareness towards google services. To test the above null hypothesis, the independent t test was applied.

Table 15: Results of t Test between Male and Female Respondents

Variables	Summery	Male	Female	Total	t-value	p-value
Awareness towards google services	Mean	24.02	23.71	23.96	0.4012	0.6889
	SD	3.54	3.76	3.57		

From the results of the above table, it can be seen that the followings: The mean of awareness towards Google Services is (23.96±3.57), in which, the mean of awareness towards Google Services in male respondents is (24.02±3.54) and female is (23.71±3.76). The difference is not found to statistically significant (t=0.4012, p=0.6889) at 5% level of significance. It means that, the mean awareness towards google services is similar in male and female respondents.

Null hypothesis: There is no significant difference between qualifications of respondents with respect to awareness towards Google Services. To test the above null hypothesis, the one-way ANOVA test was applied.

Table 16: Results of One-Way ANOVA Test between Qualifications of Respondents.

Variables	Summery	M. Lib.	M. Lib. & M. Phil	M. Lib. & Ph. D.	M. Lib. & NET or SLET	F-value	p-value
Awareness towards google services	Mean	23.82	24.44	24.80	21.40	1.3946	0.2472
	SD	3.71	2.68	2.86	5.50		

*p<0.05

From the results of the above table, it can be seen that the followings:

The mean awareness score towards Google Services is highest in respondents with M. Lib. & Ph. D. degree is (24.80±2.86) and lowest in respondents with M. Lib. & NET or SLET degree (21.40±5.50) as compared to respondents with M. Lib. (23.82±3.71) and respondents with M. Lib. & M. Phil degree (24.44±2.68). The difference is found to be statistically not significant F=1.3946, p=0.2472) at 5%

level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the mean of awareness towards google services scores is similar among respondents with different educational qualifications.

Null hypothesis: There is no significant difference between years of experiences of respondent's awareness towards Google Services. To test the above null hypothesis, the one-way ANOVA test was applied.

Table 17: Results of one-way ANOVA test between years of experiences of respondents with respect to awareness towards the Google Services

Variables	Summery	0-10yrs	11-20 yrs	21-30 yrs	31 & above yrs	F-value	p-value
Awareness towards google services	Mean	22.71	23.52	25.50	25.77	5.0999	0.0022*
	SD	3.79	3.82	2.43	1.88		

*p<0.05

The above table shows, it can be seen that the followings:

The mean awareness score towards Google Services is highest in respondents with 31 & above yrs of experience (25.77±1.88) and lowest in respondents with 0-10yrs of experience (22.71±3.79) as compared to respondents of engineering colleges with 11-20 yrs of experience (23.52±3.82) and respondents with 21-30 yrs of experience (25.50±2.43). The difference is found to be statistically significant F=5.0999, p=0.0022) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the mean awareness score towards the google services is significantly higher in respondents of engineering colleges with 31 & above yrs of experience and lowest in respondents with 0-10yrs of experience as compared to others.

Null hypothesis: There is no significant difference between designations of respondents with respect to awareness towards awareness towards google services. To test the above null hypothesis, the one-way ANOVA test was applied.

Table 18: Results of one-way ANOVA test between Designations of Respondents with Respect to Awareness towards the Google Services

Variables	Summery	Chief Librarian	Librarian	Assistant Librarian	Total	F-value	p-value
Awareness	Mean	24.21	23.98	23.15	23.96	0.4097	0.6646

| towards google services | SD | 2.83 | 3.74 | 4.20 | 3.57 | | |

*p<0.05

From the results of the above table, it can be seen that the followings:

The mean awareness score towards Google Services is highest in Chief Librarians of engineering colleges (24.21±4.33) and lowest in Assistant librarians (23.15±4.20) as compared to respondents of engineering colleges (23.98±3.74). The difference is found to be statistically not significant F=0.4097, p=0.6646) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the mean awareness score towards the google services is similar among Chief Librarian, Librarian and Assistant Librarian.

7.4 Summary and Findings

This section summarizes the investigation, the findings, discussions of the findings, conclusions derived from the findings, limitations of the study, and suggestions for further research in the field.

7.4.1 Moderate Variables

- Gender (male and Female),
- Highest educational qualifications (M. Lib., M. Lib. with M. Phil, M. Lib. With Ph. D. and M. Lib. with NET or SLET),
- Years of professional experiences (0-10yrs, 11-20 yrs, 21-30 yrs, 31 and above yrs),
- Designations (Chief Librarian, Librarian and Assistant Librarian) and
- Regional divisions (Belagavi, Bengaluru, Kalaburagi and Mysuru)
- Age groups

Keeping in view of the above objectives the chapter wise hypotheses, findings and conclusions are as follows:

7.4.2 Findings

- 87.86% respondents are aware about the Google books
- 80.72% respondents are aware about the Google translator
- 90.00% respondents are aware about the Google scholar
- 93.57% respondents are aware about the Google forms
- 93.57% respondents are aware about the Google drive for online backup and storage
- 92.15% respondents are aware about the Feedburner
- 96.43% respondents are aware about the Google docs
- 82.15% respondents are aware about the Gmail

8. Conclusions and Suggestions

Google provides various services and products with the aim of organizing the world's information, making it universally accessible, and making it more useful. Other Google services, such as YouTube and Blogger, appear in the top 100 most visited websites. For the past four years, Google has been the second most valuable brand in the world. Therefore, Google's powerful products/services can be used by Libraries to improve the experience of their users. Using Google apps, libraries can attract users in the virtual world by providing quick access to reference services.

Suggestions or Further Research Recommendations:

- Research could be undertaken on practical implementations of the various Google products
- Types of library services provided by using Google products
- Perceptions on use of Library professional towards Google products

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