UNDER-GRADUATE STUDENT'S PERSPECTIVE ON INTERNET RESOURCE DISCOVERY: A WEB USE BEHAVIOUR STUDY

Nayak, Savita N.[1] and Bankapur, V. M.[2]

"Google can bring you back 100,000 answers. A librarian can bring you back the right one." ~ Neil Gaiman

ABSTRACT

The study is designed to discover the web use behavior of under graduate students of arts, science, commerce and management streams in Govt. First Grade College, Ankola, Uttar Kannada in terms of user's background, purpose of use, searching skills, query formulation, frequency of use, favorite search engine etc. which helps the researcher to understand the student's search behavior on web. The data in the present study is based on questionnaire and observational methods. The sample size selected was 300, out of which 252 filled questionnaires from the students and are selected for analysis of data. The research study helped to know the importance of web resources for academic tasks, use of Google search engine for information retrieval and many other major findings. The findings of the study will help the information professional to discover knowledge assets or web resources to fulfil information needs of the students.

Kywords: *Internet Resources Discovery, Behaviour study, under graduate students, Web searching skills*

1. Introduction:

In this technological world globe has been treated as 'small village', where library and information centers across the globe has been tremendously impacted by computers, internet and e-resources. The Google world holds tremendous potential for a whole array of activities including online distance education, global digital library e-commerce, Internet telephony, electronic publishing, electronic journals, virtual museums etc. The exponential growth of knowledge and increase in the number of documents in various fields, the growing number of users and ever increasing demands and the escalating costs of publications including books and journals have made the managers of the library and information centers to look for alternatives to overcome from these barriers. The internet is one and only best suited communication media. The onslaught and rapid proliferation of e-resources have brought out several built in technological challenges for the Library and Information Centers such as discovering of suitable e-resources, tracking of e-resources right from the point of order to the final access, access, search and retrieval techniques and methods, information literacy skills for accessing online & e-resources.

The advent of information and communication technology (ICT) brought changes necessitated by new information packaging. Digital technology has revolutionized not only the way information is packaged, processed, stored, and disseminated, but also how users seek and access information.

[1] *Research Scholar, Rani Channamma University Belagavi & Librarian, Govt. First Grade College, Ankola, Uttar Kannada, Karnataka, India. savitanageshnayak@gmail.com*

[2] *Associate Professor, Dept. of Library and Information Science, Rani Channamma University, Belagavi, Karnataka, India*

Now a days, it is common practice that everyone just Google the internet for any piece of information requirement. In the academic environment, the students formulate their own search strategies for a search query to arrive at required information. Abundant amount of information is available over internet where the information base is strengthened by the availability of open access educational resources, course wares, institutional web pages, wikis, blogs, etc.

On the other side, Web resources provide the information with which a teaching community can keep them up-to-date and well informed and thereby contributing to the progress of the student community in colleges. The web resources are available in various formats have a significant role to play in all walks of life. Many E-resources available are free of cost and these help college communities to satisfy their information needs without spending a single pie. Some of them include Free online-courses, open source E-journals, E-books, Dictionaries, encyclopedias, courseware, Image collections, Map collection etc. In this networked environment searching for required information is commonly named as 'Googling' due to popularity of the search engine google.

2. Purpose of the study

In this competitive knowledge society, in which we live is predominantly handled by information and knowledge which have high monetary value. The Web, in the recent days is greatly affected by the use of various information sources. Use of the web for finding information by using various search engines, subject gateways is becoming more accessible in this knowledge society. The consumers of knowledge feel comfortable with online digital information rather than going for a physical document for their needy information. Therefore it is very much pertinent to have in depth information about the users/consumers information needs, information seeking behavior pattern, his approach to various websites, and his search strategies over the web. Overall it is necessary for information professional to know the resource discovery patterns of users in a web based environment.

3. Definition of key terms:

Resource Discovery

The term Resource Discovery is the process of identifying and accessing information relevant to learning, though identification. Although discovery and access are considered as separate processes, both are basic requirements in all tiers of education.

Students relay on web content for doing their project works, assignments, daily class notes, entertainment etc where as teachers preparing lesson plans, improve their research skills for development of their learning and teaching. There is no single resource or source of information which would meet the diverse educational needs of all learners, and one best develops an understanding of any particular subject when it is considered from different viewpoints.

Web use behavior rightly explains the information seeking behavior, pattern of accessing the resources over a networked digital environment

4. Objectives of the study

1. To identify the purpose of usage and to assess the acquaintance of undergraduate students with Internet and Surfing;
2. To know the preferred web search engines used by the users;
3. To know the different levels of complexity when the students perform web searching tasks;
4. Study the impact of Internet and its services on student's learning process;
5. To know the satisfaction level of the students in discovering needy resources over web;
6. To ascertain the need for user orientation programme and training in searching skills to access information.

5. Scope and Limitations of the study

With the vision of educating the economically poorer class, Government of Karnataka, Dept. of Collegiate Education, has started many colleges realizing the importance of higher education. Govt. First Grade College, Ankola is situated in the rural area of Ankola, Uttar Kannada District where the students are keen to adapt to the technological developments in educational field. The college graduates thousands of students each year in the field of arts, commerce, management and science fields.

The present research study is limited to a sample size of 300 undergraduate students of arts, science, commerce and management fields. This is the first comprehensive study of the use of web among the under graduate students in GFGC Ankola. The findings will help information professionals to plan for effective and efficient use of web search behavior to fulfill information requirements of the students.

6. Methodology

The present study resource discovery on web among the undergraduate students of GFGC Ankola was conducted through questionnaire and observational methods of data collection. Out of 816 students of GFGC Ankola , the sample size of 300 students by application of random sampling technique is selected. Among 300 questionnaires only 258 (82%) filled questionnaires were obtained, out of which 6 questionnaires were rejected because of incomplete responses for data analysis. Therefore only 252 (80%) of the questionnaires are selected for data analysis. A personal interview with the students is carried out which is aided advantage in interpreting consequences. The secondary data is obtained from annual calendar, college magazine, journals and web.

This study attempts to know the popularity of use of electronic resources, their perception and preferences in using web resources, the access point of e-resources, the information search and retrieval techniques carried out in the course of resource discovery.

7. Data Analysis and Interpretation

Data collected from the questionnaires were analysed using frequency counts and percentage.

Table-1: Size of the sample

Sl. No	Users Study stream	Sample size (users)	Respond population	Respond %
1	B.A	150	124	82.7
2	B. Sc	30	28	93.3
3	B.Com	80	67	83.8
4	B.B.A	40	33	82.5

The table 1 shows the categories of users and size of the sample of study

The sample size collected depends on the strength of the class streams enrolled to colleges.

The selected sample size constitutes 50% B.A, 10% B. Sc, 27% B. Com & 13% of B.B.A students.

The respondent's percentage is quite satisfactory as is above 80%

Table-2: Intention of Web Searching

Sl. No	Purpose	No. of students	Percentage (%)
1	Project work	22	8.7
2	Class Assignment	97	38.5
3	Filling up application forms	42	16.7
4	Entertainment	78	31
5	Sports	5	1.9
6	Shopping	8	3.2

Table 2 focuses on intention of web searching

Table 2 exhibits that a large number of students search the web for their academic purpose where class assignment (38.5%), project work (8.7%) and filling up application (16.7%) form during their admissions and scholarship submissions.

It is also reported that about 31% students search web for entertainment, 1.9% for sports, where they are particular about sports news on cricket and football and remaining 3.2% use flipkart, snapdeal websites for shopping purpose.

It is observed that almost all (27 students) science students browse internet for their class assignments.

Table-3: Occurrence of Web Search

Sl. No	Frequency	No. of students	Percentage (%)
1	Daily	53	21
2	2 to 3 times in a week	152	60.3
3	Once in a week	32	12.7
4	Once in 15 days	5	2
5	Once in month	4	1.6
6	Occasionally	6	2.4

Table 3 focuses on the frequency of web usage by undergraduate students

The table 3 shows that almost 60% of the students search the web 2 to 3 times a week while 21% students browse the web daily. There are 12.7% of students who browse the once in a week, 2% of students use web fortnightly and very small amount of students i.e 2.4% use the web occasionally.

In consequence it clearly shows that students are almost regular in web searching.

Table-4: Location of Web Use

Sl. No	Location	No.of students	Percentage (%)
1	Home	124	49.3
2	College	16	6.3
3	Internet Café	112	44.4
4	All the above	0	0

Table 4 focuses on the Premise of web usage

It is indicated from the above table that the students use internet at home and internet café rather than in college campus. Although the aids from central government in the form of NME (National Mission on Education) through ICT Project internet connections are provided at the college premise but due to lack of basic infrastructure facilities there is decline in usage of internet in college premise. The need for networked resource center is felt at college premise in this regard.

Table-5: Preferred Web Search Engine

Sl. No	Search Engine	No. of students	Percentage (%)
1	Google	243	96.5
2	Yahoo	7	2.7
3	Others	2	0.8

Table 5 shows that Google is the most preferred search engine with 96.5% responses followed by 2.7% yahoo users. Other search engines like Hotbot, rediff are the least used ones. Today's networked environment is called as 'Google Age' because of its popularity.

A web search engines are designed to search the information on the World Wide Web. The search results are usually presented in a list of results and are often called as hits. Usually search engines results are dependent on the algorithms incorporated during the development of search engines

Table 6: Information Sources

Sl.No	Source	No. of students	Percentage (%)
1	Trial in search engine	169	67.06
2	URLfrom teachers/friends	23	9.13
3	Search History	54	21.43
4	Media	6	2.38

Table-6 focuses on Sources used in obtaining information on the World Wide Web

The students were asked to state which sources they use in finding appropriate information on web. The results indicated that many trial in search engines (67.06%), while 21.43% respondents browse through the search history and 9.13% of students browse the URL's suggested by teachers and friends.

Table-7: Search Skills

Sl. No	Skilled	No. of students	Percentage (%)
1	Basic Search	209	82.9
2	Advance Search	32	12.7
3	Subject Gateway/Directories	7	2.8
4	Query	4	1.6

Table 7 focuses on the students searching skills and their awareness about various types of searches.
The purpose of the question was to identify different levels of sophistication when performing web searching tasks. Most of the students frequently used basic sea rch i.e. about 83% for searching on web, while a moderate number of students i.e. 12.7% use advance search, very less number of users 2.8% make use of subject gateways/ directories in their query retrieval process.

Table-8: Browsing hits

Sl. No	Hits browsed	No. of students	Percentage (%)
1	10	72	28.6
2	20	120	47.6
3	30	29	11.5
4	40	16	6.3
5	50	12	4.8
6	More than 50	3	1.2

Table 8 shows the users perception in finding information using number of search entries
The tables 8 highlights that majority of users i.e. 47.6% browse through first 20 hits for searching the required information. This is followed by 28.6% of students with browsing first 10 hits. Others 11.5%,6.3%,4.8%, 1.2% 0f the users browse through first 30,40,50 and more than 50 hits respectively. It is clearly indicative from the study that the majority of the users get their required information within 20 hits.

Table-9: Criteria of judging relevancy of information

Sl. No	Relevancy	No. of students	Percentage (%)
1	Title	188	74.6
2	Highlighted word	30	11.9
3	Description	22	8.7
4	URL's	12	4.8

Table 9 focuses on the users criteria on judging the relevancy of information
Due to information overload, it is very difficult to find relevant materials in a small span of time. The students were asked whether they usually find relevant information on web. They were inquired about their criteria to judge relevancy. The responses focuses that students usually acknowledged the relevancy by title (79%) followed by 10% highlighted words.

Table-10: Problems in web searching

Sl. No	Problems	No. of students	Percentage (%)
1	Important sites in the subject area are unknown	86	34.1
2	Difficulty in finding relevant information	125	49.6
3	Irrelevant information	0	0
4	Information overload	12	4.8
5	Slow speed	19	7.5

The table 10 depicts the problems faced by students while searching in web.
Almost ½ the student population i.e 49.6% of the students said that they find difficulty in finding relevant information while 34.1% students stated that important sites in the subject area are unknown to them. About 4.8% of the users felt information ove rload is the problem while the remaining 7.5% stated internet speed is the major problem.
There is no complaint about finding irrelevant information. The results of this table stress upon the requirement of user education in usage of web in the college.

Table-11: Satisfaction Level

Sl. No	Level of satisfaction	No. of students	Percentage (%)
1	Fully satisfied	72	28.6
2	Partially satisfied	128	50.8
3	Least satisfied	43	17
4	No comments	9	3.6

Table 11 exhibits the satisfaction level of undergraduate students in searching web and getting relevant information.
Table 11 shows that 50.8% of the students are partially satisfied with the web searches whereas 28.6% of students are fully satisfied with the search results,17 % were least satisfied and 3.6% did not express their view regarding the level of satisfaction.
Consequently it is found that the most of the students are partially satisfied with the web search behavior. Many of the students felt the importance of orientation programmes in this regard

8. Consequences of Web Usage

The existence of the Internet and the surplus amount of online resources have enhanced the ways of information seeking behaviour of the users as a whole whether it be in traditional or the Electronic environment. But most of the students of GFGC Ankola are having literacy issues in online information searching.
Many students have opined that orientation programme on web resources; search technique will ease their information discovery methods and also satisfaction level. Although the college is in economically and socially backward rural area, the urge to cope up to the digital environment is keen in the students.

9. Role of Library and Information Centers in Google Age

ICT has greatly affected the information environment for library and informational professionals. He should be capable of responding to new user information needs and information-seeking behaviours and should be able provide solutions to multifarious queries of Google generations.

Students just 'Google' their way through the internet for their class notes, assignments as they get easy and immediate access to required information rather than spending time in searching through the treasure of more traditional library environment.

But the fact that huge quantities of information are ignored by web crawlers or information access without authentication (Search engine may list links to academic sources, but access is paid service) leads to search failures. The search failure may be due to spelling mistakes, lack of vocabulary to formulate queries or the use of natural language rather than identifying keywords, and expression of multiple concepts.

Therefore Training is needed to enable students to make more effective use of the internet and acquire capability to overcome complexities in search interfaces. This can be easily handled by information professionals.

It is observed that the teaching faculty and student community usually tap the Internet resources from computer laboratory desktops, yet many seek librarian help for research information in the networked digital information environment. Users demand on librarians for more specific and relevant information is increasing in spite of librarian's and computer professionals' efforts for continuously improving the ease of access to information. To meet such increasing demands, library professionals have to keep on devising new strategies, methods and techniques for bringing together the information seekers and to information relevant to them on a continuing basis.

The college libraries realized the extra responsibility of training the students in accessing information for their future so as college can aim at creating a confident and society friendly personality for students. Since networked web information resources are an integral part of information seeking, information handling, information processing etc., there is a knowledge area that must be dealt with-some expertise in using the technology. Learners must have an understanding of the technological environment in which information resources are set, integrated, and used.

10. Conclusion

Techniques of the past may not work in a new environment. We are living with techno hype - the belief that technology can solve all our problems. If we view technology as a provider of tools we can make great things happen. At some point the pendulum will swing back to personal services. Clearly, we need a new breed of librarian who understands and integrates technology, information and learning into a new model. So the library and information professional should concentrate on training the students in adapting new skills. Simple skills are not enough. Without some conceptual understanding, it is likely they will not attain a level of comfort and familiarity that can lead to expertise. Web search skills enable an individual to use web resources to achieve a wide variety of academic, work-related and personal goals.

References:

Agichtein, E., Brill, E., & Dumais, S. (August, 2006). Improving web search ranking by incorporating user behavior information. In Proceedings of the 29th annual international ACM SIGIR conference on Research and development in information retrieval, 19-26.

Anderson, R. (2005). The (uncertain) future of libraries in a Google world: Sounding an alarm. *Internet Reference Services Quarterly*, 10(3/4), 29-36.

Arndt, T. S. (2010). Services in a (post)Google world. *Reference Services Review*, 38(1), 7-9.

Behrends, Shawn (2012). Libraries vs. Google in the 21st Century. [Available at: http://theidaholibrarian.wordpress.com/2012/11/12/libraries-vs-google/].

Brindley, L. (2006). Re-defining the library. *Library Hi Tech*, 24(4), 484-495.

Chakrabarti, S.; Van den Berg, M. and Dom, B. (1999). Focused crawling: a new approach to topic-specific Web resource discovery. *Computer Networks*, 31(11), 1623-1640.

Lankes, D. R. (2008). Credibility on the Internet: Shifting from authority to reliability. *Journal of Documentation*, 64(5), 667-686.

Regalado, M. (2007). Research authority in the age of Google: Equilibrium sought. *Library Philosophy & Practice*, 9(3), 1-6. [Available at: http://digitalcommons.unl.edu/ libphilprac/].

Timpson, H., and Sansom, G. (2011). A student perspective on e-resource discovery: Has the Google factor changed publisher platform searching forever?. *Serials Librarian*, 61(2), 253-266.

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