

Internet Search Tools and Their Use by Undergraduate Students: A Survey of District Baramulla and Kupwara - J&K

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Abstract

The article reports the findings of a survey conducted to find out the pattern of internet searching, search tools, satisfaction with the search results and need for professional guidance among the undergraduate students of 8 colleges in two major districts of Baramulla and Kupwara in Jammu & Kashmir. The findings show that the rate of internet use for finding information related to their subjects of study is higher among boys than the girls. Search engines, particularly Google, are the commonly used search tools. The knowledge of other search tools like Meta-Search Engines, Directories, and Subject Based Information Gateways is negligible among the students. The knowledge of working of the search engines is lacking and the results retrieved in response to a keyword are confusing. The students also find a dire need of professional skill and guidance for learning various search techniques and strategies in finding current and up-to-date information relevant to their subjects. Thus the present work tries to emphasise the need for knowledge, skill and guidance of the above mentioned search tools and various search strategies especially among the college going undergraduate students to make maximum use of the quality and up-to-date information resources available on the Internet. The study also depicts the role of modern information professionals working in different colleges in educating the students about the role of the Internet and different skills to find the relevant information effectively.

Keywords: Internet, Search Engines, Gateways, Search Tools, Undergraduate Students, Baramulla, Kupwara

Introduction

The origin of the Internet in 1969 in general and the development of the World Wide Web and web-related technologies in particular, have led to the creation of a global information and communication network system that has changed the world into a virtual "Global Village". The resilient structure of the Internet allows easy and fast creation and publishing of vast amounts of digital data that is being constantly exchanged among networks across the Globe giving rise to what is popularly called as "Information Superhighway". However, the loose uncontrolled, uncensored nature of the Internet and the resulting resilience has given rise to many problems, such as Information

- Overload due the huge quantity of information available in almost every conceivable topic or subject.
- The availability of huge quantities of useless or irrelevant or inaccurate information due to ease of publishing.
- The ephemeral nature of the materials disseminated through personal WebPages.

Keeping in view the above mentioned problems, if we jump into searching the internet without preparation and proper skill, we may find ourselves overwhelmed by the retrieval of thousands of documents, most of which are either irrelevant or inaccurate with respect to our

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search topic. In other words, finding relevant and quality information on the Internet without prior knowledge of the various search tools and the necessary skill to use them is like finding a “needle in a hay-stack”. “A user study is the means for systematic examination of the characteristics of information behaviour of the users. Adequate knowledge about the information needs and seeking behaviour of users is vital for developing library collections, services and facilities to meet their needs effectively” (Ali, 2018).

The above mentioned problems necessitated the need for the development of various Internet Search Tools such as Search engines, Meta-Search engines, Subject Directories, and Subject-Based Information Gateways. These search tools were developed to enhance the easy and effective retrieval of quality information from the Internet. All these search tools work in a different way and offer various search features to manipulate the search for a topic to ensure the retrieval of the most relevant information.

Literature Review

“The main objectives and purpose of institutions of higher learning are teaching-learning and research. Colleges form an integral part of Higher education and libraries in colleges are the primary source for learning process. The college library is a connecting link between teaching and learning as well as place which supplements its resources that is beyond the scope of class room. College libraries play an important role in the educational pursuits of both the students as well as the faculty members. It serves the users by providing specific information” (Rather & Bhat, 2018). (Davitt, 2001) carried out survey of Information Literacy Competencies of graduate students of University of California -Berkeley which examined the extent of which Undergraduate students are information literate. (Parker, 2003) conducted a Study which focused on online information literacy course called MOSAIC (Making Sense of Information in the Connected Age), and recommended that information literacy is considered at a strategic level in higher education sector. (Hadimani & Rajgoli, 2010) conducted a survey to assess the information literacy competency of under graduate students at college of Agriculture, Raichur. The findings of the study revealed that though majority of the respondents have the ability to locate the needed information but lacked the competencies in assessing electronic information. (Issa, Amusan, Olarongbe, Igwe, & Oguntayo, 2015)

investigated the information literacy competency of the Undergraduate Students from University of Ilorin, Kwara state Nigeria. The study found that majority of the respondents have low level of Information Literacy Competency, expressed their dissatisfaction with their present status of information availability, accessibility and usage. The study recommends that authorities should consider the teaching of information literacy as a course to fresh students. Prasad (Prasad et al., 1998) examined the information seeking activities of social \ scientists and the physical scientists and the various formal and informal sources of information consulted by them in Banaras Hindu University. Questionnaire method was used for data collection and twenty six scientists belonging to both Physical and Social science disciplines responded. Study revealed that there was significant difference in ISB of Physical scientists and Social scientists. Naushad Ali (Naushad Ali et al., 2006) conducted a study to investigate teachers’ attitude towards central library services at Aligarh Muslim University. The study was carried out with the objective to examine teachers’ opinion regarding the overall collection, facilities and services of the library and to access the frequency and purpose of using the library. Study showed that majority of the teachers are aware of the reference services, circulation and newspaper/periodical services of the library but are unaware of the inter library loan services. Teachers of the University use the library for collecting materials for teaching purpose. Most of the teachers (55.24%) are not satisfied with the overall function of the library, and they suggested computerisation of all activities and services of the library. Mostafa (2013), carried out study of information needs and Seeking Behaviour of faculty members of Darullhsan University in Bangladesh. The study highlights that information needs of faculty members are related to their teaching and research purposes. The problem identified by the faculty members is that they cannot locate the targeted sources because of the scattered nature of information. Majid and Kasim (2000), revealed in their study of information seeking behaviour of International Islamic University Malaysia Law Faculty members that IT based library sources and facilities are less frequently used compared with printed sources. Thanuskodi (2009), in his study of information seeking behaviour of Law Faculty at Central Law College, Salem pinpoints some factors affecting the behaviour of the respondents such as information seeking seems to be situation depended and is influenced by the access to information, quality etc.

Objective of the Study

The objectives of the survey are:

- To know the various search tools used by the college students for finding the academic information.
- To ascertain the knowledge of the users about search engines, meta-search engines, Subject directories and Subject-based Information Gateways.
- To determine the level of satisfaction with the information retrieved through search engines.
- To suggest ways to enhance the ability of the students to explore the web based information resources by using various search tools effectively.

Hypothesis

- All the undergraduate students are fully aware about the various internet search tools and there is no significant difference in the use of such tools in the students of various colleges.
- All the undergraduate students are fully satisfied with the use and availability of various internet based information sources and there is no significant difference in the satisfaction level of students of various colleges.
- All the undergraduate students are fully skilled in the use of internet based search tools and there is no significant difference in such skills among the students of various colleges.

Methodology

Methodology constitutes a significant aspect of any scientific pursuit and reliability of its findings depend upon the extent to which the researcher has incorporated sophisticated research methodology which comprises of sampling techniques employed, the instruments used and the procedures followed. For the purpose of the data collection, descriptive survey research method has

been adopted. The survey method with the instrument of questionnaire was used for data collection. Assumed sample technique was followed by the researcher in which a total of 800 students registered in 8 Govt. Degree Colleges affiliated to the University of Kashmir in district Bramulla and Kupwara were studied. The sample included 100 students from each college. The names of the colleges are:

- Govt. Degree College Sopore,
- Govt. Degree College for Women Sopore,
- Govt. Degree College Baramulla,
- Govt. Degree College for Women Baramulla,
- Govt. Degree College Handwara,
- Govt. Degree College Kupwara,
- Govt. Degree College for Women Kupwara and,
- Govt. Degree College Sogam Kupwara.

Descriptive statistic techniques like tables of frequency counts and percentages were used in the analysis. ANOVA and Chi-Square tests were used for hypothesis testing. To improve the reliability and validity, errors, and corrections observed were affected and incorporated into the study.

Data Analysis and Interpretation

The primary data collected was tabulated, and then interpreted using appropriate statistical tools and techniques. The data analysis and interpretation was further sub-divided into four sub-headings for convenience and better understanding of the results.

Use of Web Based Information Resources (IRs) by the Users

To ascertain the use of Internet for finding the syllabus related information by the college students, college wise breakup of the respondents in the survey was done as shown in Table 1.

Table 1: College-Wise Break-up of Students Using Web Based IRs

<i>College</i>	<i>No. of Students Using Web Based IRs</i>	<i>No. of Students Not Using Web based IRs</i>	<i>N</i>
GDC Sopore	63	37	100
GDC for Women Sopore	49	51	100
GDC Baramulla	68	32	100

College	No. of Students Using Web Based IRs	No. of Students Not Using Web based IRs	N
GDC for Women Baramulla	53	47	100
GDC Handwara	52	48	100
GDC Kupwara	49	51	100
GDC for Women Kupwara	43	57	100
GDC Sogam Kupwara	39	61	100
Total	416 (52%)	384 (48%)	800 (100%)

Table 1 shows that 52% students use internet for finding subject related information. Among them, Govt. Degree College Baramulla has the highest percentage of students (68%), followed by the GDC Sopore, however the lowest no students using internet search tools for academic purpose was recorded in GDC Sogam. The figures indicate that there is a direct relation between the use of web based sources and the urbanization. The more urban areas the students belong, the more the use of such tools.

Use of Various Web Based Information Resources (IRs)

Since the development of World Wide Web, Various search engines and other search tools were developed to easily retrieve the information. When asked about the use of various search tools following results were achieved:

Table 2: Use of Various Search Tools for Finding the Information by Students

College	Type of Web Source Used				N
	Search Engines	Subject Gateways	Social Networking Sites & Blogs	Virtual Libraries	
GDC Sopore	32	03	63	02	100
GDC for Women Sopore	29	01	70	00	100
GDC Baramulla	34	05	58	03	100
GDC for Women Baramulla	35	00	65	00	100
GDC Handwara	42	01	54	03	100
GDC Kupwara	39	02	55	04	100
GDC for Women Kupwara	36	01	60	03	100
GDC Sogam Kupwara	29	00	71	00	100
Total	276 (34.50%)	13 (01.62%)	496 (62.00%)	15 (01.87%)	800 (100%)

ANOVA: Two-Factor Without Replication						
SUMMARY	Count	Sum	Average	Variance		
GDC for Women Sopore	4	100	25.00	1080.67		
GDC Baramulla	4	100	25.00	684.67		
GDC for Women Baramulla	4	100	25.00	983.33		
GDC Handwara	4	100	25.00	730.00		
GDC Kupwara	4	100	25.00	688.67		
GDC for Women Kupwara	4	100	25.00	802.00		
GDC Sogam Kupwara	4	100	25.00	1127.33		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	0	6	0	0	1	2.66

Table 2 depicts that the maximum number of students (62%) are using social networking sites and web-blogs to access information, followed by search engines like Google (34.50%) like search engines and the least preferred sources are the virtual libraries (01.87%).

ANOVA Two-Factor without Replication was applied to the table to test if there is any significant difference in the use of such resources among various resources. The calculated value of F is 1 which is much lesser the critical value 2.66. Also the P value was calculated which came out to be 1 which is larger the 0.05 which gives us enough evidence to accept the Null Hypothesis. As such we can conclude that there is no significant difference in the

use of various web based information resources among students of various colleges under study.

Knowledge of Various Web Based Information Resources (IRs) in the Students

Table 3 shows that the maximum numbers of students (60.12%) have knowledge and skills to use social networking sites and web-blogs to access information, followed by search engines like Google (32.25%) like search engines and the least knowledge students have about are Information Gateways (03.62%).

Table 3: Knowledge of Various Web Based Information Resources (IRs) in the Students

College	Type of web source used				N
	Search Engines	Information Gateways	Social Networking Sites	Virtual Libraries	
GDC Sopore	33	02	59	06	100
GDC for Women Sopore	32	05	58	05	100
GDC Baramulla	34	03	56	07	100
GDC for Women Baramulla	30	04	64	02	100
GDC Handwara	24	05	67	04	100
GDC Kupwara	23	03	69	05	100
GDC for Women Kupwara	40	04	53	03	100
GDC Sogam Kupwara	42	03	55	00	100
Total	258 (32.25%)	29 (03.62%)	481 (60.12%)	32 (04.00%)	800 (100%)

ANOVA: Two-Factor Without Replication						
SUMMARY	Count	Sum	Average	Variance		
GDC for Women Sopore	4	100	25	646.00		
GDC Baramulla	4	100	25	616.67		
GDC for Women Baramulla	4	100	25	838.67		
GDC Handwara	4	100	25	868.67		
GDC Kupwara	4	100	25	941.33		
GDC for Women Kupwara	4	100	25	644.67		
GDC Sogam Kupwara	4	100	25	766.00		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	0	6	0	0.00	1.00	2.66

ANOVA Two-Factor without Replication was applied to the table to test if there is any significant difference in the knowledge of such resources among various resources. The calculated value of F is 1 which is much lesser the

critical value 2.66. Also the P value was calculated which came out to be 1 which is larger the 0.05 which gives us enough evidence to accept the Null Hypothesis. As such we can conclude that there is no significant difference

in the knowledge and skills of use of various web based information resources among students of various colleges under study.

Satisfaction of Students with the Information Retrieved Through the Use of Web Based Information Resources (IRs)

Table 4: Satisfaction of Students with the Information Retrieved through the Use of Web Based Information Resources (IRs)

College	Type of web source used					N
	FDS	PDS	NU	PS	FS	
GDC Sopore	24	29	13	28	06	100
GDC for Women Sopore	39	33	03	18	07	100
GDC Baramulla	35	36	05	19	05	100
GDC for Women Baramulla	39	25	07	23	06	100
GDC Handwara	35	34	13	14	04	100
GDC Kupwara	46	26	09	16	03	100
GDC for Women Kupwara	52	25	11	11	01	100
GDC Sogam Kupwara	39	34	13	13	01	100
Total	309 (38.62%)	242 (30.25%)	74 (09.25%)	142 (17.75%)	33 (04.12%)	800 (100%)
Chi Square Test Calculated Value of Chi-square=2.95 d. f. = 1 Table Value ($\chi^2\alpha$) = 3.84						

FD= Fully Dissatisfied, PS= Partially Dissatisfied, NU= Neutral, PS= Partially Satisfied, FS= Fully Satisfied

Table 4 tries to assess the level of satisfaction with the information retrieved in response to a search term among the students. It was found that most of the users (38.62%) are fully dissatisfied with such services and tools while as only 04.12 students are fully satisfied. However 09.25% students preferred to be neutral while filling the questionnaire.

Chi square test was applied to the Likert scale for test the hypothesis. Two groups were taken for the test, excluding the 'Neutral' option. It was found that the calculated value 2.95 is less than the table value 3.84 at 5% significance level with degree of freedom 1. As such the Null hypothesis is accepted. Hence we conclude that there is no significant difference in the opinion about the satisfaction level with the web based information resources among the students of various colleges under study.

Suggestions

From the analysis above, the following suggestions have emerged:

- Internet connection should be available in each college library and students should be encouraged to use the same.
- There is a need to make students aware of the advantages of the Internet. Also a short training programme on how to use the Internet effectively needs to be imparted. It is suggested that each College library should conduct a training program me and make it mandatory for all the students to attend the same from time to time.
- The training programmes must also focus on the knowledge of various Internet search tools and the technology behind their use. Students should be taught about the skill and search strategies that help them to use the search engines effectively to retrieve the most relevant information.
- The knowledge of human edited Subject Based Information gateways (e.g. IPL, INFOMINE etc.) Should be imparted to the students as these are the most relevant, and quality based information sources edited and annotated by professional librarians and subject experts.

Implications

It is highly recommended that the knowledge of Faculty Members information needs and information seeking behaviour is imperative for developing valuable collections and ultimately improving the facilities and services. Consequently, Librarian must be aware about the information needs and Seeking of faculty members. It is also indicates, the necessity of a sort of training programs for library staff and library orientation for faculty members, so that to make them aware about availability of resources and services in the library. More importantly, Library staff should take adequate measures to address the problems and barriers faced by the faculty members as highlighted in the study while seeking information. The overall outlook of Library environment needs to be improved, to attract the potential users towards library. If possible, a separate website for college library should be created, so to promote the products and services of Library. Moreover, Social Networking Tools and media such as Facebook, WhatsApp, Twitter, Blogs etc. can be employed in delivering the special services like CAS, SDI and Document Delivery to the faculty members. Initiating group discussions and presentations in the Reading Room involving faculty members can be a novel idea to brand the services and products among the faculty members and also get regular feedback for future plans.

Conclusion

The statistics provided by Table 3 showing the use of various search tools used by the students and table 4, table 5 regarding the level of satisfaction with the search results and need for training and guidance in the use of various search tools especially Directories and Subject Based Information Gateways are a clear eye opener to show that Undergraduate students enrolled in various colleges who use internet to satisfy their information needs feel a dire need of guidance, training and counselling to tap the valuable and quality information resources available through the Internet. In today's information age, Internet is a very helpful platform that has brought information scattered all over the world within the reach of every student. It can help students to get the information related to their needs quickly and in the shortest possible time. But to effectively search the sea of information offered through this cyberspace, a user needs some in-depth

navigation skills. Planning the search topic, choice of the appropriate search tools, using specific search commands and operators, and evaluating the resources retrieved in response to a search query can save a lot of time and produce high quality results to help the students cater to their information needs.

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