

Purpose of Using Search Engines and Knowledge Portals by the Scientists and Researchers of Indian Institute of Toxicological Research, Lucknow and National Botanical Research Institute Lucknow

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ABSTRACT: *The Knowledge portals and search engines are widely used in social sciences and sciences. The present study aimed to understand using search engines and knowledge portals among the scientists and research scholars of IITR, Lucknow and NBRI Lucknow. In order to accomplish the precise objectives positive, an investigators intended that questionnaire was disseminated (169) one hundred sixty-nine, respondents (One hundred forty-six respondents from IITR, Lucknow) and (159) one hundred fifty-nine, responded (144 one hundred forty-four) from NBRI, Lucknow. The results which were specified to weighted mean and percentages showed that the respondents excellent and very good exposed Purposes of using search engines and knowledge portals the usefulness of quality of information available on search engines and knowledge portals with the weighted mean methods. The results from the study, it is obvious that the scientists and researchers using search engines and knowledge portals for their academic and research work. For this they too much depend on search engines and knowledge portals. They are using for different purposes and usefulness and quality of search engines and portals. The scientists and researchers IITR and NBRI were know about the privacy and security and technical audacity of information available on search engines and knowledge Portals. This scholarly library has adopted new hi-tech developments to assemble their extraordinary users information desires by provided that their highly developed and bring up to date awareness.*

Keywords: Search Engines, Knowledge Portals, Using, Purpose, Scientists, Research scholars, Information

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2. Introduction

The awareness and applications of computer technologies specifically Internet has enormously increased the availability of information. The increases in volume of available information as well as the linking of various disparate and diversified information sources is making harder for users to retrieve relevant information based on their specific task related requirement. Search engines are the have been developed to facilitate fast information retrieval. Generally two methods are used by people to get information from the internet resources, one is by specifying the website URL in the address bar of the browser window and second is by specifying the Keyword (i.e. term/terms related to the subject one is searching for) in the search-box of the Search engines. This software system is planned to exploration for information on the World Wide Web. By needful the keyword it provides us a list of websites where we find out specific Information that we are searching. Search engines are programmes that search documents for specified keywords and return a list of the documents where the keywords were found. The search results are presented in a sequence of pages which are called Search Results Pages (SERPs). The result that is returned or found may be a mix of web pages, images, and other types of files or all of these. These SERPs are web pages, images, and other types of files or all of these. Web search engines work by storing information about many web pages. The search engines retrieve this information from the content and html mark up of the pages. These pages are retrieved by a special part or component of the search engine program called web crawler or Spider and are stored in a database. Search engines have developed an important part of our information environments. Progressively they are changing the part of libraries in helping information outcome and repossessing. Research is come to be known as 'Googling' (Mostafa, 2005). Current statistics specify that Google has developed the search boundary of excellent for many academicians and scholars to lecture their information requirements, far beyond their usage of library catalogues or other online citation databases (Griffiths and Brophy, 2005). An international survey (OCLC, 2009) reports that 89 percent of information searches assumed by academy students start with a search engine and Google is the awesome favourite (88 percent). The similar movement is detected for faculty and researchers.

2.1 IITR, Indian Institute of Toxicological Research, Lucknow

KRC Centre of IITR serves as an excellent information resource in the field of toxicology in the country. About 30,000 books, journals, reports on varied scientific topics-from science and technology to microbiology, from biochemistry to environmental health are available along with: Documents of IARC, WHO, FAO, EPA, OECD, IRPTC, IPCS, ILO, BIS, Reference sources like Handbooks, Directories, Encyclopaedia and Directories Databases on CD-ROM: POISINDEX, CHEMBANK, ASTM Standards. A rich collection of 175 International and National Periodicals. Library subscribes 108 International and National current periodicals in the field of toxicology. The core journals of toxicology like Toxicology, toxicology & Applied Pharmacology, Toxicology Letters, Environmental Research. Under the Electronic Information Facility the access to full text e-journals over 3500 nos. published by Elsevier, Blackwell, Wiley, Oxford, University Press, American Chemical Society, Springer, Cambridge University Press, Royal Society of Chemistry, Taylor & Francis and Emerald are being provided to all the scientists & technical staff of the institution on their desk-top computers. This unit also housed the Environmental Information System (ENVIS), a Distributed Information Centre on Toxic Chemicals established by Ministry of Environment & Forests, Govt. of India, New Delhi Library & Toxicology Information Centre provides information on toxic chemicals and their effects on the environment and human, their management, regulation, etc. to individuals, universities private and public sector organizations, regulatory agencies and government organizations. The laboratory has established linkage with several international agencies like: WHO, UNDP, USEPA and USFDA and is serving as the National correspondent of International Registry of Potentially Toxic Chemicals of UNEP.

2.2 NBRI, National Botanical Research Institute Lucknow

The CSIR-NBRI is one of the constituent research institutes of CSIR, New Delhi. Basically it was set up as the National Botanic Gardens (NBG) by the State Government of Uttar Pradesh (U.P.) which was taken over by the CSIR in 1953. It was felt that the name NBG was no longer projected the correct nature and extent of its aims and objectives, functions and R & D activities. The library is the designated as Knowledge Resource Centre (KRC) of the Institute and provides services and facilities in order to serve with the expert S& T knowledge requirements of the R& D Groups of the Institute. The KRC repository at NBRI includes: Books = 29095 Periodicals Bound Volumes = 30500 Currently subscribed periodicals (Indian + Foreign): Including print only = 333, Print + online = 5, Online only subscribed through NBRI - KRC = 21 Online periodicals subscribed through CSIR Consortium = 472 Complimentary periodicals = 51 Online/CD-ROM Databases OPAC (Online Public Access Catalogue) Biological Abstracts on CD-ROM from 1995 to 2005 ASTM standards on CD-ROM; ISI WEB OF KNOWLDEGE (Web of Science) QPAT patent database.

3. Scope and Limitation

The study the researchers have undertaken the case study of CSIR Institute IITR and NBRI Library which are reputed organisations of India. In order to study the implications of search engines and knowledge portals on the library, only two categories of respondents i.e., Scientists and research scholars included in the study. The study has not considered the non-teaching staff, the miscellaneous users. They also form very important users of the libraries and hence, they must be integrated to formulate the study more wide-ranging. The objectives are as following:

4. Objective of the Study

- To find out the purpose of Search Engines and Knowledge portals by the researchers and scientists of IITR and NBRI library.
- To measure the usefulness of Search engines and Knowledge Portals among the researchers and scientists of IITR and NBRI Library.
- To assess the effective features of Search engines and Knowledge Portals among the researchers and scientists of IITR and NBRI Library.
- To know the technical audacity of using Search engines and Knowledge Portals among the researchers and scientists of IITR and NBRI Library.

5. Research Methodology

This is basically a survey research. This study will use questionnaire- grounded survey technique in order to accomplish the objectives; descriptive Research design will be used to achieve the study. An exhaustive and well-structured questionnaire will be planned and distributed to the selected users of the libraries. Questionnaires are less expensive, convenience, less chance for partiality or errors and provide assurance than other methods. Questionnaires are a constant, reliable and unchanging quantity without Dissimilarity. The use of questionnaires possibilities a broader coverage, subsequently scholar can approach respondents effortlessly than other procedures. Weighted mean methods is used for ranking the most significant and non- significant reason.

The investigator visited the referred libraries and approached the librarians seeking permission to distribute the questionnaire to the users and thus also collected back. The investigator also sends online web questionnaire and took the interview with the scientists, research scholar.

6. Data Analysis and Finding

Options	IITR			NBRI			Total	Weighted Mean	Rank
	Good	Very Good	Excellent	Good	Very Good	Excellent			
Relevant Information to the Users	55	67	24	25	107	12	536	1.85	3rd
	0%	46%	16%	17%	74%	8%			
Customized Information Presentation	52	72	22	38	63	43	555	1.91	2nd
	36%	49%	15%	26%	44%	30%			
Valuable Tips on Sources/ Services	71	55	20	38	31	38	455	1.80	4th
	49%	38%	14%	26%	22%	26%			
Reliable Professional Opinions	59	54	23	92	26	12	416	1.56	5th
	40%	37%	16%	64%	18%	8%			
In depth Information	66	62	18	39	0	93	562	2.02	1st
	45%	42%	12%	27%	0%	65%			
Total	146	146	146	144	144	144			

Table 1. The Usefulness and Quality of Information Available on Search Engines and Knowledge Portals

Excellent = 4; very good = 3; good = 2; poor = 1.

Table-1 As popular previous studies purposes of using the search engines and knowledge portals is the important concern for scientists and research scholars of IILR and NBRI library. Table 1 exposed purpose of the usefulness and quality of information available on search engines and knowledge portals with the weighted mean methods. This method is used for ranking the most influence and non- influence grounds for purpose about the search engines and knowledge portals among the scientists and researchers of IITR and NBRI. The option “in depth information” ranked first, which was followed by “customised information presentation,” “relevant information to the user, and “valuable tips on sources and services” giving the position independently. The choice “reliable professional opinion” was graded last at fifth place. The certainly precise that the scientists and researchers are using search engines and portals for different quality of information available on SEs and KPs.

Options	IITR				NBRI				Total	Weighted Mean	Rank
	Poor	Good	Very Good	Excellent	Poor	Good	Very Good	excellent			
Quick Responsiveness	5	56	53	32	12	24	96	12	800	2.76	1st
	3%	38%	36%	22%	8%	17%	67%	8%			
Follow up Services to Users	4	60	32	50	0	82	62	0	770	2.66	2nd
	3%	41%	22%	34%	0%	57%	43%	0%			
Message Board Forum	22	59	64	1	31	50	51	12	668	2.30	4th
	15%	40%	44%	1%	22%	35%	35%	8%			
Interactive Feedback between Users and Providers	18	64	64	0	0	94	26	24	700	2.41	3rd
	12%	44%	44%	0%	0%	65%	18%	17%			
Assurance to Solve the Problems	22	59	42	23	45	61	26	12	651	2.24	5th
	15%	40%	29%	16%	31%	42%	18%	8%			
Total	146	146	146	146	44	144	144	144			

Table 2. Interactive Communication and Customization of Search Engines and Knowledge Portals

Excellent = 4; very good = 3; good = 2; poor = 1.

Table-2 As popular previous studies interactive communication and customisation of the search engines and knowledge portals is the important concern for scientists and research scholars of IILR and NBRI library. Table 2 exposed interactive communication and customization of search engines and knowledge portals with the weighted mean methods. This method is used for ranking the most weight and non- weight justification for purpose about the search engines and knowledge portals among the scientists and researchers of IITR and NBRI. The option “quick responsiveness” ranked first, which was followed by “follow up service to the users,” “interactive feedback between users and providers, and “message board forum” at giving the position independently. The choice “assurance to solve the problems” was graded last place. The certainly precise that the scientists and researchers are using search engines and portals for interactive communication and customization on SEs and KPs.

Options	IITR				NBRI				Total	Weighted Mean	Rank
	Poor	Good	Very Good	Excellent	Poor	Good	Very Good	excellent			
Confidentiality for Users Information	9	74	35	28	12	68	64	0	714	2.46	3rd
	6%	51%	24%	19%	8%	47%	44%	0%			
Adequacy of Security Features	4	80	43	19	43	26	63	12	701	2.42	4th
	3%	55%	29%	13%	30%	18%	44%	8%			
Reputation of the Portals Company	4	57	49	36	12	26	80	26	817	2.82	1st
	3%	39%	34%	25%	8%	18%	56%	18%			
Proper Use of Personal Information	0	56	50	40	12	25	107	0	805	2.78	2nd
	0%	38%	34%	27%	8%	17%	74%	0%			
Total	146	146	146	146	144	144	144	144			

Table 3. Privacy and Security About the Search Engines and Knowledge Portals

Excellent = 4; very good = 3; good = 2; poor = 1.

Table-3 exposed privacy and security of search engines and knowledge portals with the weighted mean methods. This method is used for ranking the most weight and non-weight justification for privacy and security about the search engines and knowledge portals among the scientists and researchers of IITR and NBRI. The option “reputation of the company” ranked first, which was followed by “proper use of personal information,” “confidentiality for users information” and “adequacy of security features” at giving the position independently. The positively precise that the scientists and researchers are using search engines and portals for privacy and security on SEs and KPs.

Options	IITR				NBRI				Total	Weighted Mean	Rank
	Poor	Good	Very Good	Excellent	Poor	Good	Very Good	excellent			
High Speed of Page Loading	9	60	51	26	12	55	65	12	751	2.59	3rd
	6%	41%	35%	18%	8%	38%	45%	8%			
Proper Use of Multimedia	5	50	59	32	12	68	52	12	762	2.63	1st
	3%	34%	40%	22%	8%	47%	36%	8%			
Valid Links	4	63	58	21	0	69	75	0	751	2.59	3rd
	3%	43%	40%	14%	0%	48%	52%	0%			
Accessibility of the Sites	4	59	57	26	0	94	26	24	759	2.62	2nd

	3%	40%	39%	18%	0%	65%	18%	17%			
Assurance to Solve the Problems	0	47	65	34	31	75	26	12	732	2.52	5th
	0%	32%	45%	23%	22%	52%	18%	8%			
Total	146	146	146	146	144	144	144	144			

Table 4. Technical Audacity About the Search Engines and Knowledge Portals

Excellent = 4; very good = 3; good = 2; poor = 1.

Table-4: Showing technical audacity of search engines and knowledge portals with the weighted mean methods. This method is used for ranking the most weight and non-weight justification for technical audacity about the search engines and knowledge portals among the scientists and researchers of IITR and NBRI. The option “proper use of multimedia” ranked first, which was followed by “accessibility of the sites,” “high speed of page loading”, and “strong technical support” at giving the position independently. The certainly precise that the scientists and researchers are using search engines and portals for technical audacity on SEs and KPs.

7. Findings and Discussion

It is felt that from the analysis the majority of scientists and research scholars of IITR and NBRI are using information available on search engines and knowledge portals for usefulness and quality of information. The first ranking statements is “in-depth information” with waited mean = 2.02 The scientists and research scholars of IITR and NBRI institute are mostly found that Interactive communication and customization available on search engines and knowledge portals “quick responsiveness” ranked in first position with weighted mean = 2.76. It is also seen that first ranked statement is “Privacy and security” with waited mean = 2.82 of the scientists and research scholars about the privacy and security of search engines and knowledge portals. It is further found from analysis that the uppermost ranking technical audacity is “Proper use of Multimedia” with weighted mean = 2.63 of the search engines and knowledge portals in IITR and NBRI organisations. The study identifies that the main barriers faced by scientists and research scholars of IITR and NBRI in purpose of using search engines and knowledge portals are “High speed of page loading” and “strong Technical Support”.

8. Conclusion and Recommendations

From the study, it is obvious that the scientists and researchers using search engines and knowledge portals for their academic and research work. For this they too much depend on search engines and knowledge portals. They are using for different purposes and usefulness and quality of search engines and portals. The scientists and researchers IITR and NBRI were know about the privacy and security and technical audacity of information available on search engines and knowledge Portals. This scholarly library have adopted new hi-tech developments to assemble their extraordinary users information desires by provided that their highly developed and bring up to date awareness.

- Regular training programmes on information literacy programme should be organized for the scientists and research scholars to make them fully aware of search engines and portals resources and services. Awareness and utilization of search engines and portals is relatively less among the scientists as compare to the research scholars.
- Scientists and researchers should be trained in the utilization of advanced search techniques of search engines and knowledge portals.
- IT infrastructure of the libraries should be strengthen to meet information needs of the specially scientists.
- There is need to maintain an active interaction with the academic facility in order to understand their information requirements as well as their awareness of and of the perception about search engine and knowledge portals.

- The library should provide separate well equipped instruction room to deal with the queries of the researchers and scientists.
- Feedback from the scientists and researchers should be taken regularly to determine their specific information needs.
- For the optimum utilization of search engines and portals libraries should increase bandwidth to ensure faster access, to save of time the scientists and to solve the problems slow connectivity and lack of knowledge about availability.

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