

# INFORMATION SEEKING BEHAVIOUR OF RESEARCH SCHOLARS OF UNIVERSITY OF KASHMIR

**Tahir Ahmed Batt**

Library Assistant/Instructor

SKUAST-K 191201

E-mail: [tahirbatt2015@gmail.com](mailto:tahirbatt2015@gmail.com)

**Abstract:** The paper seeks to examine the information seeking behavior among the research scholars of Kashmir University. The present study was carried out by conducting a survey using questionnaire method. Information seeking behavior, the micro-level of behavior employed by the searcher in interacting with information systems of all kinds, be it between the seeker and the system, or the pure method of creating and following up on a search. Information seeking behavior is expressed in various forms from reading printed material to research and experimentation. Information seeking behavior is a complex activity, requiring access to diverse information resources to deal with work-related, personal and social information problems. Information-seeking behavior refers to strategies for locating information, and has three elements: people, information, and systems. The study of individual information-seeking behavior requires understanding of the psychological state of the user that may lead to insight into their expectations make it possible to predict information-seeking activity (Ocholla 1999).

**Keywords:** Information, Information seeking behavior, Kashmir University, Survey

## 1.0 Introduction

Information a sequence of symbols interpreted as a message, can be recorded as signs, or transmitted as signals is any kind of event that affects the state of a dynamic system. Information is a sensible statement, opinion, fact, concept or ideas or an association of statement “information could be considered as means to an end but not the end itself. The term information seeking behavior has been used in the research literature since the 1950’s (Hayden, 1999). Information seeking behavior refers to the way people search for and utilize information. In 2000, Wilson described information behavior as the totality of human behavior in relation to sources and channels of information, including both active and passive information-seeking, and information use. He described information seeking behavior as purposive seeking of information as a consequence of a need to satisfy some goal. It is the complex pattern of actions and interactions which people engage in when seeking information of whatever kind and for various purposes. To put it in straight words, information seeking behavior is the way in which the user goes about seeking and obtaining information. The users information behavior is reflected in his relationship with the information he or she is seeking and its related products and services. The information seeking behavior is influenced by various factors, for instance, knowledge about the information, use of information product, accessibility to information, status and relation with people etc. The behavior includes a number of components like attitude, approach, activity, information gathering, pattern of seeking information and psychological temperament etc. Earlier studies have found that information seekers use a variety of formal and informal sources with varying emphasis from one discipline to other. “Information seeking is thus a natural and necessary mechanism of human existence” (Marchionini, 1995). Information seeking behavior is the purposive seeking for information as a consequence of need to satisfy some type of a goal. In the course of seeking, the individual may interact with people (Wilson, 2000). According to Pettigrew (1996), information seeking behavior involves personal reasons for seeking information, the kinds of information which are being sought and the ways and sources with which needed information is being sought. Scholars actively seek current information from the various media available in libraries. Abels (2004) mentioned that the frequently use of internet during 1998-2000 has greatly increased with increase in the expenditures too.

Information seeking is a broad term, which involves a set of actions that an individual takes to express his information needs, seek, evaluate and select information, and finally uses it to satisfy his information needs. Various factors affect the information seeking behaviors of an individual or a group of individuals, i.e. purpose for information, channels and sources of information and barriers to information. Information seeking is a basic activity

of an individual.

With the deluge of available information, each person needs information of increasing variety. The information needs of a particular group of users and for a specific situation or organization are difficult to determine. There is not one simple system to cope up with all information needs. **According to Krikelas (1983)**, information-seeking behavior refers to “any activity of an individual that is undertaken to identify a message that satisfies a perceived need.” **Mick (1980)** observed that “information- producing and information-seeking behavior are closely linked and are the reasons why most information systems are not better accepted as they fail to provide linkage between the two activities.”

Information seeking behavior involves personal reasons for seeking information, the kinds of information which are being sought, and the ways and sources with which needed information is being sought. Information seeking behavior is expressed in various forms, from reading printed material to research and experimentation. An individual user has many paths for accessing his desired information. There are many factors which decide his information seeking behaviors. These factors include the time spent in search of information, knowledge about information sources, the way of expressing his information need etc. Scholars involved in library and information science have undertaken numerous studies with regard to human information-seeking behavior. Human activities in a changing information environment can be considered as human information behavior. It consists of human information processing and interactions with information sources and technological systems.

**Steiner ova and Susol (2007)** conducted a study on user information behavior from a gender perspective in Slovakia. Differences in orientation to information, collaboration style, and use of information were discovered, with the conclusion that gender as a variable can be productive for understanding information processing. Furthermore, definitions of information-seeking behavior and the related concepts of information literacy and information use vary in their interpretation, and so tend to overlap (**Hughes, 2006**). For example, **Case (2007)** has suggested that the concepts “information need”, “information seeking” and “information behavior” are interrelated, and has defined them in that context. For the purposes of this research, Wilson's definition of the information-seeking behavior of graduate students was adopted: Those activities a person may engage in when identifying his or her needs for information, searching for such information in any way, and using or transferring that information (**Wilson, 1999, p. 249**).

## **2.0 Problem & Purpose**

The purpose of the study is to investigate the information seeking behavior of the research scholars, faculty of social science, University of Kashmir.

## **3.0 Objectives**

1. To discover the awareness of researchers regarding services provided by a library.
2. To assess the most popular gadget used for browsing, accessing and storing the resources.
3. To know the frequency at which the users use the information resources
4. To know the utilization, search techniques and browsing skills of users;
5. To identify the information searching methods adopted while searching for information in the library.

## **4.0 Scope**

The scope of the study was confined to ascertain the information seeking behavior of research scholars belonging to the faculty of social science, University of Kashmir..As it was a difficult task to collect data from distant campus of this multi-campus university dispersed all across of the valley of Kashmir.

## **5.0 Methodology**

A questionnaire based survey method was adopted to gather the data on the information seeking behavior of research scholars. The questionnaires were distributed among 80 respondents belonging to the faculty of social science. Out of 80 questionnaires, 67 filled in questionnaires (40 being Male respondents and 27 female respondents) were returned by the respondents.

The percentage and average of data was derived only from responses actually revealed by respondents on printed questionnaires, and the silent and no-opinion responses were kept aside while analyzing the data.

## **6.0 Literature Review**

Extensive research has been done in the field of information-seeking behavior of different user groups. This literature review is not intended to cover all of the literature on information-seeking behavior; rather it highlights the comparative studies of information-seeking behavior of academic researchers and academic scholar's perceptions of libraries. Jamali and Nicholas (2008) revealed that differences in information-seeking behavior exist among people with different academic status. They identified that those with higher academic status, such as professors, relied more on word of mouth and interpersonal communications such as conferences for keeping up to date, while Ph.D students were more likely to use alerting services. Kuffalikar and Mahakulkar (2003) analyzed the information-seeking behavior of users of Nagpur University and found that internet surfing, conferences/seminars/workshops/refresher courses have widely helped the users in seeking current, updated information in their respective fields. The study also reported that user dependence was more on informal modes of communication than the formal. The study by Mahawar et al. (2009) on geologists revealed that most of them depended on conferences and seminars for up to date information. A longitudinal study of information use by 124 humanists and social scientists of a university in Argentina was conducted by De Tiratel and Romanos (2000). She found that majority of the social scientists (77.1 percent) do not use bibliographies. They first consult colleagues and then journals, prefer books (47.1 percent) than journals (30.4 percent), and have a preference for Spanish materials (73.4 percent). These social scientists made less use of the library. Patil and Parameshwar (2009) found that electronic resources are much helpful in fulfilling research scholar's information needs. Khan's and Zaidi's (2009) study on use of online databases by research scholars revealed that they largely used online databases for their research work and to update subject knowledge. Singh and Satija (2008) reviewed that agricultural scientists have great dependence in meeting their information requirements on their institutional libraries. Geetha (2004) in her study on the information needs and information-gathering behavior of research scholars in the Pure Science departments of the University of Kerala found that the collection of reference sources, indexing and abstracting sources, as well as computer-based information sources in the Kerala University library system was only partially adequate to meet research scholars' needs. The study of information needs and gathering dates back to 1948 when Bernal and others presented a paper on scientific information at the 1948 Royal Society Conference (Anwar, Al-Ansari and Abdullah, 2004). Wilson (1948) was possibly the first researcher to present the concept of information behavior. Wilson, however, today considers the concept 'information' more suitable since it includes other factors of behavior too. Wilson is of the opinion that a general information behavior should at least include the following three elements: (i) information need and its drivers (ii) factors affecting the individual's response to the perception of need and (iii) process or actions involved in that response. Shokeen and Kushik (2002), studied about information seeking behavior of social scientists working in the universities located in Haryana. They reported, most of the scientists visit the library daily. The first preferred method of searching the required information by the social scientists followed by searching through indexing and abstracting periodicals and citations in articles respectively. Suriya, Sangeetha and Nambhi (2004), carried out a research work on "Information seeking behavior of faculty members from government Arts College in Cuddalore district". The purpose of their study was to investigate how faculty members seek information from the library. It mentions that most of the respondents (38.12%) visited the library several times a week to meet their information needs. David Ellis and Hanna Old man's study explored the information-seeking behavior of researchers in the field of English literature at British universities. The article concluded with recommendations for further study of the use of electronic resources in relation to information literacy and browsing. Stephen E. Wiberley, Jr. and William G. Jones revealed that temporal factors have a significant impact on humanists' adoption of electronic information technology and identified and described four types of time intervals that influence humanists' behavior. Three are types of time spent: anticipated start-up time, actual start-up time, and use time; the fourth is time of life: that is, the stage or trajectory of a scholar's project or career. The study of electronic information seeking behavior in the social sciences and humanities dates back to the 1980s, but David Ellis was the first to model the process of information-seeking behavior of social scientists: how they search for and interact with the materials, as opposed to the sources they use and the manner in which the materials are obtained. Ellis described six fundamental characteristics of information seeking practiced by social scientists: starting, chaining, browsing, differentiating, monitoring, and extracting. It should also be noted that Ellis conducted another study about information-seeking patterns of academic researchers in 1993. Ellis's comparison of the different activities reported by social scientists led to the conclusion that these six categories were sufficient to represent the different information-seeking patterns of researchers. MANOJ, P. & MAJID (2005) has conducted the study to determine the information needs and seeking behaviour of litigation lawyers. The purpose was to investigate the types of information sources and the preferences of lawyers in selecting different information

sources. It also investigates the different types of information required at various stages of a case and tries to understand the adequacy of information to the lawyers. MAHO (2007) has conducted electronic interview of 60 researches of 14 countries including U.S., Germany, Australia, India, Russia etc. and found that scholars conducting research face many difficulties in accessing credible information for their research. The barriers include lack of academic structure, research support based information sources and widely scattered information sources. The study of KAUSHIK & KANCHI'S (2007) revealed that 57.69% respondents read newspaper daily and 33.33% read occasionally. A majority of users 58.33% used general magazines, 14.73% read magazines on films 16.67% has read magazines related to various competitions. More female undergraduates have been found reading religious and competitive books. The female undergraduate students have been found devoting more time for reading at home as compared to male U.G. students. The use of Internet by rural U.G. students was very low. There were only sixteen respondents out of one hundred fifty six, which used the Internet. MARDIS AND PERRAULT (2007) in their study about Internet found that, overall; teachers had characterized their experiences with using the Internet as frustrating because of poor quality and overwhelming results. In particular, science teachers, though confident in their search skills, used few online resources specifically designed to support their teaching and learning activities. Haglund and Olsson (2008), reinforced previous research on information behavior. Their observation revealed that most of the researchers used google. Researchers were confident of their self-sufficiency and they relied heavily on immediate access to electronic information. They reported that the researchers have very little contact with the library Morgan et al.(2011) , report that nearly two-thirds of teaching faculty has used social media in class and 30% posted course content outside of class. Wiki, blogs, and social networking websites, such as Facebook, are the most often mentioned types. Walraven et al., (2008) describes problems which children, teenagers and adults experience when solving information problems using world wide web for searching information. Their results show that students and faculty members in all age groups experience problems when specifying search terms and evaluating search results and sources. The regulation of the search process is also to be found to be problematic within all age groups. Van Kampen (2004) developed and evaluated a multi-dimensional library anxiety scale. Kurbanoglu et al., (2006) developed and evaluated an information literacy self-efficacy scale. Research in information-seeking behavior, motivation, critical thinking and learning theory was explored by Weiler (2005). Author compared in a search for possible motivating factors behind students' dependence on television and the internet for their information needs. The research indicates that only a very small percentage of the general population prefers to learn by reading A ground breaking article by Napp (2004) studied the information behaviors' of degree engineers .He found that 79% of the top 500 design firms, engineers obtained information on their own without the help of a professional librarian. This article stressed the need for more under graduate information literacy training to enhance future information retrieval skills. Shafique (2009) also explored the research student's satisfaction with the library services of the same department and found that most of the research students did not find their departmental library services very satisfactory. She also recommended many library services to fulfill research student's information needs.

## **7.0 Data Analysis and Interpretation**

The data was entered on a MS Excel worksheet for framing constituent tables / charts and overall analysis purpose. Tables were tailored in accordance with objectives under study. The tables and charts thus framed along with the interpretation are presented as under:

**7.1 Amount of Time Spent in Central Library :** The study reveals that the majority 32(47.7%) of respondents spend 3-5 hours daily among them there are 22 (32.8%) male and 10 (15%) female as evident from the Table 1. While there are 17 (25.3%) respondents who spend 4-7 hours daily among them 9 (13.4%) are male respondents and 8 (11.9%) are female respondents. Few respondents 15 (22.3%) spend less than 3 hours and small number of respondents 3 (4.4%) spend over 7 hours in the library.

**Table 1: Amount of Time Spent In Central Library**

<b>Duration</b>	<b>Male</b>	<b>Female</b>	<b>Total N</b>
Over 7 hours	2 (3)	1 (1.4)	3(4.4)
4-7 hours	9(13.4)	8(11.9)	17(25.3)
3-5 hours	22(32.8)	10(15)	32(47.7)
Less than 3 hours	22(32.8)	10(15)	32(47.7)

Figures in the parenthesis indicate percentage

### 7.2 Search Strategies Adopted

Most of the respondents 35(52.2%) adopt Boolean search among them the male respondents are in major proportion i.e. 23(34.3%) and females constitute 12(17.9%).Some respondents 14(20.8%) and 13(19.4%) who adopt phrase and proximity methods respectively for searching information. Fewer number of scholars 5(7.4%) adopt truncation strategy.

**Table 2: Search Strategies Adopted**

Search Strategies	Male	Female	Total N
Boolean search	23 (34.3)	12 (17.9)	35(52.2)
Truncation search	3(4.4)	2(2.9)	5(7.4)
Proximity search	7(10.4)	6(8.9)	13(19.4)
Phrase Search	7(10.4)	7(10.4)	14(20.8)

### 7.3 Tools Adopted For Document Searching

Large number of scholars 40(59.7%) use OPAC, along with there are other respondents 20(29.8%) who often use OPAC for searching the documents while there are least number of respondents who never consult OPAC. Printed catalogue is often used by some of the scholars 11(16.4%) for searching the documents. While majority of the respondents 56(83.5%) never use printed catalogue.

**Table 3: Tools Adopted For Document Searching.**

Source	N	Always	Often	Never
OPAC	67	40(59.7)	20(29.8)	7(10.4)
Printed Catalogue	67	--	11(16.4)	56(83.5)

### 7.4 Method Used For Seeking Help

Majority of the scholars 43(64.1%) seek help from reference librarian followed by research guide 19(28.3%) and least number of scholars 5(7.4%) take help from friend/colleague.

**Table 4: Method Used For Seeking Help.**

Method	Male	Female	Total N
Reference Librarian	28(41.7)	15(22.3)	43(64.1)
Friend/Colleague	4(5.9)	1(1.4)	5(7.4)
Research Guide	8(11.9)	11(16.4)	19(28.3)
Other	-	-	-

Figures in the parenthesis indicate percentage

### 8.0 Tools Used for keeping Abreast Of Current Development

The study reveals that:

**8.1 E-mail alert:** 30(44.7%) respondents always stay abreast of current developments through email alerts while others 37(55.2%) often keep themselves abreast through this service.

**8.2 Scanning of current issues of print/online journals:** Data in table 9 indicates that there are various respondents 33(49.2%) who always keep themselves abreast by Scanning of current issues of print/online journals while as there are some other respondents 21(31.3%) who often use this tool. Also least number of respondents 13(19.4%) never make use of this service/tool.

**8.3 CAS/SDI:** Data in table 9 reveals that majority of the respondents 42(62.6%) who always keep themselves abreast of current developments through various services provided by library. While there are some other



respondents 18(26.8%) who often make use of this service. Table also depicts that least number of respondents 7(10.4%) never make use of this service.

**8.4 Scanning Recent Issues of Abstracting Tools:** Data in table 9 depicts that most of the scholars 33(49.2%) always make use of this service while some of the respondents 22(32.8%) often make use of this service. It is also evident from the table that a least number of scholars 12(17.9%) never make use of this service.

**8.5 Personal Communication:** Data in table 9 reveals that majority of the respondents 28(41.7%) always make personal communications for staying abreast of current developments while least number of respondents 7(10.4%) often make use of this service. Also as evident from the table 32(47.7%) never have personal communications.

**Table 5: Tools Used For keeping Abreast Of Current Development**

Tools	Always	Often	Never
E-mail alert	30(44.7)	37(55.2)	--
Scanning of current issues of print/online journals	33(49.2)	21(31.3)	13 (19.4)
Through various services provided by library like CAS/SDI etc.	42(62.6)	18(26.8)	7(10.4)
Scanning recent issues of abstracting tools	33(49.2)	22(32.8)	12(17.9)
Personal communication.	28(41.7)	7(10.4)	32(47.7)

Figures in the parenthesis indicate percentage

## 9.0 Use of Search Engines/Meta-Search Engines

**Table 6: Use of Search Engines**

Search engines	Always	Often	Never
Google	57(85)	10(14.9)	--
Yahoo!	45(67.1)	22(32.8)	--
Bing	--	18(26.8)	49(73.1)
Hot Bot	--	9(13.4)	58(86.5)

Figures in the parenthesis indicate percentage

## 10.0 Accession to Journal Articles

Data in table 12 depicts that bulk of the respondents 45(67.1%) access library's subscribed journals among them the majority constitutes the male respondents 27(40.2%) and a least number of female respondents 18(26.8%) would access these journals. While other respondents 22(32.8%) access journals by personal subscription to print/e-journals.

**Table 7: Accession to Journal Articles.**

Source	Male	Female	Total N
Library's subscribed journals	27(40.2)	18(26.8)	45(67.1)
Personal subscription to print/e-journals	13(19.4)	9(13.4)	22(32.8)
Other	-	-	-

Figures in the parenthesis indicate percent

## 11.0 Information Resources Used In Research

Data in the table 8 reveals:

**Table 8: Information Resources Used In Research**

Information Sources	Always	Often	Never
Internet	65(97)	2(2.9)	--

Books	58(86.5)	9(13.4)	--
Patents	50(74.6)	8(11.9)	9(13.4)
Conference Proceedings	35(52.2)	19(28.3)	13(19.4)
Audio/video/CDROM/DVD	22(32.8)	32(47.7)	13(19.4)
Thesis	21(31.3)	29(43.2)	17(25.3)
Online journals	42(62.6)	17(25.3)	8(11.9)

Figures in the parenthesis indicate percent

### 12.0 Rating of various Tools

Table 18 depicts that a greater number of scholars 33(49.2%) has rated the Wiki's as the extreme useful tool followed by blogs 24(35.8%) while from the table it is clear that majority of the respondents 31(46.2%) has rated the twitter as 'not at all useful' tool.

Also evident from the table 18, most of the respondents have rated Facebook and twitter as the neutral tools followed by wiki's.

**Table 09: Rating Of various Tools**

Tools	Extreme useful	Neutral	Not very useful	Not at all useful
Facebook	5(7.4)	19(28.3)	37(55.2)	6(8.9)
Twitter	8(11.9)	19(28.3)	9(13.4)	31(46.2)
Blogs	24(35.8)	7(10.4)	29(43.2)	7(10.4)
Wiki's	33(49.2)	17(25.3)	11(16.4)	6(8.9)

Figures in the parenthesis indicate percent

### 13.0 Conclusion

The core of the library profession remains the same, but methods and tools for information delivery continue to grow and change dramatically. Libraries must understand information-seeking behavior of users to re-engineer their services and provide information efficiently. The results of this study reveal users who are more or less satisfied with library collections and services. Although some useful services like current awareness service and selective dissemination of information is being provided on demand, the researchers pointed out that it would be worthwhile if the library could provide them with indexing, abstracting, and interlibrary loan service as well.

### 14.0References

1. Abels, E. (2004). Information seekers, perspectives of libraries and librarians. *Advances in librarianship*, 28, pp151-170.
2. Case, D. (2007), *Looking for Information: A Survey of Research on Information Seeking, Needs and Behavior*, 2nd ed., Elsevier, London, - See more at: <http://www.aslib.co.uk/journals.htm?issn=0022-0418&volume=68&issue=4&articleid=17042799&show=html#sthash.Z9MfEE1O.dpuf>
3. Hughes, H., Bruce, C., Edwards, S. (2007), "Models for reflection and learning: a culturally inclusive response to the information literacy imbalance", in Andretta, S. (Eds), *Change and Challenge: Information Literacy for the 21st Century*, Auslib Press, Hawthorndene, pp.59-84. - See more at: <http://www.aslib.co.uk/journals.htm?issn=0022-0418&volume=68&issue=4&articleid=17042799&show=html#sthash.Z9MfEE1O.dpuf>
4. Krikelas, J. (1983), "Information seeking behavior: patterns and concepts", *Drexel Library Quarterly*, 19(2), 5-20. Retrieved from: <http://www.ils.unc.edu/-lib/F04-180/180-extra-reading.html>
5. Leckie, G.J., Pettigrew, K. E., & Sylvain, C. (1996). Modeling the information seeking of professionals and lawyers. *Library Quarterly*, 66 (2), 161-193.
6. Marchionini, G (1995). *Information seeking in electronic environments*. UK: Cambridge University Press.
7. Ocholla, D.N. (1999). *Insight into information seeking and communicating behavior of academics*.

- International Information and Library Review* 31 (3): 119-143.
8. Wilson, T. (2000). "Human Information Behavior". *Informing Science* 3 (2): 49–55.
  9. Wilson, T.D. (2000). Human information behavior. *Information science*, 3(2), 49-55.
  10. Wilson, T. (1999), "Models in information behavior research", *The Journal of Documentation*, Vol. 55 No.3, pp.249-70. - See more at: <http://www.aslib.co.uk/journals.htm?issn=0022-0418&volume=68&issue=4&articleid=17042799&show=html#sthash.Z9MfEE1O.dpuf>
  11. Al-Squari, M. (2007) "Information needs and seeking behavior of social science Scholar at sultan Qaboos University in Oman:a mixed method approach", *unpublished doctoral dissertations,Emporia,Ks.*
  12. Retrieved from:[www.informationstudies.net/images/pdf/101.pdf](http://www.informationstudies.net/images/pdf/101.pdf)
  13. Ellis, David. "A Behavioral Approach to Information Retrieval Design." *Journal of Documentation* 45, no. 3 (1989): 171–221.
  14. Ge, X. (January 01, 2010). Information-Seeking Behavior in the Digital Age: A Multidisciplinary Study of Academic Researchers. *College and Research Libraries*, 71, 5, 435.
  15. Geetha, P. (2004), "Information needs and use pattern of pure scientists", in Devarajan, G. (Eds),*New Frontiers of Knowledge in Information Science*, ESS ESS, New Delhi, Ed, pp.320-82.
  16. Jamali, H.R., Nicholas, D. (2008), "Information-seeking behavior of physicists and astronomers", *Aslib Proceedings*, Vol. 60 No.5, pp.444-62.
  17. Khan, A.M., Zaidi, S.M. (2009), "Online database usage by research scholars of the Aligarh Muslim University", *DESIDOC Journal of Library and Information Technology*, Vol. 29 No.2, pp.55-60.
  18. Kaushik, Sanjay K., and Jaswant Singh Khanchi. "Reading Habits of Rural Under-Graduate Students." *Library Herald* 45.1 (2007): 61-69.
  19. Kuffalikar, C.R., Mahakulkar, V. (2003), "A study of information seeking behavior of the user in P.G. departments of biochemistry and microbiology, Nagpur University", *Indian Journal of Information Library & Society*, Vol. 16 No.3/4, pp.185-96.
  20. Manoj, P. "Information needs and seeking behaviour of lawyers." (2011).
  21. Mardis, Maricia A. "Classroom Information Needs. Search Analysis from a Digital Library for Educators." *D-Lib Magazine* 15.1-2 (2009): 7-7.
  22. Mahawar, K.L. (2009), "Information seeking behavior of the Geologists: a study in geological survey of India", *IASLIC Bulletin*, Vol. 54 No.2, pp.3-113.
  23. Patil, D.B., Parameshwar, S. (2009), "Use of electronic resources by the faculty members and research scholars in Gulbarga University, Gulbarga: a survey", *SRELS Journal of Information Management*, Vol. 46 No.1, pp.51-60.
  24. Suriya, M., Sangeetha,G. & Nambhi,M.A.(2004). Information seeking behavior of faculty members from government Arts College in Cuddalore District. In: Kaul, H.K. & Patil, S.K. (Eds), *library and information networking*. New Delhi, 2004, pp.285-292.
  25. Singh, K.P., Satija, M.P. (2008), "Information seeking strategies of agricultural scientists working in the ICAR institutions in India", *DESIDOC Journal of Library and Information Technology*, Vol. 28 No.3, pp.37-45.
  26. Shokeen, A. & Kushik, S.K.(2002). Information seeking behavior of social scientists of Haryana Universities. *Library Herald*, 40(1),8-11.
  27. Tenopir,C. et al. (2008), "Scholarly E- reading patterns in Australia, Finland, and the United States: a cross country comparison", *paper presented to the 74<sup>th</sup> IFLA General conference and council*, 10-14 August, QUE'bec.
  28. Retrieved from: <http://www.ifla.org/IV/ifla74/index.html>
  29. Tiratel, S.R.de. (2000), "Accessing information use by humanists and social scientists: a study at the Universidad de Buenos Aires, Argentina", *Journal of Academic Librarianship*, Vol. 26 No.5, pp.346-54.
  30. Wilson, T.D (1981): On user studies and information needs. *Journal of documentation*.37 (1)3-15. Retrieved from <http://www.information.net/tdw/publ/papers/1981 infoneeds.html>