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Information Needs and Information-Seeking Behavior: A Survey of College Faculty at Bahawalpur

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Introduction

We are living in the information age. The term "Information Age" has been used to represent the impacts of Information and Communication Technology (ICT) on every aspect of life. Baby, et al (2000) has mentioned that twentieth century witnessed an "information explosion" owing to the exponential growth of printed material every minute at the global level. The growth rate of publication is greater in science and technology than that of social sciences. The term Information explosion describes the rapidly increasing amount of published information and the effects of this abundance of data. As the amount of available data grows, the problem of managing the information becomes more difficult, which can lead to information overload. Information overload refers to the state of having too much information to make a decision or remain informed about a topic (Wikipedia, 2009). This information explosion and information overload gave the birth to the concept of studying the information needs and seeking behaviors of different groups of users. Information need is an individual or group's desire to locate and obtain information to satisfy a conscious or unconscious need (Wikipedia, 2007). As Sharma (1992) and Vickery (n.d.) has stated that understanding the user is the half battle in providing information-services. The key operation is to select from the store the information needed by a particular user at a particular time.

The concept of "information behavior" was coined in the late 1990s, but it traces its roots to the concept of "information needs and uses" that arose in the 1960s. There has been a gradual shift in the focus of information behavior research from a system orientation to a user orientation (LISWiki, 2007). At the end of 1970's and in the beginning of 1980's researchers began to realize that questions in information needs, seeking and use couldn't been seen only from

the systems point of view. The user of the information and his/her needs came into focus and research in cognitive science was applied in the studies. The new view was called the new paradigm or the cognitive view (Dervin, 1986). The origins of human information seeking behavior are found in the work on the users of libraries and in readership studies in general. The post-war increase in the amount of scientific literature which was either newly published or recently released from war-time restrictions led, in 1948, to the Royal Society Scientific Information Conference, which marks the beginning of the modern study of human information seeking behavior. However, the subject goes rather further back in time (Wilson, 2000).

With the advent of information need and seeking behavior research different models were proposed for identifying different steps involved in this process. For example, Kuhlthau (1991) studied as how students searched for information as part of their writing process. She proposed a model that was consisted on seven stages. The stages of Kuhlthau's model are: a) Initiation b) Selection c) Exploration d) Formulation e) Collection f) Presentation.

Jarvelin and Wilson (2003) reviewed different models for information behavior (Wilson 1981), and information seeking behavior (Wilson 1981; Dervin, 1986; Ellis, 1989; Kuhlthau, 1991). They discussed the functions of conceptual models in scientific research in IS & R research and concluded that some models are of summary type and others more analytic. Such models serve different research purposes.

Most of the earlier studies of information needs were based on indirect methods, like citation counting of recent documents, library issue records, reference records, etc. It is true that such studies can bring out some aspects of the use of literature. The Royal Society's Conference held in London in 1948 helped much to focus documentalists' concern and interest in this area. Before the Washington Conference there appeared, in 1956, one of the most important studies entitled Pilot study on the use of scientific literature by scientists conducted by Ralph R. Shaw. This study and a few others brought an element of pessimism into such studies. They were compared with public opinion polls conducted for the improvement of consumer services and it was held that in library and information services, which were essentially technical services, there was hardly any scope for such surveys (Dawra, 2003, pp. 182-183). One of the pioneer studies was conducted on teaching of psychology in teacher-training institutions of the South by Dunkle and Peterson (1926) with the help of questionnaire.

Watson, Blakeley, and Abbott (1998) carried out a study on the use of communication technologies in teacher education. Findings showed that teacher educators, whether in universities or schools appeared to have limited understanding and experience of ICT, with a complex set of perceptions that might be at odds with reality. The staff of university computer networks failed to understand users' needs of distributed and distance networks. Shokeen and Kushik (2002) studied information seeking behavior of social scientists working in the universities located in Haryana. They reported most of the social 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. The social scientists use current journals followed by books. Cothey (2002) examined the information seeking behavior of 206 college students using the World Wide Web during a 10-month period. The study was intended to suggest how the general population uses the web. It was concluded that Web users have become more passive and more eclectic as they become more experienced using the Web. It was also discovered that they use less querying techniques; however their Web usage was more sporadic, which might suggest greater selectivity.

Suriya, Sangeetha and Nambi (2004) carried out a research on

information seeking behavior of faculty members from Government Arts Colleges in Cuddalore District. The purpose of their study was to investigate, how faculty members seek information from the library. It was concluded that most of the respondents 61 (38.12 percent) used to visit the library several times a week to meet their information needs. Regarding the type of search made by the respondents, majority of the respondents (57%) made their search by subject. Similarly Lewin and Stokes (2004) explored the information-seeking behavior of a group of lecturers, based on one site, delivering a nursing and midwifery curriculum in the School of Health Studies of a higher education institution. Findings showed that in order to access information, lecturers were most likely to access the institutional libraries, the Internet, advice from colleagues and their personal collections. Refereed journals were the top-ranked information resources with professional studies and research cited as the most sought after topics. Lecturers mentioned the role of library staff as integral to the information-seeking process.

A detailed review of the literature presented in the above section reveals that a large number of research studies are carried out to find out the information needs and seeking behavior of different groups of people, while very few studies are found on Pakistan. Anwar (2007) has critically analyzed the beginning of research activity on information needs and presented an analysis of the literature on information needs and seeking behavior in Pakistan. He reviewed 14 student-research projects produced from 1975 to 1982 at the University of the Punjab, which have remained unpublished. He also concluded that there is a dire need for the LIS academics and practitioners in Pakistan to take note of the current state of affairs and take steps to promote and conduct research in this area.

Coming section presents a review of different studies conducted in Pakistan. Qureshi (2008) investigated the information needs & seeking behavior of students in Universities of Pakistan. The study concluded that there are several factors that have significant effect on students' behavior such as educational and cultural background, surrounding environment and student participation, which have high positive impact on information needs and information seeking behavior of students. If surrounding environment is helpful and student participation is active and then it will create culture that enhances the students' information gathering system.

Besides this, most of the studies were conducted at University of the Punjab for studying the information needs and seeking behavior of different groups of people. For example, Bashir (1975) investigated the information needs of veterinary surgeons working in the district veterinary hospitals of the Punjab. Findings of the study exposed that respondents had no access to their specific material and they were unable to keep themselves up to date in their profession. Nighat (1975) studied the information needs of scientists working in the Oils, Fats and Waxes Division of the PCSIR Laboratories at Lahore using personal interview technique. The findings of the study indicated that participants used both formal and informal sources of information and they used to scan scientific literature especially current journals. Parvez (1975) investigated the information needs of dental surgeons working in the Dental College and Hospitals of Lahore. The findings of the study revealed that 68% respondents needed information for keeping themselves up to date, 48% required information to learn about medicines and related techniques. Gureja (1975) studied the information needs of newspaper editors. The study showed that majority of the respondents used reference tools specially dictionaries. For meeting their information needs, government reports were used by 67% respondents. News paper files were consulted by 53%, hand books were read by 40%, while gazetteers and directories were used by 37% respondents. Butt (1975) in his study investigated the information needs of Pakistan Television news producers located in Karachi, Lahore, Peshawar, Quetta and Rawalpindi. He exposed that a large majority of the respondents (95%) were using radio,

press releases, and official notifications, received news from PPI, newspapers, foreign journals and professional books as sources of information. The study also revealed that respondents lacked the help of qualified librarians. Perveen (1976) has studied the information needs of teachers and research staff working in the social sciences department of University of the Punjab, Lahore. The study showed that teachers required information mostly for teaching purposes and they used both formal and informal sources. Other sources of fulfilling the needs were abstracts, books, reviews, conferences, proceedings and library catalogues. Bokhari (1976) conducted research to find out the information needs of the engineers of heavy mechanical complex Taxila. The study revealed that participants were consulting both formal and informal sources to meet their information needs. Majority of them attended workshops to get current knowledge in their field. Siddique (1976) studied the information needs of chemists. The findings exposed that current periodicals were frequently used by the respondents. Abstracts were used by them for research work. Only 51% respondents were satisfied with the library services. Fazlul-Haq (1976) conducted a study to know the information needs of teachers. According to the results, the teachers were consulting text books for the preparation of class lectures. The main sources of obtaining new ideas for information were current journals, latest books, news magazines, research reports and conference proceedings. Chaudhary (1977) studied the information needs of science teachers. The study revealed that 94% science teachers were using textbooks and 43% current journals. To keep themselves up to date, they usually used to consult journals. Anjum (1978) probed the information needs of the humanities faculty members of University of the Punjab, Lahore using a questionnaire supplemented by selected interviews. Major findings of the study pointed out that humanist scholars were less interested in informal sources of information.

Beside these old studied in the recent years, few more studies were conducted. For example, Shahzad (2007) conducted his research to find out the information seeking behavior of faculty members at GCU, Lahore. Tahir, Mahmood, and Shafique (2008) studied the information needs and seeking behavior of Arts and Humanities Teachers of University of the Punjab. Tahira (2008) studied information needs and seeking behavior of science & technology teachers at University of the Punjab for her M. Phil study. Ansari (2007) carried out her PhD research to find out the information needs and seeking behavior of media practitioners in Pakistan. Within the city of Bahawalpur, only one study was conducted by Nazli (2001) to find out the information seeking behavior of user community at the Islamia University of Bahawalpur Library. No study to date has been conducted at national or local level to find out the Information needs and seeking behavior of college teachers and administrators in Pakistan. Keeping this gap in view, this study aims at finding the information needs and seeking behavior of college faculty at Bahawalpur City.

Research Methodology

The study is based on the questionnaire survey, prepared after reviewing the related literature. The questionnaire was containing both open and close ended questions. All (n=6) Government colleges listed within the city of Bahawalpur were selected for the study. Respondents included teachers, principals & vice principals working in the selected colleges. The principal researcher personally visited the colleges several times and due to the personal persuasion, the response was 93.33%. In total, fifty six questionnaires were carefully sorted, entered, and analyzed using the Statistical Package for Social Sciences (version 15). Responses acquired against the open-ended question were analyzed qualitatively.

Data Analysis

Personal Profile of the Respondents

In total 56 respondents responded against the questionnaire, of which 17 (30.4 %) were female and 39 (69.6 %) were male (Table 1).

Table 1. Frequency Distribution of Respondent's Gender

Sr.	Gender	Frequency	Percent
	Male	39	69.6
	Female	17	30.4
	Total	56	100

Respondents from six colleges were selected for the data collection. Eleven (19.6%) responses were acquired from Govt. College for E/Teacher BWP., 10 (17.9%) from three colleges such as Govt. Post Graduate College BWP, Govt. S.E. College BWP and Govt. Commerce College BWP. On the other hand, nine (16.1%) responses were acquired from Govt. Elementary College for Women BWP and six (10.7%) from Govt. Degree College for Women, Satellite Town BWP (Table 2).

Table 2. Frequency Distribution of Responses Acquired from each Institution

Sr.	Institutions	Frequency	Percent
	Govt. College for E/Teacher BWP	11	19.6
	Govt. Post Graduate College BWP	10	17.9
	Govt. S.E College BWP	10	17.9
	Govt. Commerce College BWP	10	17.9
	Govt. Elementary College for Women BWP	9	16.1
	Govt. Degree College for Women Satellite Town BWP	6	10.7
	Total	56	100

Of the 56 respondents of the survey, 51 (93%) were teachers, four (5%) were principals, while only one was vice principal (2%) (Table 3).

Table 3. Frequency Distribution of Respondents' Designation

Sr.	Designation	Frequency	Percent
	Teacher	51	93
	Principal	4	5
	Vice-principal	1	2
	Total	56	100.0

Four (7.1%) respondents were between 21 to 30 years, 20 (35.7%) were between 31 to 40 years, 21 (37.5%) were between 41 to 50 years, nine (16.1%) were between 51 to 60 years, while two (3.6%) did not mention their age (Table 4).

Table 4. Frequency Distribution of Respondent's Age

Sr.	Age	Frequency	Percent
	21-30	4	7.1
	31-40	20	35.7
	41-50	21	37.5
	51-60	9	16.1

Missing	2	3.6
Total	56	100.0

Frequency distribution of respondents' academic qualification presented in Table 5, shows that thirty (53.6%) were M.A, twelve (21.4%) were MSC, three (5.4%) were MCS and Ph. D., two (3.6%) were M.Com and M. Phil, one each (1.8%) was LLB & M. Com, MA & M. Ed, MBA and MSC & M.Ed.

Table 5. Frequency Distribution of Respondent's Qualification

Sr.	Qualification	Frequency	Percent
	MA	30	53.6
	MSC	12	21.4
	MCS	3	5.4
	Phd	3	5.4
	M.Com	2	3.6
	M.phil	2	3.6
	LLB & M. Com	1	1.8
	MA & M.Ed	1	1.8
	MBA	1	1.8
	MSC & M.Ed	1	1.8
	Total	56	100.0

Frequency distribution of the respondents' experience category shows that 12 (21.4%) respondents had professional experience between 11-15 years, nine (16.1%) between 1-5 years, 16-20 years and 21-25 years each. Eight (14.3%) respondents possessed experience between 6-10 years, five (8.9%) had 31 years and onwards, while only one (1.8%) had 26-30 years of experience (Table 6).

Table 6. Frequency Distribution of Respondent's Professional Experience

Sr.	Experience	Frequency	Percent
	1-5	9	16.1
	6-10	8	14.3
	11-15	12	21.4
	16-20	9	16.1
	21-25	9	16.1
	26-30	1	1.8
	31-onwards	5	8.9
	Total	56	100.0

Information Needs and Seeking Behavior of the Respondents

Respondents were asked different questions to find out their information needs and seeking behavior. Coming section presents an analysis of the acquired responses.

Purpose and Habits of Seeking Information

Respondents were asked to mention their purpose of seeking information. Most of them opined that they frequently seek information for lecture preparation (mean= 4.28), and for improving their personal

competencies, general knowledge or current awareness (mean= 3.96), while they mentioned that conversing with co-workers and other experts at institutions (mean= 3.68), and reading articles/books (mean= 3.17), are their information seeking habits (see Table 7).

Table 7. Descriptive Statistics of Respondents' Opinion About Purpose & Habits of Seeking Information

Sr.	Purposes & Habits	Min	Max	Mean	Median	Mode	St. Dev.
	For lecture preparation	1	5	4.28	5.00	5	.960
	To improve personal competencies	1	5	3.96	4.00	5	1.018
3.	Conversing with co-workers and other experts at institutions	1	5	3.68	4.00	4	1.146
4.	Reading articles/books	1	5	3.17	3.00	4	1.370

Note: 5= Always, 4= Frequently, 3= Sometimes, 2= Seldom, 1= Never

Source of Acquiring Information Resources

According to the acquired results, respondents mentioned that they sometimes acquire resources from their colleagues (mean= 3.48), purchase it or use from personal collection (mean= 3.09). On the other hand they mentioned that they frequently acquire information resources from their institutional library (mean= 4.04), (Table 8).

Table 8. Descriptive Statistics of Respondents' Opinion About Sources of Acquiring Informal Information Resources

Sr.	Sources of Acquiring Information Resources	Min	Max	Mean	Median	Mode	St. Dev.
	From your institutional Libraries	2	5	4.04	4.00	5	.981
	From Colleagues	1	5	3.48	4.00	4	1.112
	Through Purchase/personal collection	1	5	3.09	3.00	3	.986

Note: 5= Always, 4= Frequently, 3= Sometimes, 2= Seldom, 1= Never.

Frequency of Usage of Different Formal & Informal Information Resources

Respondents were provided with a list of formal and informal sources of information resources and were asked to mention the frequency of their usage. They mentioned that they frequently use books or monographs (mean= 3.96) and they sometimes use reference sources such as bibliographies, handbooks etc., (mean= 2.72), similarly respondents indicated that they frequently use to discuss face to face with their colleagues or friends as an informal source of information (mean= 3.93), (Table 9).

Table 9. Descriptive Statistics of Respondents' Opinion About Frequency of Usage of Formal Information Resources

Sr.	Formal & Informal Sources	Min	Max	Mean	Median	Mode	St. Dev.
	Books/Monographs	1	5	3.96	4.00	4	.972
	Reference sources (Bibliographies, Handbook etc.)	1	5	2.72	3.00	3	1.116
3.	Face-to-face Discussions with colleagues/friends	1	5	3.93	4.00	4a	1.120

Note: 5= very frequently, 4= Frequently, 3= Sometimes, 2= Rarely, 1= Never.

Preferred Language for Reading Material

Respondents were asked to mention their preferred language for reading material. They pointed out English as their most preferred language (mean= 1.25) (See Table 10).

Table 10. Descriptive Statistics of Respondent's Opinions About Their Preferred Language

Opinion	Min	Max	Mean	Median	Mode	St. Dev.
Preferred language	1	2	1.25	1.00	1	.434

Note: 1= English, 2= Urdu, 3= Any other.

Preferred Format for Information

Descriptive statistics given in the Table 4.18 reveal that they most prefer print format (mean=2.65), while they prefer electronic (mean=2.06) and audio/visual (mean=2.02) format. On the other hand they less prefer microform (mean=1.34), (Table 11).

Table 11. Descriptive Statistics of Opinion About Preferred Format for Information

Sr.	Format	Mean	Median	Mode	Std. Dev.	Min	Max
1	Electronic	2.06	2.00	2	.705	1	3
2	Print	2.65	3.00	3	.590	1	3
3	Audio / Visual	2.02	2.00	2	.761	1	3
4	Microform	1.34	1.00	1	.522	1	3

Note:3=Most preferred, 2=Preferred 1= Less Preferred

Role of Institutional Libraries/Information Centers

Most of the respondents opined that present libraries and information centers in their educational institutes are fulfilling their required information needs to some extent (mean= 1.93), (Table 12).

Table 12. Descriptive Statistics of Respondent's Opinions About the Role of Libraries and Information Centre

Opinion	Min	Max	Mean	Median	Mode	St. Dev.
Role of present libraries/information in fulfilling your information needs	1	3	1.93	2.00	2	.544

Note: 3= To great extent, 2= To some extent, 1= Not at all.

Impact of Information and Communication Technologies (ICT) on Information Needs and Seeking Behavior

Respondents were asked to mention how ICT has affected their information seeking & gathering habits. The results show that most of them have admired that ICT has completely changed their information seeking & gathering habits (n=24), (Table 13).

Table 13. Frequency Distribution of Respondents' Opinion About Impact of ICT

Sr.	Opinion	Frequency
	ICT has completely changed their information seeking & gathering habits	24

Type of Information and Communication Technologies used by the Respondent

Respondents were asked to mention the type of Information and Communication Technologies used by the respondents for seeking information. Most of them were using Atmospheric (Radio/T.V) (n=28) and telephonic communication technologies (n=27). Besides this they were also using Internet search engines/websites (n=26), e-mail (n=5), online chatting (n=2), and teleconferencing (n=1), (Table 14).

Table 14. Frequency Distribution of Different Information & Communication Technologies Used by the Respondents

Sr.	Information & Communication Technologies	Frequency
	Atmospheric communication(Radio/T.V)	28
	Telephone	27
	Internet search engines/websites	26

Impact of ICTs on Information Seeking and Gathering Process

Most of the respondents opined that ICT has made information seeking and gathering process easier for them (mean= 3.82) (See Table 15).

Table 15. Descriptive Statistics of Respondent's Opinions About Impact of ICT on Information Gathering Process

Sr.	Opinion	Min	Max	Mean	Median	Mode	St. Dev.
	ICT made information seeking and gathering process easier or more difficult	1	4	3.82	4.00	4	.601

Note: 4= Easier, 3= More Difficult, 2= Much More Difficult, 1=About the Same.

Search Engines used for Information Seeking

Respondents were asked to mention the Internet search engines used by them. Most of them (n= 23) were using Google, only four were using Yahoo and two were using MSN, while only one respondent was using Alta Vista (Table 16).

Table 16. Frequency Distribution of Search Engines Used by the Respondents

Sr.	Search Engines	Frequency
	Google	23
	Yahoo	19
	MSN	11
	Alta Vista	2

Formal Training or Orientation Received by the Respondents

Respondents were inquired whether they have received any formal training or orientation for using online information resources. Results show that most of the respondents (36, 64.3%) did not receive any formal training or orientation, while only 18 (32.1%) got it. Two respondents did not answer this

question (Table 17).

Table 17. Frequency Distribution of Formal Training Received by the Respondents

Formal Training	Frequency	Percent
No	36	64
Yes	18	32
Missing	2	4
Total	56	100.0

Problems Faced by the Respondents While Seeking Needed Information

Respondents were asked to indicate the problems faced by them while seeking needed information. Most of them pointed out that they sometimes face the following problems such as lack of computer hardware and software (mean= 3.25), information scattered in too many sources and lack of time for searching it (mean= 2.92), non availability of required material (mean= 2.85), lack of training or help in IT (mean= 2.68), (See Table 18).

Table 18. Descriptive Statistics of Problems Indicated by the Respondents, While Seeking Information

Sr.	Problems	Min	Max	Mean	Median	Mode	St. Dev.
	Lack of computer hardware and software	1	5	3.25	3.00	3	1.262
	Information is scattered in too many sources	1	5	2.92	3.00	3	1.181
	Lack of time for searching	1	5	2.92	3.00	3	1.124
	Required material is not available	1	5	2.85	3.00	3	1.133
	Lack of training/help in using IT resources	1	5	2.68	3.00	3	1.173

Note: 5= Always, 4= Frequently, 3= Sometimes, 2= Seldom, 1= Never.

Suggestions Provided by the Respondents

Very few respondents (n=3) provided additional comments or suggestions. They stressed that college libraries should be equipped with computers, CDs and Internet etc. (n=1), latest journals of research should be provided in college libraries (n=1) and college teachers should be invited by universities whenever there are seminars or lectures by the eminent scholars (n=1).

Findings of the Study and Recommendations

- The college teachers and administrators mostly seek information for lecture preparation, improvement of their personal competencies and current awareness.
- They mostly use books and monographs for seeking information, while they frequently use to discuss face-to-face with colleagues and friends as an informal source of information.
- They mentioned that they frequently acquire information resources from their institutional library.
- They use their personal collection or institutional libraries when they have urgent need of some information.

- Major obstacles, they face while seeking information is lack of computer hardware and software.
- Majority of them use atmospheric communication technologies (Radio/TV), and telephone
- Most of them did not find different parts of research journals directly useful for their information needs.
- They prefer English language for reading material, while print is the preferred format.
- Google is mostly used search engine by them.
- Most of them have not received any formal training or orientation for using the online information resources.
- Institutional libraries are fulfilling their information needs to some extent.
- They stressed that college libraries should be equipped with computers, CDs, Internet, and latest research journals. Workshops and seminars should be arranged for them.
- Most of them opined that an information centre should be given functional freedom to great extent for improving its services.

On the basis of acquired results, following recommendations are made for the improvement of college libraries and information centres at Bahawalpur City:

- As the college teachers frequently seek information for lecture preparation and improve personal competencies, from their college libraries but college library system is inadequate to fulfill their information needs. Keeping this reality in view, college libraries should be updated with better facilities and collection.
- College libraries should be provided with proper hardware & software and online access to related resources as it is the practice of university libraries.
- Keeping the dissatisfaction of respondents with college libraries in view, better services should be provided by the college librarians.
- Respondents' demands for information sources must be given importance in order to improve existing services of the library.
- Formal training should be provided to the college faculty for using online resources.
- It is obvious from the acquired results that college faculty use books/monographs and face-to-face discussion with their colleagues & friends instead of college librarians, keeping this fact in view, college librarians should enhance their communication and interpersonal skill to provide better services.

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