CHAPTER-III

REVIEW OF LITERATURE
3. REVIEW OF LITERATURE

Introduction

Use of information services have permeated academia and profoundly affected the way in which information (in institutions) is sought today. A more complete understanding of the way in which Research Scholars and faculty acquire and use of information is therefore necessary. The literature review presented in this chapter provides a holistic view of the historical trajectory and current status of research in this domain. Literature is examined in order to Investigate user actions and their cognitive understanding of and psychological motivations behind acquiring information through Library. An attempt was also made to identify a range of Library information seeking behaviors that are inherent in the higher education environment.

Markee, Katherine M. (1972)\(^1\) while conducted a study on ‘where is the library researcher’ he emphasized the need of user research in the parent organization and stated that a ‘review of library literature revealed that the amount of library research being done by librarian at his institution is not his professional responsibilities. He further suggested that library research should begin and continue right in the parent institution, as this bottom-upward
approach can only provide a solid foundation for national information systems of developed countries'.

Foss, V.M., (1974)\(^2\) corroborates this by arguing that user education should be organized at different information levels to ensure that the needs of all students are met. This argument implies that training should be organized around levels of difficulty and user’s educational background. In university, students have different background and culture. They previously studied in different disciplines and each student has different level of perception and mental ability that causes a great effect on information seeking environment. Another big source of information is the communication among students but due to having different disciplines and levels, they cannot exchange information effectively.

Packer, H. (1975)\(^3\) in a research study investigated the methods used by chemists and chemical engineers in Canadian universities to study current awareness. He found that 60% of the subject’s experts used the formal methods of communication.

Anwar, M.A., (1981)\(^4\) Lack of awareness of available resources is also another big cause that highly affects information needs and seeking behaviour of Pakistani students. Anwar studies on the use of subject literature at the University of Punjab, India, concluded that often students do not
succeed in achieving the basic goal of developing ability to use the access tools of information in dependently. Lack of knowledge due to different factors in this case can be seen as a barrier. It also may have different aspects.

Herron’s (1986) research of journalists, a little over two dozens of studies have been conducted to understand journalists’ information seeking behavior and its various aspects.

Osiobe, (1988) found that browsing was the most important source of finding references for undergraduate students. He concluded that respondents in the University of Botswana did seek help from University library staff with 40% receiving help from the reference librarian and approximately 32% from the subject librarian.

Taylor (1990) also noted that after interacting with the information sources (e.g. library) what a user actually needs may not eventually tally with what is practically available, due to constraints either within the stock or due to the user own inadequacy. Many problems may serve as hindrances for the undergraduates in the process of their search or using the library.

Taylor (1991) information is the product of certain element of the information use environment. The element according to him are: the assumptions, formerly learned or not, made by defined set of people concerning the nature of their work; the kinds and structure of the problems
deemed important and typical by this set of people; the constraints and opportunities of typical environments with in which any group or sub-group of this set of people operates and work; and the conscious perhaps un conscious, assumptions made as to what constitutes a solution, or better said, a resolution of problems, and what makes information useful and valuable in their contexts. He concluded based on this definition that information behaviour of different groups of people also is different.

Kuhlthau, C.C. (1991) focused on information search process, which emphasizes feelings, thoughts, and understanding of a situation that they need to resolve task, problem, or topic. This particular action led to the action of people as they Kuseek the meaning of useful research in providing a frame work for improving information search.

Stabler (1991) explained that end users of CD-ROMs often need assistance in database content, search protocols, and use of computers. There is a necessity for a good training program to develop a positive attitude, competency of staff, and consistency of service. He described a model training program developed by the New Mexico State University Library. By using a team approach of a subject specialist and the CD-ROM coordinator, the staff could be trained quickly and efficiently. The training focused on database
content, software comparison and application, and basic knowledge of computers.

Fister, (1992)\textsuperscript{11} undergraduate students may be smart people, but they are still finding the process of research intimidating. Fister explained that these students do not learn the basic information skills; they only end up using trial and error methods of research. This limits their capabilities to satisfy their needs.

Ellis, Cox and Hall (1993)\textsuperscript{12} compared the information-seeking patterns of physical and social scientists and differences. This is why this study has included all these factors in analyzing the pattern of information seeking behaviour of University of Botswana undergraduate students.

Folster (1995)\textsuperscript{13} reviewed social scientist information-seeking patterns and found that they preferred journals instead of other sources, to follow citations instead of using indexes or abstracts to find articles, and they did not view librarians as important sources of information.

Young and Ackerson (1995)\textsuperscript{14} incorporate the degree to which students misused (or plagiarized) information. Assess different attributes of information-seeking behavior, namely, quality of resources, variety of resources, citations, and utilization of information, reflected comprehensively in the quality of term-papers submitted by student teams.
Malmsjo, A. (1997)\textsuperscript{15} reviews the factors related to the environment and situation influencing gushers' information seeking behaviour and the various models and equations reported in the literature to describe this activity in a quantitative manner. Overall, the aim is to examine the degree to which these models of information seeking behaviour can be of use in designing practical information systems.

Lehtinen, E., (1997)\textsuperscript{16} study on the use of subject literature at the University of Punjab, India, concluded that often students do not succeed in achieving the basic goal of developing ability to use the access tools of information independently. Lack of knowledge due to different factors in the place of the study, for instance, the university to include also those sources of information which can be used and followed by different media and those events which students can take part outside the university virtually or directly.

Ellis and Haugan (1997)\textsuperscript{17} have reported on the information seeking patterns of engineers and industrial research scientists. Their description is embedded within a detailed account of different project types and project phases in their findings, they identify eight major information seeking activities or characteristics that are: surveying, chaining, monitoring, browsing, distinguishing, filtering extracting and reveling.
Marchionini, Gary M. (1997)\textsuperscript{18} conducted research on browsing and observed that there seems to be agreement on three general types of browsing that may be differentiated by the object of search and by the systematically of tactics used. Direct browsing- occurs when browsing is systematic, focused and directly by specific object or target examples, Semi directed browsing- occurs when browsing is predicted, the target is less definite and browsing is less systematic, and undirected browsing occurs when there is no real goal and very little focus.

Wilson, T.D. (1997)\textsuperscript{19} in a study of the information seeking behaviour in multi disciplinary subjects been identified four basic categories of information seeking and acquisition i.e., Passive attention such as listening to the radio or watching television programmers ,where there may be no information seeking intended, but where information acquisition may take place nevertheless; Passive search which seems like a contradiction in terms, but signifies those occasions when one type of search (or other behaviour) results in the acquisition of information that happen to be relevant to the individual; Active search which is the type of research most commonly thought of in the information science literature, where an individual actively seek information; and Ongoing search where active searching has already established the basic framework of ideas, beliefs, values or whatsoever, but
where occasional counting search is carried out to update or expand one’s framework. Wilson in a study of the information seeking behaviour in multidisciplinary subjects been identified.

Swarnalatha Devi and Lahiri (1997) made a survey of information seeking behavior of 40 Agricultural scientists working in ICAR, Manipal, College of Agriculture and Manipur University. The study revealed that the agricultural scientists seek information for research, experiments and paper writing, most of the scientists prefer paper publication as the better medium for dissemination of their results. A sizeable section however favors other media like ‘radio talk’ or demonstration to the formers and to a major section of the scientists, Agricultural information available in the state is minimum.

Fisher (1998) briefly reviewed information is checkered history and critically analyzed electronic information sources with particular reference to social science CD-ROMs and the Internet. The content of such databases is nothing as geographically and culturally diverse as we are led to believe. This unequal and discriminatory supply of information, aided and abetted by increasing commoditization, is both the product of, and an influence on, the quality of academic research and teaching. Information professionals can take steps to mitigate information inequality.
Liao (1998) conducted a study on information seeking behaviour of agricultural researchers as teachers in Taiwan. He investigated that the critical ways for the teachers to get needed literature and the use pattern of information sources is primarily the primary sources of information.

Butcher H (1998) in a survey of top Japanese firms, showed that Japanese managers spent much time collecting and processing business intelligence. He described them as having a preoccupation with the actions of their competitors and suggested that it was the use of information that helped them maintain their competitive position.

Fidzani (1998) conducted a study in University of Botswana, Gaborone to establish the information needs and information-seeking behaviour of graduate students. Findings include that there was a heavy reliance on library books, textbooks and journals as sources of information used for course-work. The researcher reported further that students primarily relied on scanning the shelves, or browsing through journals rather than using the index and abstract databases to locate information.

Nicholas and Martin (1998) All the three types of journalists mostly need information for fact checking and current awareness. They use the Internet, e-mail and cell phone to obtain information. Results indicate that the education reporter had lower needs as compared to the crime reporter. The
sports reporter required deep background knowledge and statistical information while the education reporter needed only descriptive knowledge. All of them have to search information constantly owing to the fact that they need files of subjective and up to date information. Education and crime reporter mainly relied on online databases, national news magazines and books for background information and research studies on different subjects. All three types of participants acknowledge the need for packaged information.

A survey on students’ web searching preferences conducted by Morrison, Kim, and Kydd (1998) reveals that students place a higher value on locating and collecting information than critically evaluating the source of the data. In an article reviewing literature on college student web research techniques

Helton, R & Esrock, S (1998) observed that library services can be packaged and promoted like almost any other product. For those with a professional background in marketing, it is almost certain to think of programs and services as if they were consumer products, but that’s not always easy for librarians. Any information professional who listens to and acts on the unique needs of users is thinking like a marketer although limited time and funding often push marketing to the bottom of the priority list in the library.

95
Vaughn.L et al. (1998) compared the use of business information in Western culture (Canada) and an Eastern culture (China) based on a questionnaire survey. The results suggested that informal information sources were more important and better used in both cultures. Studies have also been made in Africa.

Siatri R (1998) observes that failing to understand information seeking behaviour is an obstacle interpreting the way in which electronic information services are being delivered.

Covi (1999) analyzed information-seeking behaviour of academic researchers in the field of molecular biology, literacy theory, and computer science and their use of digital libraries. Her result indicated differences in the search strategies employed and the types of material selected among the researchers in the various academic disciplines.

Brown (1999) analyzed the information seeking behaviour of physical scientists. She found that those scientists preferred single journal articles, finding new information by attending conferences and through preprints. Her reports further sown that, they preferred electronic access to bibliographic databases, although they favoured obtaining journals articles in print versus electronically.
According to Wilson, T.D., (1999)\textsuperscript{32} the spreading of research findings in information behaviour of students has traditionally been reached at the summit that there must be a bridge to recover the gap between students and their information's behaviour.

Siatri R (1999)\textsuperscript{33} notes that concepts such as information use or need, information seeking behaviour, and channels of communication all exist in a system of complicated and interdependent relations. The fact that web information seeking is a topic that unites many strands of academic and commercial research - from studies of information-seeking behaviour to the design and construction of large-scale interactive systems – makes it difficult to arrive at serviceable definitions.

Anwar and Eisenchitz (2000)\textsuperscript{34} on the information needs and information seeking behaviour of Malaysian agricultural scientists have revealed that research scientists spend 16% of their office time on reading the literature. The literature searching as compared with 9.3% spent by academicians, it also revealed that scientists preferred using primary sources of information particularly journals, and research reviews reports.

According to Wilson (2000)\textsuperscript{35} “Information seeking behaviour is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual
information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web).” It therefore generally appears as though information seeking behaviour involves some action being taken by a user to fulfill an information need, whether perceived or otherwise, and this culminates in an eventual interaction with some kind of information system. Information seeking can be affected by the characteristics of the users, such as age, knowledge and experience. Information seeking behaviour is also encapsulated and expressed in various forms, from reading printed material, to research and experimentation.

Mchombu’s (2000)\(^{36}\) small exploratory study probed the information needs of women in small business in Botswana in order to establish how these needs arose, and factors which create information seeking habits. The study employed structured interviews as the main data-gathering tool. Among the key findings, it was found that respondents’ information needs centred on business management, sources of financial assistance, business diversifications and legal information.

Majid and Eisanschith (2000)\(^{37}\) conducted a survey on “information needs and information seeking behavior of Malaysian Agriculture Scientists”. It was found that research scientists spent 16% of their office time on reading and literature searching. Where as academicians spent 9.3% of their time for this
purpose. The study also revealed that scientists preferred using primary sources of information particularly journal and review articles. Informal communication with professional colleagues was also considered important for exchanging current research information. A large number of the participants felt that they had not been keeping in touch with scientific literature due to deficient library collections and services. This article recommends that Science and technology libraries should periodically survey the information needs of their collections and facilities, and strengthen their promotional activities.

Wien (2000) investigated the online information retrieval support and resources available to the journalists of Denmark. All newspaper agencies in this study subscribe to national and international resources and these are available at the desktop of the journalists. Large newspaper companies subscribe to more online databases as compared to their smaller counterparts. Wien found that all newspaper agencies in Denmark, except for one, have a library with at least one librarian who assists in information searching. However, the journalists sampled also have to search for information on their own. In the light of the research findings, suggested that journalism students should be trained to express their information needs and be given hands-on training of information searching skills for using online information retrieval
tools. In a study to find out how and by whom was the Internet being used in media and the impact of the Internet on the use of traditionally existing information services and channels,

Nicholas et al (2000)\textsuperscript{39} studied the impact of Internet on British newspaper journalists. The data were collected from over 300 journalists and media librarians through open-ended interview questionnaires and observations. The result made obvious that the three groups i.e. student journalists, media librarians and media journalists use Internet extensively. The studies on information seeking behaviour reviewed in this section indicate that journalist’s information seeking behaviour is motivated by originality checking, confirming the news and developing personal understanding. Journalists need information for fact checking and they also use online databases, magazines and books for background information. Internet and e-mail are important sources of information.

Smart, Feldmann, and Etington, (2000)\textsuperscript{40} believe that undergraduates select majors based upon values, interests and characteristics that they share with faculty in the same academic discipline. As Whitmore said, library and information science research has always been interested in examining disciplinary differences. There are students that confirm Whitmore position
Majid and Kassim (2000) conducted a survey on "To identify the information channels used by the international Islamic Diversity Malaysia". (IIUM) Law faculty members, information sources preferred by them, methods employed for getting the needed information and their library use pattern. A questionnaire was distributed to 80 HUM Law faculty members and 66 filled in questionnaires were returned giving an overall response rate of 82.5 percent teaching and research purposes. Followed by law reports and statutes. The online public access catalogue (OPAC) and CD-ROM were the most frequently used IT-Based sources and applications. On the whole, respondents perceived HUM library collections services and facilities. E-Mail was the most popular among the internet-based services and applications. On the whole respondents received IIM library collections, services and facilities as adequate to meet their information needs effectively.

Shokane (2001) investigated the extent to which small and medium-sized enterprises in Acornhoek (South Africa) make use of business information for sustainable competitive advantage. The study utilized a pre-structured questionnaire to gather data. The study's finding revealed that: (1) many business managers lacked information managing their businesses, (2) many were not aware of their information needs and how business information
devices could support and advance their business activities and (3) business managers still relied on informal sources for managing their business enterprises.

Mahapatra and Pardha (2001) conducted a survey on information seeking and searching behavior of working journalists in Orissa: it provides an insight into various behavioral approaches of working journalists (WJs) in seeking and searching information it describes the pattern of their searching and locating information sources and services, mode of communication and strategy employed in seeking needed information, their priority on information sources, and constraints encountered by them in locating information. Analyses data received from 226 WJs representing the leading news dailies of the state.

Ford, Miller, and Moss, (2001) found that females tended to experience more difficulty finding information online. It is the focus of this study therefore, to find out whether or not; gender will influence information seeking behaviour of the University of Botswana Undergraduate students.

Dulle, F.W. & et al. (2001) conducted a survey to assess the information needs and requirements of the agricultural research workers in Tanzania. The finding of the study indicates that resources in the libraries and information centre are inadequate and does not meet the needs of agricultural workers. The study further suggested that the agricultural information services
rendered by the libraries and information centre should be improvised up to the level the scientists need.

Hallmark (2001)\textsuperscript{46} conducted a survey on lengthy interviews of 43 meteorologists at two universities and a research centre, the author investigated their methods of seeking information needed for their research, teaching, and current awareness. The primary goals of the study were to determine problems and challenges encountered by these scientists and to develop a profile of their formation needs of particular interest were the internet on their formation-seeking behaviour, particularly their access and retrieval of electronic journal articles and data. Suggestions for academic science librarians were developed through another series of interviews with successful information professionals.

Grimes and Boening, (2001)\textsuperscript{47} While considering the idea of student’s behaviour we reach at point, which is closely connected, to their study subject and the number of years they have studied. It is difficult for students to estimate the quality of resources found on the internet.

Valentine, (2001)\textsuperscript{48} student’s information seeking behaviour largely depends upon teacher’s attitude. Students a interesting in good grades and they attempt to figure out what their instructors want in a research paper and just give attention on the number of pages and types of sources. There is often
a gap between the instructors' definitions of "good resources" and the students' ability and tendency to find them.

While Hartmann (2001)\textsuperscript{49} concluded that undergraduate students experienced difficulty in locating items from the library collection and did not understand the processes for retrieving journal articles.

Chinn (2001)\textsuperscript{50} studied the information seeking behaviour and information needs of journalists by using a case study approach. Three journalists were observed during a regular workday lasting 8 - 13 hours. The first study participant was a sports director at a local television station in Washington D.C. The second participant was a general reporter of education for a medium sized daily newspaper located in the southeast region of United States, and the third participant was a crime reporter at the same daily newspaper where the second one worked.

This process, according to Patitungkho and Deshpande (2001)\textsuperscript{51} starts off with their reasons (personal or otherwise) for seeking information, and goes on to include the kind of information being sought, and the ways and sources that they use to find the information.

Seamans (2001)\textsuperscript{52} it was reported that first year undergraduate students reported that all of the participant felt that they had little need to look for information outside what faculty provided for them in their course and
where information was needed. They felt they were able to acquire it using general search engines. Other findings from this research is that student participants were comfortable using technology to learn and that web modules could be used in the future to teach library instruction.

Meho and Haas (2001)\textsuperscript{53} claim that information seeking behaviour is a broad term that encompasses the way in which individuals articulate their information needs and seek, evaluate, and use information.

Oladele, Idowu O.I. (2002)\textsuperscript{54} conducted a study on agricultural researchers in Nigeria. The study demonstrates the level of awareness and the use of agricultural information sources among researchers in Nigeria. The empirical findings have described the researchers' scenario as that of being informational deprived, where searchers do not have enough in formation to take a wise decision as against there searchers' being as informational over Loaded. The policy implication of the findings have such that to improve the performance of agricultural researchers, the provision of information sources as well as the facilities to enhance their use is very important in the research institutes.

Whitemire, E. (2002)\textsuperscript{55} Discipline differences and It could be expected that undergraduate students' information-seeking behaviour would differ from faculty and graduate students because their information seeking
skills are not as well developed. However, similar information-seeking pattern could also be expected because undergraduate majors are socialized and indoctrinated into the research process of their academic disciplines through course assignments and lecturers. This researcher explained further that faculty expose no undergraduates' to the major theories and seeking information to complete course assignments.

Numerous studies have been undertaken to explore the electronic information sources. Lee (2002) published a handbook on building electronic resource collections, beginning with a definition of electronic databases and the general principles of collection development and then proceeding to discuss the purchase and use of e-books and e-journals as well as methods of user access. The author highlights the collection development activities of assessing, acquiring, and delivering electronic databases from initial appraisal through acquisition, budgeting, installation, marketing, and evaluation.

Majid and Ai (2002) studied the use of information resources by computer engineering students in Singapore and found that the top five information resources in order of preference were books, (94%), Lecturers (84%), the internet (86%), and friends (84%). They relied heavily on printed sources of information and their use of electronic journals and databases was very low.
Moreover, Hiller (2002)\textsuperscript{58} in a study conducted in the University of Washington reported that undergraduate preferred to visit the library to study rather than to seek journals or books, Similarly, (Seiden, Szmborski and Barbara.

Shokeen A. and Kushik S.K (2002)\textsuperscript{59} conducted a survey on information seeking behaviour of Social Scientists working in the universities of 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.

This perhaps justifies Kingrey' (2002)\textsuperscript{60} observation that: “The where, why, when, and how of information seeking continues as the topic of debate and discussion on both the theoretical and practical level of a variety of Biological science disciplines.” The fact that this debate should continue is unsurprising, seeing as searching for information, retrieving it, and using it lies at the heart of university education.

The problem scholars’ face when defining information seeking behaviour is well articulated by Case D (2002)\textsuperscript{61} who explains that information seeking behaviour is a phenomenon that often defies generalization and
escapes observation because it varies depending on people, situations, and objects of interest. A lot of it is intangible and takes place in a person’s head, making it difficult to measure. Despite this quandary, a plethora of studies and articles have been conducted examining information-seeking behaviour in a variety of diverse fields, resulting in a wide array of definitions.

David Ellis, (2003) The study of Information Needs & Information Seeking Behaviour of university students especially in developing countries has been a significant and eventful issue from last few decades. The current ambit of information atmosphere is rich, characterized by an explosion of information sources and providers, a multiplicity of methods for accessing information, and a redundancy of content from multiple sources. International Encyclopedia of Information and Library Science defines Information-seeking behaviour as: “The complicated form of actions, which people slot in, when seeking information of whatever kind for whatever reason”.

Moyo & Cahoy (2003) conducted their research at the Penn State World Campus to investigate students’ perceptions of Web-based library on the use of electronic resources and services available to those virtual campus students

Attfield and Dowell (2003) investigated the information seeking behaviour and information use by journalists at a national British newspaper
agency. The data for this study was collected through unstructured interviews with twenty-five journalists at "The Times" in London. Information seeking of the study participants started with their work assignment. The journalists seek for information for the following reasons with the aim to provide the readers with an informed interpretation of events: personal understanding, establishing a perspective of story, finding facts and truth, and assessing the originality of a news angle. The researchers summarized their research findings in the form of a model which depicts a journalist's research and writing process, which consists of three stages: initiation, preparation and production.

In addition, a study on plagiarism conducted by Donald McCabe Muha, (2003)\(^6\) which surveyed more than 18,000 students from 23 schools, found that the number of under graduates, who copied and pasted information found from the web directly without citation into their papers, rose by 10% over the results reported in a previous study. Of the sample, over 40% of the undergraduates and nearly 25% of the graduate students confessed to incorporating text in their papers lifted directly from the Internet or print sources. In describing their motivation for assessing the impact of information literacy training in a graduate business class.

Cooney and Hiris (2003)\(^6\) indicate that there are substantially more studies on undergraduate information literacy training than graduate
information literacy training. In reviewing the literature it is also evident that there are few studies describing the differences in the training needs of undergraduate and graduate students.

Lokman I Meho and Heen R Tiboo (2003) conducted a survey on David billis's Information-seeking behavior model of social scientists, which includes six generic features: starting, chaining, browsing, differentiating, monitoring, and extracting. The paper uses social science faculty researching stateless nations as the study population. The description and analysis of the Information-seeking behaviour of this group of scholar is based on data collected through structured and semi structured electronic mail interviews. Sixty faculty members from 14 different countries were interviewed by e-mail. For reality check purposes, face-to-face interviews with five faculty members were also conducted.

Humes (2003) The information superhighway has increased public awareness in ways to empower people to access electronic networks and use information available through them. A lot of promises are being made about the boon to education offered by the new information technology but providing the complementary skills needed to convert opportunity to success must be the province of all educators. Another point of view is that information seeking looks at how individuals go about finding the materials that they need in order
to satisfy their personal, professional and/or recreational information needs. This a view shared by many scholars, among them who suggests that information seeking is always embedded in the larger tasks of work, learning and play. A similar thought is shared by the University of Michigan’s (School of Information’s) information seeking behaviour instructor.

Callinan, (2004)\(^{69}\) conducted a focus group study with undergraduate students from Skid pore college in New York and found that the students had a strong overall preference for digital resources. These preferences were explained to reinforce by a lack of familiarity for printed sources.

Linda Ashcroft and Chris Watts (2004)\(^{70}\) stated that there are similar issues in the take-up of e-books to those of other electronic resources, such as e-journals. These include changes in professional and management skills, such as collection development, marketing and evaluation, user education, technological skills and communication skills.

Ursin, Blakesley, and Johnson (2004)\(^{71}\) analyzed citations in student bibliographies over two semesters to determine if students use the resources recommended by the library guides distributed in information literacy training sessions.
Jiuriya, M Sangeetha G and Nambi M.A (2004) conducted survey on. "Information seeking behaviour of faculty members forms Government Arts Colleges 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 61(38.12%) visited the library several times a week to meet their information needs. Regarding the type of search made by the respondents the majority of the respondents 91(56.87%) made their search by subject.

Rieh (2004) who says: "Information seeking is a complex information and communication activity requiring access to diverse information systems and resources in order to deal with work-related, personal, and social information problems."

Ikoja-Odongo and Ocholla (2004) described information seeking as a process that requires an information seekers, or what might be called "personal information structures" such as person's cognitive abilities, his or her knowledge, skills in relation to the problem or task domain, knowledge and skills specific to a system and knowledge and skills regarding information seeking.

Liu & Yang (2004) investigated factors that affect distance-education students' information-seeking process at Texas A&M University
(TAMU) at College Station. This study was based on a model of distance-education students’ information-seeking process, developed by the researchers. Physical information source and online information sources support, matching individual learning qualities, and geographical and temporal convenience can influence students’ use of information sources.

A significant part of this literature was reviewed by Anwar, Al-Ansari, and Abdullah (2004) in their study of Kuwaiti journalists. The present study is a replication of research done in Kuwait. There are a few later studies that deserve mention and will add to the earlier review study, based on quantitative data collected by questionnaire, of various aspects of information seeking behavior of 92 Kuwaiti newspaper journalists. They examined their information source preferences, level of satisfaction with the sources used, use of electronic resources, level of information use Synopsis of the thesis entitled dills, and problems journalists faced while seeking information. It was found that fact-checking, background information, and finding angles for future articles were the main purposes of using information sources. ‘Conversations’ and ‘phone calls’ were very important information sources for them. The level of satisfaction with various types of formal and informal sources was almost similar to the importance given to these. Information searching’s kills of these journalists were found to be deficient. Researchers made several
recommendations to improve the situation including curriculum-integrated
information literacy at the undergraduate level.

Ojha (2004) examined the information needs of 180 journalists
employed by 10 daily national newspapers in India in his doctoral dissertation.
This paper, reporting a small segment of the original study, does not go beyond
looking at the frequency of use of various types of sources. It is reported that
among the 20 formal sources, the newspaper library, personal files, and other
Indian newspapers were the most frequently used sources. Within the informal
sources, personal communications with journalists and non-journalists were
extensively used. This paper presents superficial look at the topic.

Kerins Madden and Fulton (2004) in another study of graduate
engineering students reported that the majority of the students indicated that
the Internet was the first source of information they used for project.

Kanaujia (2004) findings in his study reveal that librarians have
a positive attitude towards the different aspects of marketing of library
information products and services. The problem is that librarians are not
getting the chances to apply their lessons into marketing practices and
application planning for the library. All librarians in the study agree that
ignorance with marketing is responsible for discouraging marketing
applications. The study results reflect the need of proper training and teaching
of marketing. Efforts for increasing librarian’s awareness and separate financial support are necessary for efficient marketing. Instead of scattered approaches and different styles, a consistent view must be taken.

Anwar, Al-Ansari and Abdullah (2004) investigated the information seeking behaviour of Kuwaiti journalists. Results reveal that the sampled journalists regarded information as most important for fact checking and verification. They need information principally for writing a news item and feature article. They mostly used the Internet and press releases amongst formal sources of information and their satisfaction level with these sources is high. A sizable number of journalists use the Internet and their organizations provide this facility. The major reason cited for use of library/ information centre is to search a database and read materials there. Regarding the problems faced in information searching, lack of time available to finish assignments and lack of training are the major problems that journalists have to overcome.

Shontz, Parker and Parker (2004) identifies the attitude of public librarians toward the marketing of library services and relate this attitude to selected independent variables. Marketing knowledge and experience also positively correlated with years of library experience. This may indicate that marketing techniques are learned over the course of a librarian’s career, or perhaps late in ones career. Librarians who work in libraries that offer a
broader range of services learn to appreciate the importance of making the public fully aware of these services.

Wei. (1995) observed that undergraduate students in a focus group showed themselves to be inexperienced in online system. They were keen to receive instruction on how to find periodicals, with (58%) and almost half of them wished to receive instruction on using electronic resources in science library. It was noted earlier in this review that research conducted on library, even here in University of Botswana have shown that undergraduate students do not use most of the library information resources. It may be true that students are experiencing technical problems in accessing information resources; in addition with their lack of basic knowledge and awareness of the resources. Therefore, undergraduate student poor information seeking behaviour was captured and considered the biggest problem to be examined.

Ikoja-Odongo and Ocholla (2004) studied the information seeking behaviour of informal sector enterprisers in Uganda by combining interviews with observations and historical methods. The study concluded that an appropriate model for information behaviour for the information poor community must be grounded on oral tradition and indigenous knowledge and be sensitive to poverty infrastructure and illiteracy. No study of the information needs and information seeking behaviors of SME managers in Botswana has so
far been reported in the literature. It was therefore considered important to undertake this research in order to understand the information behaviour of SME managers in Botswana.

Callinan, (2004)\(^{84}\) conducted a focus group study with undergraduate students from Skid pore college in New York and found that the students had a strong overall preference for digital resources. These preferences were explained to reinforce by a lack of familiarity for printed sources.

Crawford, J., A. DeVicinte and S. Clink, (2004)\(^{85}\) Purpose of this study is to determine information requirements of students, their awareness about resources, and their behaviour. The investigation of “information needs and information seeking behaviour in students” has been the subject of confusion. Information needs and information seeking behaviour of students especially in Pakistani universities is a very comprehensive topic and requires an inquiry in depth. Many research studies evaluated the relation between students and their behaviour towards seeking knowledge. There are several factors, which have significant affect on students’ behaviour. These factors might include, timeliness of information presented, awareness of the sources of information, ability to use information access tools, surrounding environment, cultural impact, self-evaluation and intuition. There is, however, a considerable dearth of reading material on this subject among the grown-up students in

117
Pakistan. Information needs and seeking behavior is also affected by the culture of universities and libraries. Students observably do not feel much comfortable with available resources, and this approach is a big hurdle in seeking knowledge.

Robert & Dennis (2004) conducted a study on information seeking behaviour of the informal sector entrepreneurs working in Uganda. The demographic and business characteristics of these entrepreneurs are highlighted and empirically tested with regard to their information needs. This study has largely employed qualitative research methodologies, such as the critical incidence technique for interviews with 602 informal sector entrepreneurs from a variety of regions. Observations of the entrepreneurs' work environments and historical methods were also employed. The results suggest that modern/exotic models of information transfer based on textual media and ICT exhibit less impact on the entrepreneurs' information needs and use at macro levels because of poverty, illiteracy and poor information infrastructure. It is however noted that most 'elite' models share a platform within formation behaviour of entrepreneurs at the micro levels. The study concludes that an appropriate model for information behaviour for the information poor community must be grounded on oral traditions and indigenous knowledge and be sensitive to poverty, infrastructure and illiteracy. Recognition is also made of the need for
information repackaging and the use of appropriate media for information provision.

Taylor and Procter (2005) define information seeking more simply, stating that it is the ability to scan literature efficiently using manual or computerized methods to identify a set of useful articles and books. This is congruent with Kari and Savolainen assertions that information seeking manifests itself in the end-user's active search for and consultation of information sources. Like any other complex concept, information seeking means different things in different contexts. All the same, the definitions listed above lead one to deduce that information seeking is a process or activity that involves the consultation of sources. These sources can be manual or computerized, and there is often a behaviour, pattern or way one goes about consulting these sources.

Heinstrom (2005) conducted a study on 'Fast surfing, broad scanning and deep diving: The influence of personality and study approach on students' information seeking behaviour'. The study is based on the five dimensions of personality (i.e., neuroticism; extroversion; openness to experience; agreeableness; and conscientiousness). The study finds that the personality characteristics of a information seeker greatly influence the information seeking behaviour of seeker.
Asemi, A. (2005) This article reports a survey on the search habits of Internet users at the Medical University of Isfahan (MUI), a governmental university in Isfahan city, Iran. It is revealed that the researchers of MUI are getting quality information through the Internet. Fifty-five percent of respondents search for scientific information through the Internet because the university library has provided access to various databases and online journals for all students and staff. They use the Internet in different ways, such as accessing to online journals, downloading software or text, chatting, discussion, E-mail services and for finding related references. It was unveiled that the Internet services are normally used for research. The analysis reveals that 54 percent of Internet users always find useful information on the Internet. Thirty-one percent of respondents believed that quality information is available on the Internet and finally, 35% of the studied population use print, online and offline form of information for updating their subject knowledge.

The view held by Borgman et al. (2005) is that research on the information needs and the information-seeking behaviour of academics extends back to the late 1950s, beginning with simple descriptive studies and evolving into discipline-specific investigations. Much of the research evolved from a more generalized interdisciplinary interest in the work of scientists and the nature of scientific communication, resulting in a large body of literature that
dates back to 1940 - 1960. Parallel to this interest in science, other early studies focused on the work of technical experts, such as engineers, in an attempt to understand how information and information seeking permeates an individual’s work-life and personal productivity.

A number of researchers have studied the impact of information technology and the Internet on the use of information by journalists. Veglis et al. (2005) investigated the adoption of information technology by studying 142 Greek journalists working in local newspapers. They found that, in general, their computer knowledge was inadequate, the diffusion of Internet among them was moderate, and age and education had a significant relationship with IT use. They concluded that Greek journalists were aware of the importance of information technology in their profession but they lacked training in new technologies.

According to Harris (2005) “For most college students, the Internet is a functional tool, one that has greatly changed the way they interact with others and with information as they go about their studies.” Most times, this involves active or purposeful information seeking to complete course assignments; prepare for class discussions, seminars, workshops, conferences, etc.; write final year research papers; and view news, sports, weather, stocks, teaching material, and such like. From personal experience, both as a student
and as a librarian, many (mainly) senior students and staff members are making an effort to familiarize themselves with database searching and access in laboratories, libraries, offices, etc. Understanding web behaviour involves more than simply understanding search-engine related behaviour.

Markland, (2005)⁹³ Students want simple and common interfaces and they do not want to go to different databases with different search requirements and interfaces. They want easy methods and adopt it without considering its benefits and drawbacks. The student's choice is based on a least effort principle. In connection with this, it is often found that students use a cut, paste culture, and make their assignments and projects.

Heinstro¨m, J., (2005)⁹⁴ It is important to note that a massive variability exists among students depending on their study behaviour and probably also their psychological profile.

De Jong & Branch (2005)⁹⁵ conducted their study at the University of Alberta to investigate students 'information-seeking behavior during use of resources as well as use of library services such as reference services, online tutorials, and the document delivery service for distance learners'.

Vilar and Zumer., (2005)⁹⁶ the students having such approach have no fame in practical life. Students want simple and common interfaces and they do not want to go to different databases with different search
requirements and interfaces. Students simply want easy and simplest methods of use.

Abdulla (2006)\textsuperscript{97} investigated the information technology related information behavior of 117 journalists working in seven Kuwaiti newspapers. He found that younger and recently educated journalists displayed better Internet-related information behaviors. He concluded that these journalists were lacking in terms of Internet-related information behaviors, were at the beginning stages of Internet adoption, and were lagging behind their counterparts in the developed world.

KP Singh & Prof MP Satija (2006)\textsuperscript{98} Information seeking behaviour is an essential component in the designing and developing of need based information centre for meeting the information requirements of users. The undertaken study is an output of doctorate research in which a comprehensive review research scanned in international context in the field of agricultural sciences. The study covers various facets related to information seeking behaviour, findings and their conceptual meanings. It includes about sixty five researches undertaken by foreign researchers in the agriculture sector. The findings of the studies are organized into various categories i.e., theories of information seeking; information needs; users characteristics; information browsing; information seeking; and information seeking behaviour.
Wilson T.D (2006)\textsuperscript{99} says that, "much information (seeking) behavior research is of a "snapshot' character exploring a situation at a particular point in time." Information-seeking behavior differs significantly according to background, culture, conditions, needs, and requirements. It is difficult to predict the actual behavior that a person might exhibit in a quest for information. In order to understand the behavior of human beings better, there is a need for multidisciplinary research using multidimensional approaches. Health science is a vast discipline that uses information extensively.

Zainab A.N (2007)\textsuperscript{100} emphasizes the importance of collaboration for effective information seeking, saying that "Collaboration and professional intermediation therefore becomes necessary to support purposeful bibliographic compilations to support effective information seeking amongst library and information users and researchers".

Bayugo and Agbeko (2007)\textsuperscript{101} reported on a survey of convenient access to, and use of, electronic databases (CD-ROM and online) with full-text journals and their effect on information seeking behavior of health sciences faculty at the College of Health Sciences of the University of Ghana. The survey documented faculty preferences of print and electronic resource, and the specific databases and full-text journals. The results showed that faculty
member were unaware of the two full-text journal databases (HINARI and PERI) available at the library. Hence they resorted to PUBMED as their source of access to full-text articles. They concluded that most faculties now prefer using electronic access to information (CD-ROM/online) to traditional print indexes and abstracts.

Muneera Ansari (2007)\textsuperscript{102} studied the information needs and seeking behavior of 185 mass media (radio, television and newspapers) practitioners based in Karachi using structured interview. She found that reports of various organizations were the most sought sources. The respondents mostly required selective rather than exhaustive information. The use of libraries was low whereas Internet use was increasing. There is also a study, quite dated now, of the information needs of 30 newspaper editors of Lahore, Pakistan.

Casey Long Milind Shrikhand Y (2007)\textsuperscript{103} The current generation of college students has used the Internet to access information since the early 1990s. No assessment of information use, quality, variety, and reliability of information generally occurs at both the student and faculty level. In this paper we use package of teaching methods targeted towards improving information-seeking behavior among graduate and undergraduate business majors. The effectiveness of the teaching package is assessed through an evaluation of
student term-papers and quality of resources used. We find that the package of teaching methods implemented does result in significant improvement in information seeking behavior, especially among undergraduate business majors.

Jamali and David (2007) conducted a survey on "Communication and information-seeking behaviour of Ph.D students in physicists and astronomy". On a qualitative case study of Ph.D students in the department of physics and astronomy at university college London, this study seeks to derive behavioral patterns in information seeking activities of Ph.D students. The study aims to investigate the Interdisciplinary differences in information-seeking activates of physicists and astronomers. The findings show the high reliance of Ph.D students in physics and astronomy on electronic journals and their low of libraries. The finding reveal differences in the information seeking patterns of students who conducted theoretical research and whose of whom are involved in experimental research. The research highlights the need for the study of small subject communities within academic disciplines instead of studying users in a broad subject area which as physics as one single domain.
According to Francis H (2008) "Researchers and practitioners in the field of LIS have long held an interest in the information-seeking behaviour of different client groups. Research in this area dates back to the 1940s and the focus was on scientists." Since then, studies quickly progressed, starting with those intended to improve collection development, followed by those that explored the research habits of individuals or groups for the design of appropriate systems and services – in other words a user-centred approach that examines the system as seen by the user. Studies on web information seeking behaviour appeared later, and many pen down the mid-90s as the exact starting point when generated.

Kaur and Rani (2008) examined the attitude of library professionals in university libraries in India. Results of the research reveal that 84.6% of the librarians and professionals under study have not studied marketing in their schools of library and information science. 94.2% have not attended any workshop and seminar on marketing of information services and products. More than 94% of the respondents either agree or strongly agree that the concept of marketing is equally applicable in the field of library and information science and it should form an important component of the curriculum in the library schools. Of the respondents, 84.6% think that
marketing relates not only to selling and advertising but also to customizing the services to serve the user needs in a more fulfilling way, and 82.7% admit that traditional view of libraries towards marketing has been in terms of promotion only. The positive response to all the statements shows that librarians feel the need of applying the marketing principles in the libraries in an era of global competitiveness and shrinking resources.

From the same study the researchers found that 84.6% of the population of the study agrees that libraries conduct marketing programs at random rather than develop a consistent program, the lack of consistency in marketing education is crucial as it affect the perspective of librarians towards the use of marketing in libraries. Regarding the marketing mix the overall result were positive in favor of introducing and implementing the basic marketing mix and the four P's of marketing.

Ploydoratou Panayiota (2008) conducted a survey on the research findings from interviews with chemistry researchers about the use and linkage of source and output repositories and the expectations of the chemistry research community about their use. A total of 17 face to face interviews were conducted with members of academic staff and postgraduate research students.
(PGRs), in chemistry departments at a number of UK Universities. The summary findings that As part of the store project, which sought to develop new ways of linking academic publication with repositories of research data, 38 members of academic and research staff from institutions across the UK provided valuable feedback regarding the nature of their research, the type of data that they produce, the sharing and availability of research data and the use and expectations of source and output repositories.

Mumtaz A. Anwar Muhammad Asghar (2008) This study, a replication of the one done in Kuwait, investigated the information seeking behavior of print journalists in Lahore, Pakistan, using a self-administered questionnaire. The 87 respondents, coming from 11 establishments, were mostly male. In terms of the type of information, they place emphasis on factchecking and general information. Information was obtained by using a wide variety of both informal and formal sources. 'Human 'sources were the primary informal sources used by the participants. Personal collections, daily news diaries, and news agency reports were considered high in terms of importance. The Internet and the 'in-house electronic library of stories / reports generated by their colleagues' was very limited both in availability and use. The lack of information searching skills is their top ranking problem. They
consider these very important for their work and are willing to go through training if it were provided to them.

Tahir Masood Qureshi, Jawad Iqbal, Mohammad Bashir Khan (2008)\textsuperscript{109} This study was undertaken to determine the information needs and information seeking behaviour of university students. It is a critical issue in developing countries. Study also identified impact of different factors involved in the general pattern of information gathering system by the students. Data was collected from 1000 respondents randomly selected from 9 famous universities of Pakistan through questionnaires. Correlation and regression tools were used for analysis, study identified that Awareness of resources, Surrounding environment, Student participation, Educational & cultural background, Ability to use tools, Self-evaluation, Intuition are having positive impact on students’ information needs and seeking behaviour.

Francis. H (2008)\textsuperscript{110} intimates that “not surprisingly, the vast majority of user studies carried out in developed countries are well documented and widely known”. Her study therefore “focuses on the few recent user studies….that have emerged from developing countries”. Given that conditions in developing countries diverge significantly from those in the developed
world, it is imperative that research be done to tell the developing world’s story. The developing world’s participation in web information seeking is generally poor. The explosion of the Internet and the web is a reality some developing nations have not fully grasped. However, this is at varying levels; some nations are better positioned than others. Nevertheless, problems in terms of connectivity and insufficient ICT infrastructure to support web information seeking persist. In Africa in particular, many countries still lack basics such as clean water and food, and have poor road networks. Basic ICT infrastructure (e.g. phone lines) to support any meaningful offer of web services is in some cases nonexistent.

Rowlands and David (2008) conducted a survey on faculty and students at University College London (UCL) were polled online in November 2006 as part of a wider investigation into the impact of books in UK higher education. One of the survey questions probed the strategies that members of the academic community use to identify the conventional printed books that they need for work, study, or leisure. This article reports on a quasi-experimental statistical investigation of the survey findings for this single question. Multivariate data analysis suggests that book discovery is very highly structured, with gender, subject discipline, and academic status offering
powerful predictors of certain underlying behavioral strategies. A model of book discovery strategies is developed and this is used to help segment. The survey population into those with high or low levels of dependence on formal library systems or non-library based solutions. The paper concludes with a discussion of home of the practical implication of these findings for librarians, publishers, and booksellers.

Stokes (2008)\(^{112}\) says that, "Nurses handle information all the time, including processes from patient counseling through recording of care reflection practice, with increasing emphasis on evidence based practice; with the growth of web 2.0, nurses will need to work with fellow professionals and patients in different ways, and nursing students will need to acquire more and more sophisticated information seeking skills to cope with the new roles." Up-to-date information is very important. Many journal articles, papers, reports, and case studies are written in this area. This paper will explore bibliometrically and create a snapshot of information seeking behavior in the health sciences. The range of the study is the years 2000-2007. In looking at the distribution of the papers and sources of information in this literature, Bradford's law of scattering of information sources is applied to this data.
Qurush, Zafar and Bashir (2008) conducted a survey on "Information needs and information seeking behavior of students in universities of Pakistan". It is critical issue in developing countries. Study also identified impact of different factors involved in the general pattern of information system by the students. Date was collected from 1000 respondents randomly selected from 9 famous universities for Pakistan through questionnaires. Correlation and regression tools were used for analysis, study identified that Awareness of resources, surrounding environment, student participation, Educational and cultural background, ability to use tools, self-evaluation, and institution are having positive impact on students information needs and seeking behavior.

Negahban, Mohamad Bagher, & Talawar, V. G. (2009) The present study is aimed at assessment of e-resources dependency by Iranian social science faculty members. A total of 232 faculty members from various universities from Iran were randomly selected. A questionnaire measuring dependency on various e-resources: e-books, e-journals, e-tutorials, online databases, CD-ROM databases and e-reports was prepared by the investigator and administered to the sample selected. Statistical methods like descriptive statistics and chi-square tests were employed to verify the hypotheses. Results
revealed that Iranian faculty members were more dependent on all the e-resources selected for the study. It was also observed that Iranian faculty members were more dependent on e-journals, followed by e-books, and Online data bases and least on e-reports. The reasons for dependency on various e-resources have been discus.

Anwar and Asghar's (2009) research into the information seeking behaviour of Pakistani journalists found that the journalists use a variety of information sources, both formal and informal. Journalists sampled mostly require information for writing a news item and article, and they give high importance to their personal collection of information sources, daily news dairy and conversation. They are much satisfied with the Internet resources. They use in-house electronic library for getting the idea for a storyline and for background information. The majority of the journalists regarded their searching skills as good. The major problem in searching is lack of training and difficulties in accessing international information sources.

Munira Nasreen Ansaril and Nisar Ahmed Zuberi (2010) The purpose of this study was to investigate the use of various information channels, the awareness of the existence of information sources, ways used for
disseminating information and use of libraries among media professionals in Karachi. A questionnaire was used as an instrument for data collection for the survey. Data was gathered from 185 media professionals who belonged to three types of media houses (T.V, radio and newspaper). Findings indicate that library is the most use channel among newspaper professionals and television professionals. Reference service and newspaper clipping service are the most favorable information services in the library. Ediaprofessionals get to know of the information sources through common knowledge and review articles. Internet is the channel, which is being used increasingly by media practitioners; however use of Internet among newspaper practitioners is high as compared to radio and television practitioners. Quite surprisingly, the use of libraries among radio practitioners was found to be particularly low. All groups of the practitioners mentioned reading of book reviews published in newspapers to know the existence of an information source. This study would be helpful for librarians and information specialists, who are working in media house libraries for library planning and designing of library services in their parent organization.
REFERENCES:


68. Humes, B. (2003) Understanding information literacy. Available at:


