CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

Review of related literature discusses the published information in particular area of a study in a certain period. The main goal of the review of related literature will be the logical continuity between previous and present work. The review of related literature helps to the researchers for doing the current research effectively. It provides a strong background for the development of the present study and brings the readers up to date. In another side, the review of related literature helps the researcher for avoiding unintentional duplication of well-established finding.

In this chapter a look at the existing literature on information seeking behavior has been analyzed. The main purpose of this literature review is to find previous studies conducted on information seeking behavior of the faculty members of higher education. Their research was done in order to refine the research area, research question and objectives of the study.

2.2 SOURCES

In searching the relevant information to this topic, several sources were searched for resources. The sources like abstracts, dissertation, thesis, general bibliographical tools, specialized bibliographical tools, and online cataloguing of various library holding were searched.
Information seeking behavior involves the searching, locating, retrieving, and using the information with the help of electronic resources like internet, various articles from various journals referred for sound literature collection. The periodicals that is related to the library and information science has been referred. These periodicals included, Library information research, journal of documentation, information science research, anthropologist, library philosophy and practice, DESIDOC, Bulletin of information technology, journal of American society for information science and technology, journal of educational media and library science, journal of applied science research, annals of library and information studies, libri, and information research. After reviewing, the resources about information seeking behavior of the faculty members of a university is limited.

2.3 SELECTION OF LITERATURE

The selection procedure of review of the related literature on information seeking behavior is as follows;

✓ Searched in the world wide web with the help of databases which available in the web sites, used search engine for gathering information with the key words information seeking behavior, information seeker, information seeking process.

✓ Referred paper’s abstract were checked for suitability.

✓ Indian printed journals were also referred manually for finding the Indian publications on information seeking.
The findings through review of literature are summarized in various places of this study under the following section

The review of related literature are classified in to;

i. Information seeking behavior

ii. Factors involved in meeting information

iii. Role of information

iv. Usage of information

v. Electronic Information Sources

vi. Barriers to meet the information need

vii. Channels of information

viii. Information seeking pattern

Figure 2.1 Review of Related Literature
2.4 INFORMATION SEEKING BEHAVIOUR (ISB)

Niu et al (2010)\(^1\) have conducted study on national study of Information seeking behavior of academic researchers in the US. They found that, differences in information seeking behavior among universities are not as clear as among disciplines and demographics. Many researchers have begun to utilize blogs, wiki, and multimedia to communicate with their colleagues or students.

Kingrey (2002)\(^2\) had concluded that information seeking involves the search, retrieval, recognition, and application of meaningful contents.

Majid, Anwar and Eisenschitz (2000)\(^3\) had done a study on information needs and seeking behaviour of agricultural scientist in Malaysia, found that nearly 42% of the respondents from University Putra Malaysia visited their library once or twice a week, 37% once or twice a month and 21% several times a year.

Vijayakumar (1999)\(^4\) carried out a study based on a sample of 120 Social Science faculty members. The Findings provide significant sight into similarities and differences in the information seeking behaviour of faculty members (Social Sciences) of Annamalai University.

The medical students’ most frequent use the library for course work and photocopying. Textbooks and handouts were most used by all the medical students. The students believe that the information supplied by these sources is adequate for their present information needs. Majority of them never use Indexes and Biological Abstracts for their current information. Ajayi (2004)\(^5\).
Borgman (2000), defined information seeking as a continuous process, involving active and passive behaviours, and formal and informal communication. The researcher pointed out the cycle of creating, using and seeking information can be viewed as series of stages which people move back and forth, and they may be actively, creating, using and seeking information concurrently. Therefore, information seeking behaviour refer to the patter of response to information need by person or group of person.

Even in the time of technological advancement, where the Internet is easily available to every individual, respondents still visit the library regularly; however, the frequency of visits differs among respondents. The respondents of all the universities under study are frequent library visitors, with the exception of a few institutions. Respondents from agriculture discipline are the most frequent library visitors, followed by those from humanities and social sciences, Sharma (2008).

The college teachers and administrators mostly seek information for lecture preparation, improvement of their personal competencies and current awareness, 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 frequently acquire information resources from their institutional library and use their personal collection or institutional libraries when they have urgent need of some information. Google is mostly used search engine by them. Khan, and Shafique (2011).

Patitungkho and Neela Deshpande (2005) the first three preferences given by the faculty for seeking information are textbooks, periodicals and newspapers. The majority of faculty members sought information for preparing lectures, keeping up-to-date knowledge and research work.
In the study of the information-seeking behavior of 256 social science faculty members in Indian universities, it was found that they preferred journals, books, government documents and reference sources for meeting their information needs. The study also revealed lesser use of indexing and abstracting sources, book reviews, conference proceedings, dissertations and thesis, newspaper clippings and other non-book sources Sethi (1990)\textsuperscript{10}.

Silvio, (2006)\textsuperscript{11}, identified that the information needs of immigrant southern Sudanese youths in the city of London, Ontario are mainly academic in nature. Their chief sources of information included colleagues, friends, neighbors and relatives – respondents tend to seek information that is easily accessible, preferably from interpersonal sources, unless there is a particular reason for avoiding interpersonal sources.

The information needs and use pattern of faculty members and research of Chaudhary Charan Singh university, Kumar (2009)\textsuperscript{12} identified the constrains faced in using and searching information in libraries, the result of the study shows that 96% of the respondents visit the library to borrow books, 80% for study/research/training purpose, and 81.50% visited library to locate information from the book and journals.

Rubina Bhatti (2009)\textsuperscript{13} conducted a study on Information Need (IN) and Information Seeking Behavior (ISB) of faculty members at the Islamia university of Bahawalpur. 56% of the respondents were not satisfied with current stock of the books related to their field as they find them inadequate for meeting their educational and research need. 54% of them having discussion with senior and colleague. The purpose of seeking information for teaching was the reply by 88% of the respondents. 68% of the respondents’ using the library for literature
search/reference collection. The problem faced by 64% of the respondent in the library was material is not available on the shelf. Shortage of computer and latest journals faced by 73% of them.

Sei-Ching Joanna Sin et al (2011)\(^{14}\) had done a study on international students’ Acculturation Information Seeking. They found that the most important information need were in education followed by work/career, finance and health. The most frequently used source was web search engine such as google followed by web sites of official institutions such as the university’s international students office, online resources from library, general web sites and social networks sites such as facebook, micro blogging (example: Twitter) and print resources were seldom used for Acculturation Information Seeking (AIS).

Shifra Baruchson Arbib and Jenny Bronstein (2007)\(^{15}\) had done a study among information users on humanities as in the digital age and calculated that the scholars securing on their use of both formal and informal information channel, on the one hand the scholars are disinclined to abandon their traditional ways; they still base their research on printed books and journals. They find new information by browsing the library stacks and following citations, Electronic Information Sources (EIS) and newly developed information technologies have great potential for further humanistic research.

Youth information seeking behavior study by Leanne Bowler (2010)\(^{16}\) equated with information and communication technologies. Information and communication technology (ICT) plays a large role in the information seeking behavior of young people in Canada. The participants experienced a complex web of both positive and negative feeling related to curiosity and interest during the search process and that the two poles of feeling were frequently experienced at the
same time. The curiosity experienced by adolescents during the search process was accompanied by feeling of both pleasure and pain and both feelings needed to be managed in order to navigate a pathway through the search process.

Jayadev Kadli and Kumbar (2011)\(^\text{17}\) conducted a study on faculty information seeking behavior in changing ICT environment. 77.62% of them using computer based services for browsing internet and 84.61% using this service for e-mail purpose. 87.41% of faculties are reading latest book in the field for current developments. Majority of them are reading current printed journal, electronic journal and website of particular organization/company. 88.11% of them seeking information to preparing class notes for teaching.

Yunjie Calvin Xu, Cheng Yian Bernard Jan and Li Yang (2006)\(^\text{18}\) have found through their study that in the context of interpersonal task information seeking, first the least effort principles might not be adequate in explaining personal sources choices; rather, a equality-driven perspective is more adequate and cost factors are of much less importance. The Seeker-Sources relationship is not significant to source choicer. The nature of information, especially task importance, can modify seekers’ sources of choice.

Florence Gonod Boissin and Ursidoc Doesi (2005)\(^\text{19}\) had done a qualitative study on information seeking behavior and use of the internet by French general medical practitioners. They found that for getting information, they mostly use their own book collection, medical journal, colleagues, lifelong learning, events, www., information provided by the pharmaceutical companies and others libraries for accurate information.

Narayanan et al (1999)\(^\text{20}\) had done a study on Modeling real-world information seeking in a corporate environment. The information oriented
societies, critical activities are collecting, managing and using information efficiently. Information seeking is fundamentally an interactive process includes both search and retrieval of information.

Reneker Maxine (1993)\textsuperscript{21} had found through the study that the informants to be proactive. Successful information seekers, actively engaged in building their information sources both in negotiating and creating their environment to satisfy those needs they experience most often. The satisfaction level of work-related and academic needs is higher than the satisfaction level for personal needs.

Greyson, Deron, Cunningham, Colleen and Morgan, Steve (2011)\textsuperscript{22}, had conducted a study on Information Behavior of Canadian Pharmaceutical Policy maker. They identified three types of information seeking approaches they are Scatter shot Approach: They fired off questions to all sides in an attempt to collect information rapidly. Systematic approach: They might go down a list of sources, including data, familiar people, and information services, or consultant and Delegated approach: In which literature reviewing and environmental scanning were conducted in depth. Approach varied not only by individual, but also, among queries by the same individual, based on time pressure and question type.

Information seeking is an important human activity, he seeks information to gather, store, interpret to use for various need, to increase awareness, to keep up to date, and to solve problems.

2.5 **FACTOR INVOLVED IN MEETING INFORMATION**

Jae-Shin Lee and Hichang Cho (2011)\textsuperscript{23}, conducted a study to identify and analyze the process of seeking information online and evaluating this information. They found three factors significantly influenced the way individuals seek and
exchange online information in a collaborative learning environment. The three factors are

a) The group level in-out group categorization,

b) The relational level social network

c) The individual-level cultural proclivity.

Chun Wei Choo and Christine Marton (2003)\textsuperscript{24}, had given in the summary of their research that the four modes of information seeking were observed. They are Undirected Viewing, Conditioned Viewing, Informal Search and Formal Search. In each mode of viewing or searching the user adopting some browser moves, starting, chaining, browsing, differentiating, monitoring and extracting. They applied a behavioral model to analyze the web information seeking behavior of IT professional.

Jarkko Kari (1997)\textsuperscript{25} defined information sources that any physical carrier of information.

Anne Aula et al (2005)\textsuperscript{26} concluded in their study that google search engine is most frequently used by the web user for searching the required information.

According to Singh, and Satija (2008)\textsuperscript{27}, everybody needs information for the study. There is a difference between a scientist and ordinary seekers. A scientific need of information arises due to three different reasons, a) Current Approach: the scientist need to know what others scientist have done or are doing, b) Everyday Approach: Information need arises during the course works of research. Scientist need for some specific piece of information for the progress of his/her work. c) Exhaustive approach means information need to find and check
the research work through relevant information. They found that the journal was ranked first on using the information sources for specific information and use of information sources for keeping up-to-date but it was ranked 2 on accessing background information.

Ochilla (1996)\(^{28}\) the respondents use information resources that depend on their nature of program, the sources available to staff and goals of the faculty. The result showed that use of journals, textbook, research reports and conference literature is high.

Al-Muomen, Morris and Maynard (2012)\(^{29}\) had found the information seeking behavior of graduate students at Kuwait University and revealed various significant factors like library awareness, information literacy, organizational and environmental issues, source characteristics and demographics.

Young and Seggern (2002)\(^{30}\) had conducted a focus group study among students and faculty members at Idaho University to investigate their information seeking behaviour and information use. The study revealed ease of use, reliability, accuracy, currency, availability, and cost were the main criteria for using the information resources. Other terms that students mentioned to them were trust, quality, credibility, validity, and completeness.

Christine Urquhard and Jannifer Rowley (2007)\(^{31}\), they established a model that includes both the individual (micro) and organizational (macro) factors affecting students information behavior. The macro factors are Information Resource Design (IRD), Information Learning Technology, Infrastructure, Availability and Constraints to Access, Policies and Funding, Organizational Leadership and Culture. The Micro factors includes Information Literacy,
Academics, Information Behaviour, Search strategies, Discipline and Curriculum, Support and Training and Pedagogy. They concluded that the mediating factors interact in unexpected ways.

Kingkaew Patitungkho and Neela J Despande (2005) exposed in their study that successful operation of library depends on sound collection. This collection should provide required information of the end users. The faculty members of Rajbhat University in Bangkok are giving first three preferences to textbook, periodicals and newspapers. They observed that they seeking information for preparing lecture, keeping up to date, knowledge, and research works.

2.6 ROLE OF INFORMATION

Chandra Prabha et al (2007) information seeking related action begins with the recognition of the need to find information to address a situation or solving a problem and the action gets ended after fulfilling the requirement of the individual.

Syamalamba Rani (2009) noticed in her study that aim of education is to impart knowledge and making good knowledgeable citizen. Libraries are the repository of knowledge and form an integral part of education. The progress of library is in fulfilling the requirement of the information need to the user.

Qureshi, Zafar and Khan (2008) had conducted a study on information seeking of university student in Pakistan had noticed that information need and seeking behavior change from culture to culture and country to country. Not only that, the culture of universities and libraries also change the seeking behavior. They had given conclusion been that the modern digital libraries, interfaces and
web database sources are important factors to develop student’s information seeking behavior.

Nicolas (2000)\(^{36}\) had defined the five broad function of the information need, they are, fact finding function, current awareness, research function, briefing function and the stimulus function.

Singh and Rani (2013)\(^{37}\) majority of the faculty members seek information from different sources for updating themselves with the current developments in concerned disciplines and for research work. The ICTs, particularly the Internet have made a significant impact over information seeking behavior of teachers.

2.7 USAGE OF INFORMATION

Ajayi (2004)\(^{38}\) Information is an important tool used in the realization of any objective or goal set by an individual. The information seeker is willing to keep up-date himself, so he / she searching information from various type of resource through sources.

Bradley M Hemminger et al (2007)\(^{39}\) conducted a census survey on information seeking behavior of academic scientists at the University of North Carolina at Chapel Hill to analyze their current information seeking behavior. By the survey they found that 91% of respondents access the internet in office or lab, Journals, web pages, database and personal communication are the resources most frequently used by researcher. Nearly 85.4% of the respondents are maintaining personal article collection. 61% of them prefer to read retrieved information in the format of electronic and printed.
Amin Yousefi and Shima Yousefi (2011)\(^4\)\(^{10}\), they concluded the following three suggestions to fix the gap in information seeking behavior, i) the training of the company should implement necessary courses for personal instruction in relevant fields, ii) main researchers of each department can cooperatively work with or alongside librarians, iii) librarians should provide specific information seeking skill instruction for each department related to their careers and professional activities.

Amin et al (2007)\(^4\)\(^{11}\) mention in their report that two ways are followed by the experts to update in the field of subjects. i) Active: it means approaching sources for information and ii) Passive, it uses technology for getting information automatically.

Chuma Opara Nnadozie and Chizoba Doris Nnadozie (2008)\(^4\)\(^{12}\) had concluded in their study as the monographs and journals are the main information sources used by the faculty members.

Fazlur Rahiman and Tamizhselvan (2011)\(^4\)\(^{13}\), found by their study as information seeking process of students is dominated by the visiting behavior to library. Student’s visiting behavior is mainly to access newspapers. The respondents had preferred the library and the internet secondly preferred.

Jayaraman, Srinivasaragavan and Duraisamy (2011)\(^4\)\(^{14}\), they found that 83% of respondents uses the library to read textbooks and the smallest percentage that is 21% to read thesis and 31% of respondents are daily visiting the library to seek information.

Muhammad Tahir, Khalid Mohmood and Farzana Shafique (2008)\(^4\)\(^{15}\) found in their study that consulting an expert in the subject will be the most important
source for research purpose and the reference book will be most useful for teaching. Majority of arts and humanity teachers preferred the printed format of information sources. They had noted in conclusion as humanity scholar’s information needs are diverse, they access books and older materials, so the lack of availability of required sources in library is a main problem in information seeking. 77% of arts and humanities teaching professionals preferred printed format of information resources for gathering required information. Reference book were ranked as the most important reference for teaching purpose, meeting personally was the most used channel of communication.

Opeke Rosaline, Osunkunle Sola and Okwilagwe (2002)\textsuperscript{46} in their study on information sources and utilization patterns of pharmaceutical scientist in Nigeria, through this study they found that the books and standards are very essential resources for information. As a whole the information is being used to improve the quality of the product.

Preeti Mahajan (2009)\textsuperscript{47} done a study on information seeking behavior of the user in Punjop university to find the purpose of information seeking nature of undergraduates, post graduates and researchers. By her study the researchers seeking information for discussion and research work. For needs of current information the researchers relay online database, journals, and conference proceedings. All the respondents are using current issues of the journals for getting current information. 80% of respondents gave preference for print and electronic formats of resources.

Singh and Satija (2007)\textsuperscript{48}, had conducted study on Information seeking behavior of Agricultural scientist to examine the strategies. Among the respondents 72% of respondents preferred the library/information centre is the most preferred
source for utilizing the information resources. Nearly 78.4% respondents uses journals to find specific information. 83.2% of respondents are using journals for up-dating themselves. They concluded as the scientific journals have been ranked first for obtaining particular information and keeping up-date.

Shaheen Majid and Gava Mugeraa Kassim (2000)⁴⁹ found in their study nearly 50(82%) respondents spent up to 20% of their office time on literature searching and reading. Also, they found that 72.9% respondents always first consulted their personal collection for meeting their information requirements. Respondents were asked the methods used for getting information from the library, nearly 51(77.2%) of respondents going library always personally for getting information. They concluded that a considerable number of respondents also visited certain other libraries for getting sources even though it is located far from their own campus. Finally they concluded as no library has all the materials which are required for a particular discipline.

Shakeel A Khan and Farzana Shafique (2011)⁵₀, conducted a study on information needs and information seeking behavior of college faculty at Bahawalpur and found that they seek information for their lecture preparation and improve themselves with current awareness. They preferred mostly the textbook, monographs and discuss face to face with colleagues. Mostly they do not prefer the journals for their requirement of information.

Akua Asantewaa Aforo and Richard Bruce Lamptey (2012)⁵¹ the primary purpose for seeking information to obtain useful materials for research work, background reading, and keeping updated with knowledge in their field of specialization, law reports, law journals, and textbooks the most useful source of information. The majority of lecturers sought for information daily.
Miriam Kakai, R (2004)\textsuperscript{52} their study investigated the information needs and seeking behaviour of undergraduate students of Makerere University. The results provide an insight into the factors that influence students information-seeking behavior and the information sources used.

### 2.8 ELECTRONIC INFORMATION SOURCES

Amanda Spink, Cenk Ozmutlu and Seda Ozmutlu (2002)\textsuperscript{53} said in their study that information seeker conduct multitasking search sessions and seek information on more than one topic concurrently in stage over extended periods and use a variety of information sources. From childhood, human develop the ability to seek and use information with the help of this type of practice they are able to obtain any information from information retrieval system such as online public access catalogue, the web and digital libraries. They calculated that the complexity of information structure increase the problem on finding information so, more complex human Information Process (IP) and more effective Information Retrieval (IR) technologies are required to sustain effective human information behavior.

Bennett, Casebeer, Zheng, and Kristofco (2006)\textsuperscript{54} conducted a study on ISB and reflective practice, found that 820(35.5\%) respondent out of 2311 most frequently searched online journals sources on the internet. They discussed in their study that the patients place some questions to the physician but they were not able to answer readily. Physician most frequently turn to the internet to search information related to the specific patient’s problem.

Beth E Kolko, Emma J Rose and Erico Johnson (2007)\textsuperscript{55} have found that the majority of respondents access internet outside the home. 59 respondents
reported using the internet most frequently at an internet café or computer club. Work place was the next most common access site with 34 respondents.

According to Chandraiah, Madhsudan and Bhaskara Reddy (2004)\textsuperscript{56} the academicians of Sanskrit mostly preferred browsing internet to collect the required information in the morning and night time. Nearly 72.2\% of teacher unaware of e-journals.

Thanuskodi (2009)\textsuperscript{57} had concluded on his study that law faculty use IT based library sources and facilities less frequently when compared with printed sources. This might be due to the lack of awareness of availability, skills to access and quality of IT based resources. Respondents are using variety of information resources and considering books and law report most important.

Moshe Yitzhaki and Gloria Hammershlag (2004)\textsuperscript{58} conducted a study on the accessibility and use of information sources among computer scientist and software engineers in Israel. They concluded that the printed textbook and professional journal as well as oral discussion with colleagues /expert in the organization were common to both group, topping almost all lists of accessibility and use. There were no significant difference found regarding electronic professional journal and bibliographical database. Printed professional journal as well as printed and electronic conference/meeting papers, were reported as consistently more accessible and used by the academic group, while the industry group reported greater access and use of electronic textbooks and trade /promotional literature.

Baljinder Kaur and Rama Verma (2009)\textsuperscript{59} had done a case study on use of electronic information resources of Tapar University, found that faculty, research
scholar and post graduate having more awareness than under graduate. They concluded that the user access often in the hostel and computer centre than the library.

Chunke Su and Noshir Contractor (2011) found through their study that consultants’ information seeking from human knowledge sources was mostly driven by the expertise and accessibility level of their team members, whereas this information seeking from digital knowledge repositories was strongly influenced by how much information the digital knowledge sources had and whether colleagues with whom they had strong social communication ties were seeking information from the digital sources.

Chun-Yao Huang et al (2007) online information behavior covers not only the information search but also those for communication, self-expression, fun, and so forth. Thus web users’ online information behavior includes all the behavior and behavioral results relating to information that occur in the online mode. After analyzing the data they found that the three dimension of online information are positively correlated.

Eynon and Malmberg (2011) had conducted a study on understanding the online ISB of young people, they found that the significant role of networks of support in particular friends, play in understanding uptake of both types on online information seeking. Importance of networks of support in explaining uptake of online information seeking and the fact that those who have better networks of support, particularly friends who are engaged in technology are more likely to engage in more Online Information Seeking (OIS).
Bystrom, Katrina (1999)\textsuperscript{63} Information sources means a carrier of information from which the individual gets or at least expects to get knowledge that could satisfy his information need.

Ranjan Kumar Barik, Rakesh Singh Bisen and Jalpa Bhardwaj (2007)\textsuperscript{64}, conducted a study on electronic ISB of scientists and research scholar they found that electronic information environment which is more convenient in gathering information. The purpose of gathering information is to update knowledge was the indication of 102(41.13\%) respondents and 57(22.98\%) of them gathering information for writing paper & presenting paper. Respondents 94(77.05\%) are highly satisfied with the subscription of e-resources by the library in their research areas. The PDF format of e-resources is most preferred by 114(88.37\%) respondents.

Lehmann and Renfro (1991)\textsuperscript{65} examined the attitudes of humanities faculty members at the university of Pittsburgh toward the usage of on-line databases. They found four determinants that influenced the use of on-line databases by these humanities faculty members. These determinants were content, connectivity, user-friendliness, and cost. The humanities faculty members saw content as the more important determinant and the cost was the least important of the determinants.

Ujrjita Patel and Manibhai K. Prajapati (2013)\textsuperscript{66} the study reveals that internet is the best source for preparing the examination and important source for information seeking. They use computer and internet in their search for information, retrieval and email communication. The majority of students prefer information in print format and English language. The majority of the students were satisfied with collection sources, resources and ICT facilities in their libraries. They visit libraries for reading newspapers or borrowing books on daily basis.
2.9 BARRIERS TO MEET INFORMATION NEED

Ethelene Whitmire (2003)\textsuperscript{67}, has conducted a study on information seeking behavior of undergraduate, given conclusion as the connection between various background characteristics, such as gender, socioeconomic status, disciplinary differences and epistemological belief may affect an individual’s information seeking behavior and epistemological belief.

Stephann Makri (2009)\textsuperscript{68} found through his study that difficult arose from the poor knowledge of digital library system itself rather than poor skills in general system of seeking information.

Sandar Hirsh and Jamie Dinkelacker (2003)\textsuperscript{69} found in their study that the information seeking behavior of the respondent was impacted by the unstable environment and refinements in focus resulting from the recently completed merger, which resulted in the integration of two research organization.

Richael Green Clemens and Amber L Cushing (2010)\textsuperscript{70} conducted a study on beyond everyday life, they noted in conclusion as several factors push this information seeking situation beyond the everyday, including Stress, emotion, secrecy and shame surrounding the decision process.

Pettigrew, Durrance and Unruh (2002)\textsuperscript{71} conducted a study on facilitating community information seeking using the internet. They had revealed several basic types of barriers to use community network, internet and information related in general. These barriers are, a) Technological Barriers: These barriers raise on technological failure. The devices which are involved to access information will not function properly (Slow Connecting speed, Unavailable or incompatible systems). b) Economic Barriers: As the cost of computer components and online
access are heavy. It cannot be afforded by the user. c) Geographical Barriers: These are related with geographical events (Connectivity was unavailable and people living far away from the resources). d) Search Skill: This barrier depend the search skill of the user (the user does not know how to search a particular topic with the help of a search engine). e) Cognitive Barriers: These types of barrier arise when the user does not know how the internet work. f) Psychological Barrier: The user expressed a lack of confidence in their own ability to find a needed information. g) Poor Retrieval-Information Over Load and Low Precision: Due to the poor search engines and site indexing users retrieved too much community information and were challenged with discerning what was relevant to their search. h) Poor Interface Design: User were often daunted by a site’s layout and the amount of text displayed on a single screen. i) Poorly Organized: User does not find Current Information when they expected to find it, and there was little cross-referencing. j) Out-of-date and Inaccurate information: Current Information has either out of date or there was no way of discerning when a page was created or last updated. Inaccuracies in content were also noted. k) Authority: Without proper identifiers and author credentials or association endorsement.

Devendra Kumar (2009) conducted a study on information needs of faculty members and research scholars of Chaudhary Charan Singh University, on his study he found there are many difficulties faced by the faculty members on accessing information what they need. Difficulties faced lack of time, inaccessibility of all the information, incomplete collection, lack of knowledge of resources and library services, as well as unfriendly library staff. 76.50% of respondents have difficulty because of lack of knowledge about using library services. 96% of respondent visit the library for borrowing books.
Janet Murphy (2003) had done a study and found that 85% of scientist indicated that they had some barriers. Many respondents had felt that there were lot of information available than the time having to find the information.

Xi Niu and Broadley M Herminger (2011) in their study indicated the factors that affect the information Seeking Behavior of academic scientist. They found various factors which are affecting the information Seeking Behavior of academic scientist. Overall many factors were found to affect the specific information seeking behavior of scientist, including demographic, psychological, role-related and environmental factors. Academic position was the most important in determination of information seeking behavior. The gender and discipline are important factors which affect information seeking behavior. The level and the type of information depend on the discipline. The services provided by the library and information services centers also affect ISB of the user, such as distance of library, available electronic database and devices which help to access the electronic information resources.

Ahmad Sufian (2009) the study reveals that the facilities, such as Internet, e-journals, etc. provided by the library are not sufficient enough to meet the requirements.

2.10 CHANNELS OF INFORMATION

According to Shoham (1998) the informational channels are classified as formal and informal channels. Formal channels are “those carrying information that is public, permanently stored, typically retrievable, primarily user selected, relatively old information and non-interactive (Books and Journal articles). Informal Channels are restricted to a specific audience, only temporarily stored,
difficult to retrieve, disseminator, selected recent and current information and interactive.

Information seeking can be done through formal and informal channels of communication. Formal channels of communication mainly comprise printed resources like book and periodicals. Informal channels of communication are personal interaction through phone, letters, e-mail, seminar, and conference etc. Hart (1993). Jonathan A Ocheibi and Abba Buba (2003) listed the sources as verbal and recorded information sources these can be divided under 3 categories, they are i) Formal channels are like article published in journal, reprint, handbook, textbook, review, conference proceeding, cataloguing card, audio visual media, bulletin, emails and others databases. ii) Informal channels like private correspondence, national and international conference, meeting, and seminars. iii) Semi-formal that contains unpublished reports, theses, draft of manuscript, conference presentation. Information gathering behavior depends on the specific requirement of an individual.

Johnson et al (2006) noted in their study that the information carriers include a variety of channels, a variety of sources within channels, and a variety of messages contained within these sources.

2.11 INFORMATION SEEKING PATTERN

Jannica Heinstrom (2006) conducted a study on broad exploration or precise specificity. The students are the important users of Information Services (IS) as they need to retrieve information in order to expand their knowledge. He found three information seeking patterns found in the analysis were named as,
i) Fast Surfing: This was a search pattern dominated by use of minimal effort, in terms of both information seeking and content analysis. The sources would be chosen on the basis of easy access and information seeking was seldom particularly thorough. ii) Broad Scanning: This was an exploratory search pattern characterized by wide search in many types of information sources. This search was more spontaneous than planned, and it was common for these students to retrieve useful information incidentally in unexpected contexts. iii) Deep Diving: In this search pattern students had expanded considerable effort on information seeking and preferred documents of high scientific quality. They seemed focused and structured in their searches and aimed for thorough understanding of their search topic.

Hong Iris Xie (2000) has found in his study that the two dimension of Information Seeking Strategies (ISS) appeared from the data method and resource. It can be characterized by different integration and combination of eight types of methods and six types of resources.

Sameh Shaaban, John Mckechnie and Stephen Lockley (2003) identified four type of information seeking groups were described. Exploratory information seeking behavior with highly interactive system usage. Knowledgeable users who tend to employ their domain experience in doing subject searches with experience system usage. Fast-paced users who perform known-item searching accompanied by help-intensive behavior. Passive users who experience successful short seeking episodes.

Kadli, Jayadev and Kumbar (2011) the majority of faculty say the purpose of information-seeking is to prepare class notes. The users seek information for their research work, and writing and presenting papers respectively. More number of hours spend on information gathering activities like
browsing e-journals on internet, searching for related websites, E-mail alerts, and correspondence. The online activity is more than the traditional activities. The trend of use of electronic resources is more than the print.

Majid and Ali (2002)\(^{84}\) had investigated the information needs and information seeking behaviour of computer engineering undergraduate students at Nanyang Technological University, Singapore. They found that printed material were the most preferred information format among students. The top five most preferred information resources were books, lecturers, the internet, friends and manuals.

Ossai (2011)\(^{85}\) this study pointed out various facts concerning both male and female law students in their patterns of information search and use. The male law students obtain higher mean scores in their information utilization pattern than the female law students. It shows that the information utilization patterns of both male and female law students are the same with perhaps slight differences not highly evident.

Vimaladevi (2000)\(^{86}\) done a study on information needs and search patterns in humanities user studies. Information needs and search behaviour of the users of information in various disciplines have been a subject of serious study are research information search pattern, materials of research subject of bibliographies, databases, Information technology for various purpose has also been studied.

Arabito (2003)\(^{87}\) has made a case study on user information seeking on library web, how the users seek and gather information for their papers and dissertations, how the library web site is becoming more and more stuffed with resources and with instructions on how to use such resources.
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