CHAPTER-4

4. CONCEPT OF INFORMATION SEEKING BEHAVIOUR

The concept of information as we use it in everyday English in the sense *knowledge communicated* plays a central role in today’s society. The concept became particularly predominant since end of World War II with the widespread use of computer networks. The rise of information science in the middle fifties is a testimony of this, possibly the most used, and the least precisely used, term in the library and information world. Best seen as holding the place in the spectrum between raw data and knowledge. Seen in this way, information is an assemblage of data in a comprehensible form capable of communication and use facts to which a meaning has been attached. Within information technology or information processing, the term is used in a more general sense to encompass all the different ways of representing facts, events and concepts within computer-based systems. In this usage, it includes data, structured text, text, images and video or in other words some consider information to be a cognitive phenomenon representing any change in an individual’s idea or cognitive maps. Information is the experiential process of interacting with the environing world. Information is the result of being conscious, of being alive. Information is also conceived of as the prepositional aspect of sentences or any set of sentences. It is a linguistic phenomenon. Information is also taken to mean the result of data processing. Information to some means the lessening of uncertainty about a problem or situation; following the model of physics, information is the way system keep going, it is negative entropy (Skovira, 1988).

Information is regarded as an organized set of data. It is the outcome, or is an interpretation of a state-of-affairs represented in a report or in a collection of data. Information is the consequence of reading the report; this is an act of learning about or coming to know about something. That is, when you look at a display or a printed report, you have something in mind that you are interested in knowing about. The data presented by the display or report may or may not satisfy you, but even to be dissatisfied you have to know what it is you are looking for in the data. Information is data that is clustered or put in context. (Bhatt, 2001).

4.1 Information use

Information use occurs when people process information, which changes their state of knowledge or capacity to make sense. Information need and use are two sides of
a coin, since the trust, indication that information is needed when it is used. Purposive information seeking focuses on the perceptions and behaviors that lead to information being found, including the identification, selection and use of information sources. Information use occurs when the recipient processes information by engaging mental schemes and emotional responses within larger social and cultural context. The outcome of information use is a change in the individual’s state of knowledge or capacity to act. Information use can also be categorized as cognitive, affective and situational dimensions. At the cognitive level of information use, a user’s cognitive style and preferences would influence the manner in which information is processed and utilized. In the affective level, user may expect that when people process information, they avoid using information that will arouse strong, negative emotions in others or in themselves. People use information selectively to avoid embarrassment, conflict or regret; to maintain self-image and to enhance personal status or reputation. While at the situational level information use, the degree to which a task has been structured by rules and routines will affect the use of information.

4.2 Information Seeking what

The term information seeking often serves as an umbrella overarching a set of related concepts and issues. In the library world, discussions of database construction and management, community information needs, reference services, and many other topics resonate with the term. Yet, a single, serviceable definition remains elusive.

Like any other complex concept, information seeking means different things in different contexts. In the simplest terms, information seeking involves the search, retrieval, recognition, and application of meaningful content. This search may be explicit or implicit, the retrieval may be the result of specific strategies or serendipity, the resulting information may be embraced or rejected, the entire experience may be carried through to a logical conclusion or aborted in midstream, and there may be a million other potential results.

Information seeking has been viewed as a cognitive exercise, left as a basic condition of humanity in which all individuals exist. In fact, information behavior may be a more appropriate term, rather than information seeking, to best describe the multifaceted relationship of information in the lives of human beings, a relationship that can include both active searching through formal information channels and a variety of other attitudes and actions, including skepticism and ambivalence (Pendleton & Chatman, 1998).
4.3 Information Seeking Concept

Information seeking defies efforts to bend it to a model or scheme for the purposes of explication. However, one basic, if clumsy, means of describing the phenomenon exists in noting changes in an individual’s thoughts, feelings, and actions during a single problem solving experience. After several studies into the research experiences of students, Carol Kuhlthau developed a model of information seeking she subbed the information search process (1993). Kuhlthau describes the information search process as moving through initiation, selection, exploration, formulation, collection, and presentation. While it was developed primarily to explain the formal research performed to complete class assignments, this model does organize information seeking into a set of experiential stages that offer a rough framework for discussing what occurs in the search for information and the transformation of that information into knowledge.

Initiation begins with the recognition of an information need and involves the first attempts to resolve uncertainty. In behavioral psychology theories, uncertainty, novelty, and variety provide the initial motivation for information seeking (Wentworth & Witryol, 1990). A psychological desire to predict outcomes, to know the unknown, or to widen the range of experience serves as the primary impetus for information seeking from a behaviorist perspective. George Kelly departing from both behaviorism and traditional cognitive psychology to suggest that knowledge, and the information seeking that builds knowledge, emerge from personal construction rather than purely objective retrieval and application (1955). The process and product of this construction is a unique experience influenced by the cognitive, affective, and material situation of the individual. The need to modify personal constructs as new situations and experiences emerge fires information seeking.

Drawing on theories of communication and on qualitative methodologies, the sense-making approach to understanding information seeking and use elaborates upon some of Kelly’s ideas, regarding information seeking as a dynamic, constructive and negotiated phenomenon (Dervin, 1999). Individuals constantly make and unmake their understanding and perspectives through the exploration of the wide and deep nexus of information that is life. This exploration occurs as a communicative process, an intersecting dialogue that extends beyond data to include emotions, ideas, values, opinions, superstitions, and beliefs on the personal and social level. From the sense-making perspective of complexity and change, the initiation of a specific act or situation of information seeking lies within this larger context.

Once one recognizes the need to know, the question of what one needs to know
must be answered. In selection, the individual ascertains his information need in relation to a general topic or field of knowledge. Formal information seeking situations may require an individual to relate a highly organized taxonomy of subject areas to their particular question or problem. For example school term the papers, assignments, often ask students to investigate their research question using prescribed method, to utilize certain sources of information, and to present their findings in a uniform format. To complete the assignment, students must translate their information needs into the organizational systems that libraries and other information agencies have developed. However, all of this order and regulation belies the inherent messiness of actually placing an unanswered question inside the vast scheme of human knowledge.

4.4 Definitions

**Information** is regarded as a collection of raw data, consisting of symbols, signs, signals and surrogates that can be compiled into messages (text, audio, images, or digital) for communication.

**Seeking** is an expression of want demand, need or requirement that entails looking for or fetching an item or information.

**Behaviour** is normally associated with the psychological and emotional status, dynamics and paradigm of an individual or organization in relation or reaction to internal and external stimuli.

**Information Seeking Behaviour**

The phrase ‘Information Seeking Behaviour’ has been defined variously by different authors. The following definitions of information seeking behaviour will, however, make the concept more clear.

Information seeking behaviour is a means towards reducing uncertainty and solving, in this case, the information needs of an information consumer.

According to Krikels, Information seeking behaviour refers to “any activity of an individual that is undertaken to identify a message that satisfies a perceived need.”

King defined information seeking behaviour as “a manner in which a user conducts himself in relation to a given information environment. It is, therefore, regarded as essentially, a process of interaction between the user and the rest of the information system.”

Mick observed that the information producing and information seeking behaviors are closely linked and are the reasons why most information systems are not better accepted as they fail to provide linkage between the two activities.

Thus, it stems from the above definitions that the act of searching or finding
information can be ascribed to information seeking. Such an activity begins when the user perceived that the existing knowledge is less than that needed to deal with some problem(s). With the end of that perception, the process of seeking ends. Developing an instinct for information is a sort of behaviour and the process of searching the same is considered as information seeking behaviour.

4.5 Information-seeking behaviour

Wilson, 1995 and as such its history may be considered to date back to the first studies of scientific communication and information use (Royal Society, 1948). Its use has also changed in line with developments in that field. Early references to information-seeking behaviour would be referring to scientists’ use of formal and informal communication channels and with a predominantly quantitative flavour unpacked, the expression ‘information-seeking behaviour of scientists’ would, typically be referring to the different proportion of scientists consulting with colleagues, using journals or books, employing abstracting services, receiving preprints or reprints, attending conferences, and their associated preferences in terms of channel.

Now a day towards more theoretically grounded studies and to the application of qualitative, hybrid or methodologically pluralist techniques. The denotation and limited connotation of the expression has evolved in line with these developments. In this respect the nature and quality of what lies behind the expression is totally dependent on the quality of the studies themselves. The expression has as shallow or deep a conceptualization as the studies in which it is rooted or the sections to which it refers. In this respect, too, it is impossible clearly to separate any historical analysis of the use of the expression from consideration of the associated terms ‘information needs and information uses’.

The ‘Information-seeking’ component of the expression might be thought to promise more than it delivers in implying a level of positive activity which might not be borne out by studies of the individual or group, where passive ‘information gathering’ might be a more accurate description than ‘information-seeking patterns’ distance the notion from that of ‘behaviorism’. In this respect expression such as ‘information-seeking activities’ or ‘information-seeking patterns’ distance the notion from that of ‘behaviorism’ and also link the notion philosophically closer to its true family of concepts connected with reasons and actions and further from concepts of the stimulus and response group. But, again, like the notion of information needs the notion of ‘information-seeking behavior’ is such a useful catch all that these philosophical caveats are unlikely to see it going out of fashion.
4.5.1 Dissonance Theory

Once can ask ‘what is the basis of seeking’? Seeking arises when there is some perceived need. It is required to determine why individuals selectively seek certain kinds of information while they ignore or reject others. Based on Festinger’s cognitive dissonance theory, it was suggested that individuals seek information that confines their pre-existing opinions, attitudes and favours their predisposition. In this framework, it is noted that individual’s information seeking behaviour is not guided by the relative importance of relevance of an issue, but rather by their pre-existing attitudes towards the issue.

On the other hand, Hawking and Daly have added selectivity process of dissonance theory. They have viewed that the selectivity process is not only a cognitive phenomenon, but is should be viewed interactively with other variables such as emotions, availability of information and specific domain of information.

The work of Donohew, et. al., knowledge gap contended that what motivated individuals to seek information is the relevance of such information to individual situations. Persons having higher social status or educational attainments are better equipped with information, but those who actually obtain from in information seeking environments are seldom considered the least knowledge.

4.6 Information Seeking Behaviour: The Concept

With the growth of information deluge, each one needs information of increasing variety and diversity of level, volume and use. This complex situation appears to be ambiguous and heterogeneous in character as that, information needs of a particular group of users and information flow from a specific situation / organization are difficult to determine. Again, the use of information is so complex that there cannot be a simple system to cope up with the task of effective retrieval without assessing their specific needs. This situation has given rise to the growing concept of information searching and the manner of determining the pattern of searching is said to be considered information seeking behaviour.

4.6.1 Why to Assess User’s Needs?

Users and their information use studies perhaps from the largest single body of research literature in librarianship. Crawford estimates that well over 1000 user’s behaviour and information system use studies have appeared in print. The recent developments in the field have added new dimensions to the research literature. It can be expanded by new approaches to citation studies, automated searching, text-retrieval and scaling of bibliographical databases. The body of literature on ‘user behaviour’ within
The framework of librarianship is considerably increasing day by day.

The incessant growth of various aspects of subject has led the researchers to concentrate more on service aspects in order to refine the services or redesign the information system. To crystallize the situation, different roles played by the users appear to be essential for an early assessment. Because, such an assessment would result in improving the existing system and generating new ideas and thoughts related to information products and services.

4.6.2 Role of Intermediary in Bringing the Gap between the user and the Document

Information environment primarily appears to be critical as it involved users of information, organizations, information mediators, library and information centers, publishers and producers of information. In this complicated situation, the role of the information intermediary assumes greater importance due to the fact that the whole system is based upon the effective retrieval of information by the intermediary.

The present scene has given birth to the deluge of information and the complexity of centers or storehouses in such a manner that the role and responsibility of the intermediaries has been very much ambiguous and varied in nature. One can term, the intermediary as “information specialist” who helps people to find information they are looking for. Every activity related to information acquisition to dissemination is more or less an event that implies an information system finding out about and producing the information required in that particular case. The intermediaries help the users to build up this system not only with their knowledge about store house of information but also with the knowledge about the information seeking behaviour of the users.

On this premise, it can be further argued that the intermediary is more concerned with the provision of satisfaction of the users. Once information needs are developed, the user has to develop the personal strategy of searching information from various sources. Thus the concept of information seeking behaviour of the user is being generated within a given library and information environment.

4.6.3 Understanding the Psychological Attribute

Current research on information retrieval and dissemination pays greater attention to the study of information habits and needs of users about myriad information systems. It has also been said that the user should be viewed more broadly as existing within interacting cognitive, emotional and social systems while considering the user as the central focus of ‘information needs’, the emphasis is shifted on the personal and psychological attributes of the users that would provide good understanding of the
dimensions of the study. Hence, the merging concept of Information Seeking Behaviour becomes the focus of the question, which needs a detailed emphasis.

4.7 Information Seeking Behaviour a Theoretical Framework

A librarian’s major task is to satisfy the users. In order to undertake such a critical task that involves a clear understanding of the psychological, physiological and social factors of the human nature/being, one has to develop a deep understanding of user-librarian interaction based on human behaviour, which often remains unpredictable and complex.

4.7.1 Behavioral Options and Ecological Influence on Information Seeking Behaviour

The attribute, personality and motivational structures that constitute the overall ‘behaviour’ of the human being are seen. A person needing information develops certain behavioral option. There are five main classes of these options

i) To wait;
ii) To act;
iii) To generate information;
iv) To seek information;
v) To opt out of the situation;

Each of these classes can be broken down into fixed groups and eventually into the specific concrete options available at a given point of time. But the general classes apply at all points of the behavior structure.

The user can wait before deciding what to do, can act on the information retrieval so far, can generate information, can seek information, on can opt out of the situation, if the same does/does not suit to his taste or need.

Human brain acts as a processor of information. Zewizig in his work utilized the model of the individual as an information processor. Bell’s study analyses many information processing mechanism in animals which are applicable to human being and provides a foundation for understanding searching strategies and tactics, patterns of resource distribution, and trade-off between competition and risk on time minimization and energy maximization.

4.8 Information seeking as a constructive Process

Within the past few years there has been a noticeable shift in the conceptual approach to information studies to the user’s perspective of information seeking and use. In 1986, Dervin and Nilan in a review of research into information needs and uses found that most studies remain constrained by the system’s definition of needs with the menu
of responses coming from the system’s definition of needs with the menu of responses coming from the system’s view of the world and not the user’s. They called for research within a new paradigm of the user’s perspective in order to provide a solid research. Others have substantiated that research is needed which goes beyond the study of seeking and gathering of information to the study which goes beyond the study of seeking and gathering of information to the study of the study of seeking and gathering of information to the study of the constructive process of using information to solve the problem which initiated the information need.

Although there have been relatively few empirical studies of user’s problems and processes, some important work has been done which indicates a direction for further investigation. Taylor’s levels of information need (visceral, conscious, formal and compromised), Dervin’s studies of sense making, and Saracevic’s description of relevance are some examples of this work. Also investigations of search techniques, procedures and strategies, which accommodate the user’s perspective, have opened a productive line of research.

4.9 Borrowing a Constructivist Framework of learning

The constructivist view of learning has provided a particularly fruitful, theoretical framework for my own research into the information search process. This framework is purposefully applied to explain the role of information in the individual’s process of problem solving or finding new ideas, framework extends the Ask hypothesis of Belkin and other dynamic but step-like theoretical constructions.

The work of three prominent theorists on construction, John Dewey, George Kelly and Jerome Bruner, has formed the conceptual basis. Each of these theorists contributed to a conceptual perspective which provided a lens for viewing and interpreting data collected on user’s experience in information seeking.

4.9.1 Dewey’s Phases of Reflection

Dewey described what he called reflective thinking as occurring in five phase’s suggestion, intellectualization, guiding idea or hypothesis, reasoning, and testing by action.

The first phase involves suggestion. In this phase a state of doubt due to an incomplete situation causes perplexity, confusion, uncertainty and hesitation. The second phase is intellectualization. This involves conceptualizing the problem, interpreting the given elements and anticipating possible solutions. The third is the phase of the guiding idea or hypothesis. A guiding idea is a tentative interpretation of the initial suggestion used as a hypothesis to initiate and guide the collection of factual material. A careful
survey incorporating examination, inspection, exploration and analysis is made to define and clarify the problem at hand. The fourth phase is one of reasoning. The hypothesis is made more precise and more consistent by familiarity with a wider range of facts. An elaboration of the idea emerges through reasoning. The fifth phase, testing by action, involves taking a stand on the tentative hypothesis, doing something to bring about results to test the hypothesis in order to resolve the doubt and perplexity. The idea may be tested by either overt of imaginative action.

4.9.2 Kelly’s Phases of Construction

Some years later, George Kelly described the process of forming new constructs as progressing through a series of psychological phases. His descriptions of experience in the phase of construction are strikingly similar to Dewey’s stages of reflective thinking. Kelly, however, expanded on Dewey’s model by emphasizing the disruptive impact of new information to a person’s system of constructs and the resulting increase in uncertainty in the early phases of the process of construction.

Kelly also explains the process of construction in five phases. The first phase is initiated by a new experience or a vague new idea, which cannot be assimilated into the existing system of constructs characterized by feelings of confusion and doubt. In the second, the sense of confusion and uncertainty increases and may become quite threatening when further new information is inconsistent and incompatible with existing constructs. The third phase is the turning point in the process when new idea is either rejected or a tentative hypothesis is formed to provide a direction to pursue. In the fourth phase the hypothesis enables one to ‘break through his moment of threat to get on with the task of testing to confirm the hypothesis. The final phase of the cycle involves assessing the outcome and reconstructing and assimilating the new construct.

4.9.3 Bruner’s Phases of Interpretation

Bruner’s research and writing corroborates and elaborates the active part the individual plays in the constructive processes of both Dewey and Kelly similar to Dewey’s reflection and Kelly’s reconstructing, Bruner emphasizes the task of interpreting as being central to construction. Merely gathering information is not enough. Bruner explains that

If we are to understand it (a new idea), it will not be by means of positivist archaeology in which every thing particular about it and everything leading up to it are finally dug up, labeled and collated. However much we dig and delve, there is still an interpretive task.
The interpretive task beings with perception when a person first encounters new information. The second phase involves selecting a process of recognizing patterns and third phase involves making inferences by joining clusters and connecting categories. Predictions are made in the fourth phase. The interpretive task is completed by action in the final phase that results in the creation of products of the mind.

These descriptions of the constructive process in general provided a conceptual assumption for studying information seeking as a process of construction in my own research.

4.10 Empirical Testing of a borrowed conceptual Framework

A borrowed theory needs to be tested within the context of information seeking in order to be established as a grounded conceptual perspective. Using the premise that an individual is actively involved in his or her progression from uncertainty to understanding, the hypothesis was formed and tested that information seeking is a process of construction experienced in phases similar to those described by Dewey, Kelly and Bruner. In a series of five studies of information seeking and use from the user’s perspective, a model of the information search process was developed.

4.11 Factors of Motivation in Information Seeking

There is a varying degree of motivation to seek information. It primarily depends upon the work situations or level of requirements or organizational factors. Individuals with this motivation to seek information on politics may not have the same degree of interest to seek information on scientific research/or or investigative journalism.

Goldhaber, et. al., suggests that persons are interested to seek information concerning their work environment. The motivation to seek information lies in information itself. Persons seeking information about job- related matters are very often motivated by the desires to get rewards for successful performance. Individuals will not be motivated to seek such information because of the same is perceived that being reinforced.

On a study of a health information system, Etteme, et al., finds that circumstantial factors as predictors of information seeking would not be powerful enough to generate active search for information when such information is not readily available. In situations where information related to the specific as better predictor of information seeking.

4.11.1 Information Seeking Situations

Individuals in the course of time may exhibit different information seeking behaviour because of a significant difference in the nature of the problem. Certain jobs and life styles may be characterized by the degree of the constraints they happen to face.
There can be two types of situations in which information is consulted (1) continuous; and (2) discrete. Bureaucrats, for example, while dealing with specific issues face discrete problems. But journalists whose responsibility is to report in a daily manner need information continuously.

There are different dimensions of behavioural assessment, while some emphasis the sociological approach as the appropriate one, others prefer psychology or cognitive science that leads the behavioural patterns. Some still say communication system to be the mainstay in shaping the behavioural designs while others consider observable behaviour or actions of the information user that mould the human information seeking behaviour.

4.12 Elements of Information Seeking Behaviour

Information seeking is a matter more or less related to the sense making in which the individual choose an item of information that best fits to his needs and purposes.

Making an in-depth study on ‘information needs’, Dervin and Nilan have proposed a paradigm shift for information seeking behaviour. They have identified an automotive set of premises and assumptions, the essence of an alternative paradigm in a set of six elements. They are

1. The conception of information as objective versus subjective
2. Information users as passive recipient or objective information versus purposive, self-controlling and sense-making beings;
3. User of information on behaviour applied across situations versus behaviour understood as the result of dialogue between system and the user in which need articulation goes through situationally bound interactions;
4. The study of user behaviour primarily in the context of user interaction with the system versus holistic approaches that focus on the whole social interaction;
5. Focus on external behaviour versus internal cognition; and
6. Concerns that a focus on individual behaviour yields too much variation for systems to integrate versus the need, with individuality in user behaviour. They, however, conclude that traditional approaches have aspired to sophisticated quantitative techniques yet in the context of the impetus of the paradigm shifts, scholars are now calling for supplementing quantitative approaches with inductive and qualitative approaches.

4.13 Information Seeking Behaviour Vs Gratification Theory

The Gratification theory on Information seeking behaviour developed by Chatmant identifies the underlying methods by which researchers are able to explore a
minimally understood area in information studies. The theory has attempted to define problematic situation for poor people and new conceptual factors that influence their choice of strategy. It has attempted to address a central issue of information use among poor people, even though they do not appear to be active seekers of information.

This theory illustrates immediate gratification behaviour that appears prevalent in the lower working class. The findings suggests that no information seeking will occur if respondents are convinced that future is more attributed to luck, rather than one’s investment of time or energy.

4.13.1 Information Seeking Strategies

Despite the attempts by librarians to promote the www as an information resource and to provide a gateway to information sources via library web pages, most students clearly conceived a distinction between the www and the library as separate information-seeking resources. Some students instinctively sought web information as priority, whereas the impulse for others was to look for library materials and use the web for supplementary information or as a fall-back resources. Nevertheless, the key point was that, for most interviews, accessing the physical stock of the library and retrieving information from the www are two separate, although sometimes connected, information seeking strategies. Even the students who expressed a good deal of confidence in using the www used language, which indicated a superficial approach to information seeking.

The study has identified three basic methods of information seeking

1. Piggy backing;
2. Friendly consultation; and
3. Professional peripheration.

These factors are responsible for such methods to be adopted. Firstly, a user would tend to piggyback-giving information search a low priority; if there were higher priority demands on his or her time. Secondly, a person would be guided by previous experiences, especially in regard to selecting appropriate sources of information. And finally, professional peripheration tended to be used when an understanding of the context of question/problem was felt necessary.

4.14 Categories of Information seeking

People seek information in different ways and for different purpose. Thus, the method of information seeking varies from person to person and situation to situation. Lonqvist has identified the existence of two types of information seeking.

1. Specific information seeking with subject acquaintance of the scholar;
2. Dependent information seeking when the subject is new and the scholar is not aware of it.

The above two types information seeking do not always occur in their present form, Individual variations could be seen but it is fair to say that these two main types have crystallized.

While studying on reading phenomenon of secondary school students, Harwood identifies seven main categories of information seeking. These are

1. Reading;
2. Consultation personal contact with the authority;
3. Consultation personal contact with non authority;
4. Thinking Vigorous;
5. Thinking intuitive;
6. Systematic observation; and
7. Casual observation.

These seven methods of information-seeking identified by Harwood appear to be move exhaustive and pragmatic.

4.15 Patterns of Information Seeking

The subjects demonstrated a range of searching behaviors prescriptive, exploratory, purposive, associative, intuitive, curious, tangential, and accidental. Each type of searching appeared to reflect the subjects’ current mental state or intention. They typically engaged in exploratory searching before they came up with a specific direction. They used prescriptive searching to incorporate their goals and constraints. Purposive searching occurred once they could maintain or constant points of reference. And, they demonstrated associative searching when they proactively looked for related and interconnected information to support arguments they had in mind.

Curious searching took place when the subjects pursued something which piqued their interest, whether or not it was essential to their task. Tangential searching occurred when their searches followed a course either parallel to their goals or went clearly beyond the requirements of the assignment. Accidental searching occurred occasionally, either because of the database design, or from serendipitous glitches in using function buttons. The subjects’ individual styles were evident in their searching behaviors; for example, Bert demonstrated more curious searching. He appeared to balance his interests with his current goals and to follow his own natural, intuitive, or interpretive courses. Others appeared to concentrate more on their main task, demonstrating more purposive operations, and limiting their searches to the current goal at hand.
The subjects’ deployments of searching strategies were reflected in the stage differences and their preparation of the task at hand. As they progressed, the proportion of exploratory and purposive browsing declined steadily and they engaged increasingly in more proactive and associative searching. For example, Eric was observed in his initial stage of the task A, demonstrating more exploratory behaviour than in his intermediate stage. Crystal and Gatsby allowed much more associate and proactive searching, especially when observed variously in their intermediate and final stages.

Eric explained that his strategy would be first just to browse around, brainstorm, and let the problem roll around in his mind while he looked for something interesting to work on. From his protocols, a high proportion of his time was spent exploring possibilities. The intensity of its browsing activities seemed to support this statement. He searched for information in irregular patterns, going from stack of stack, starting with architecture, sites atlas and going on to sculpture, with repeated movement back and forth among the stacks. It seemed that he had no specific goal or coordinated plan in mind. He appeared to be exploring the database in hopes of hitting on something that might trigger an insight or idea. If he still did not find anything that sparked his interest, he would initiate another search, and recycle back through the material.

4.16 Research on Information-Seeking Behaviour

Research on information seeking behaviour is on the rise. With the growth of multi disciplinary subjects and interest of researchers of new micro subjects, there appears a tremendous increase of special users in libraries and information centers. To cope with the task of providing satisfactory library and information services, it is always desirable to make a close look at the information users. Hence library intermediaries have started to undertake several researches works on information needs and seeking behaviour of their users at different levels.

Saracevik while speaking on “Information Seeking”, however, has characterized the current state of knowledge of cognitive aspects of information seeking and information retrieval in terms of two basic questions (1) at the level that the rationalists used to ask a hundred years or so; (2) that concern not only with identification of the variables, but what is their nature and their effects?

The situation remains same as Krikelas reacted to Saracevik in the words “work in this area of information seeking is so arduous because we are only now beginning to understand how complex the process may be and how difficult it is to define let alone measure many of the important concepts”.

Information needs and users have contributed a lot to the research discourse on
information seeking behaviour. Attempts have been made to relate specific variables to particular pieces of information seeking behavioural patterns. A good number of articles have also seen presented which are devoted to in depth analysis of behavioural components of information uses. Still a renewed endeavour seems imperative in order to discover some of the important issues that remain hidden and possibly unexplored.

4.17 Information seeking under internet platform

The Internet is the gateway for libraries and information centers to enter into the Electronic era. In addition, the Internet is a generic term for a bundle of technologies available under the Internet umbrella. Internet is providing the enormous information generated by the different organization, institutions, research centers and individuals all over the world. Some important Internet services are electronic mail, Bulletin Board Services, FTP services, WAIS, Archie, Remote Login Telnet, Gopher and www.

Internet is the ocean of all sort of information. Many information resources are available on Internet, which can be accessed in the libraries, and information centers and provides information to their users. Some of the important resources available on Internet include; e-journals, e-books, preprinted materials, bibliographical tools, union catalogues, dictionaries, encyclopedias, directories, research reports, patents, standards, databases, files, audio, video and home pages of companies, vendors, institutions, organizations, professional associations, individuals, experts etc.

The Internet is very similar to the global phone system. In the phone network, whoever is a subscriber can be reached by dialing the right country code, area code and local phone number. In the case of the Internet visitors types in the right Universal Resource Locator (URL) to access the necessary information.

Internet users today use a small but powerful set of applications. The most widely used applications are e-mail, WWW content browsing, and file transfer services. These services are provided by high-powered servers within the network and the software implementing those applications. The Domain Name services such as

1. It converts the widely seen host names into IP address and authorization services provide support across applications.

2. Transport services provide the option for reliable transport of information (Error detection and retransmission) or simple unacknowledged transfer. These services may operate end-to-end (e.g. in case of file transfers between and end-user and a remote Internet server). In such cases, the network does not get involved at the transport level.

3. In other cases (e.g. when the user is accessing a web server internal to the
network), the transport service is provided by the network by UDP (User Datagram Protocol) or by TCP (Transmission Control Protocol). IP (Internet Protocol) infrastructure enhancements provide differentiated services at the IP router level.

4 These emerging capabilities and extensions to the current IP features will become key to future applications on the Internet.

5 Based on this technology, in particular IP, all types of networks and their services could be standardized.
REFERENCES


