1.0 Introduction:

Now we live in the age of knowledge and information explosion. "Information" is one of the fundamental resources indispensable for development in all the vital spheres of the life of the civilized society. Information is universal – it is known to all men in all languages, there may or may not be a precise or apt word in a language to describe the term 'Information' but surely it is there. Research aims to provide solution to problems. However, solution of problems requires information. No rational development programme can succeed fully without proper information support. As a result information is being increasingly regarded as a national resource. In some of the developed countries, it is being considered as fundamental as energy or matter which affects different aspects of human activities.

We talk about information, we seek information, we exchange information and we pay for information. Ironically through, despite our familiarity with information we have not been able to properly define the term.

1.1: Definition of Information:

The concept of information is associated with many other concepts such as data, fact, observation, skill, experience, knowledge, wisdom, intelligence and so on. All these concepts indeed are very much the creation of the human mind. In fact the combination of these concepts and their application for human resources development contribute to the growth and prosperity of the society.

In Information Science the concept of information is defined in many different ways. In the cognitive viewpoint of information science Belkin defines: "the information associated with a text is the generator's modified (by purpose, intent,
knowledge of recipient's state of knowledge) conceptual structure which underlines the surface structure (e.g. language) of that text”. Definition is subsequently elaborated by Ingwersen\(^2\) as information being "the result of a transformation of the generator's cognitive structures (by intentionality, model of the recipients' state of knowledge, and in the form of signs), and "on the other hand information is something a structure which, when perceived, may affect and transform the recipient's state of knowledge". Information is seen as "something constructed by human beings." (Dervin & Nilan)\(^3\)

Farradane\(^4\) defines information as “any physical form of representation or surrogates of knowledge or of a particular thought used for communication.” In wide sense, Mc Garry\(^5\) argues that information is not limited to facts in documents but it covers a wide spectrum of issues including emotions, facts, opinions, guidance and persuasions.

Within the context of user studies, information has been used “to denote factual data or advice or opinion, a physical object, such as a book or journal, or the channel through which a message is conveyed, for example, oral or written communication” (Rohde)\(^6\)

Ching-Chih Chen\(^7\) and Peter Hernon define information as, “all knowledge, ideas, facts, data, and imaginative works of mind which are communicated formally and/or informally in any format.”

Within library and Information Science Information has been defined by Ford\(^8\) as the structure (or order) of any text which is capable of changing the image structure of a recipient.” An operational definition was proposed by Faibisoff and Ely\(^9\), in 1976, which stated “Information is a symbol or set of symbols which has the
Potential for meaning.” Krikelas\textsuperscript{10} stated, “Information is any stimulus that reduces uncertainty.”

Information is seen as having an existence independent of thought or of sources or of receivers and as something that describes reality which can be discovered, described and predicted, thus reducing uncertainty about reality and making it possible for people to cope more effectively. The image which emerges is of an object (sometimes described as a brick) which can be transferred from one place to another. Each bit of information is assumed to have a logical place in relationship to each other bit and thus to be informing.

1.11: Types of Information:

According to J.H.\textsuperscript{11} Shera there are six types of information:

(i) Conceptual Information - relating to ideas, theories and hypotheses about the relationship which exists among the variables in an area.

(ii) Empirical Information - relating to data and experience of research which may be drawn from oneself or communication through others.

(iii) Procedural Information - this is the data obtained, manipulated and tested through investigation.

(iv) Stimulatory Information - is motivated by oneself or the environment.

(v) Policy Information - is focused on the decision making process.

(vi) Directive Information - is used for coordinating and enabling effective group activity.
1.12: Information Need:

It is now quite evident that information is vital to every individual. There is no aspect of a person’s life where information is not required. The concept of ‘Information Need’ is very difficult to define, to isolate, and specially to measure. It involves a cognitive process, which may operate on different levels of consciousness and hence may not be clear even to the inquirer himself. In order to understand the concept of ‘information need’, one has to first define the term ‘need’. Need refers to ‘what a person ought to have.’

The Encyclopaedia of Psychology\textsuperscript{12} has given a comprehensive and clear explanation of the term ‘need’—“Need is one of the several English words (the others being drive, motive, want, urge, desire and so on) – each in some respects unsuitable – used by psychologists today to designate an internally or externally aroused, brain-located force (often coupled with an accelerating emotion), subjectively experienced as an impulsion or felt necessity (a mild or intense urge) to act (immediately or later) so as to produce a certain specifiable terminal effect which is ordinarily expected to be beneficial to the actor, and/or positively hedonic (less painful, more pleasurable) relative to the arousing situation.”

Need refers to what an individual ought to have. This should be differentiated from wants. Wants are restricted to what an individual would like to have. Psychologists have divided needs into three categories which are psychological, cognitive and physiological. User’s needs are basically of the cognitive type because those involve need to plan and of learning skills.
Green\textsuperscript{13} finds that the element that most clearly distinguishes a need from a want or a demand is that there is no necessary self-awareness of a need. People frequently need things without being aware of the need.

Need is said to be the expression of uncertainty. Information is the stimulus that helps to reduce that element of uncertainty. Information need, in the words of Atkin\textsuperscript{14}, is to be defined as “a function of extrinsic uncertainty produced by a perceived discrepancy between the individuals’ current level of certainty about important environmental objects and a certain state be seeks to achieve.”

The concept ‘information need’ has proved to be an elusive one, difficult to define, isolate and measure. It has to do with users, the central figure around which the whole world of information system and the procedures of information, that is authors and writers revolve.

A need is generally conceived as describing what an individual ought to have, for his work, edification, recreation, etc. Pinpointing a need implies a value judgement, one person may regard a piece of information as vital, while another, in the same situation may attain the same goal without it, possibly by putting more efforts into other activities.

Researchers have used the term in a variety of ways. Needs, demands and wants have been used interchangeably although they may not be identical. Need is further complicated by the necessity to distinguish among expressed, unexpressed or unfelt needs, the latter being the most difficult to identify. Based on information seeking behaviour needs have been categorized as immediate or deferred by Krikelas.\textsuperscript{15}
Another way of expressing this idea is to view as shaped by activity, such as problem solving or decision making, or as latent, manifest through a passive reception of information which is stored as knowledge (Faibisoff and Ely, 1976)\textsuperscript{16}

According to Brenda Dervin\textsuperscript{17} "an information need is an impediment preventing an individual from moving forward in cognitive time and space. The person is faced with a gap that must be bridged by 'asking questions, creating ideas, and/or obtaining resources.' Such gaps do not occur in the abstract but arise out of particular critical events and situations."

The Librarian's Thesaurus\textsuperscript{18} defines information need as "that need which library services or materials are intended to satisfy."

Ching-Chih Chen and Peter Hernon\textsuperscript{19} stress that an information need is more than a question asked of an information provider. It occurs whenever people find themselves in situations that require some form of knowledge for resolution.

Information need is often understood in information science evolving from a vague awareness of something missing and as culminating in locating information that contributes to understanding and meaning (Kuhlthau 1993)\textsuperscript{20}. Information need is described as an anomalous state of knowledge (ASK) (Belkin et al.1982)\textsuperscript{21} or a gap in individual's knowledge in sense making situations (Dervin & Nilan 1986)\textsuperscript{22}. Wilson points out that there must be an attendant motive when a person experiences an information need (Wilson 1997)\textsuperscript{23}

Martyn\textsuperscript{24} viewed that different types of needs also may be identified based on the stage of a project or activity.
Herver and Herver\textsuperscript{25} have identified two types of needs in 1967, which are continually confused substance or kinds of messages and the means or channels of delivery. Because needs are internal and vary with the individual and the situation, the object of most frequent study is user behaviour and/or expressed demands, the assumption being that needs are implied by demands and information seeking activities (Menzel,1966\textsuperscript{26} and Krikelas,1983).

Wilson (1981)\textsuperscript{27} in discussing information needs distinguished between basic and applied research. Studies of information seeking behaviour are examples of applied research. Inferences may be made about needs although the purpose of the study may be to identify other variables related to system design and development. Understanding why information seekers behave as they do is basic research, and the results of such a study may have practical application but applicability is not a requirement of the study.

Wilson and Streatfield\textsuperscript{28} in 1981 viewed that information need is subjective, relative concept existing only in the mind of the experiencing individual. Krikelas\textsuperscript{29} in 1983, defined it as the "recognition of the existence of uncertainty". Zweizig\textsuperscript{30} in 1979, described it as something which prevents an individual from making progress in a difficult situation. He viewed that individuals may perceive their problem in different ways, for example, decision making, coping with a worry, overcoming a barrier, living with a problematic situation. They may, indeed, want to reduce uncertainty, but they may just as well want informing, instruction, release from a situation, companionship, reaffirmation of reality, or social support (Dervin, 1976)\textsuperscript{31}. The extent to which information seekers transfer the information into their own knowledge structures may reflect at least in part the extent to which they really need the information (Ford, 1983).\textsuperscript{32}
The year 1971 saw a continued growth of literature reporting information needs and uses in science and technology. One most remarkable feature of this literature shows that systematic studies of information needs and uses have become truly international phenomena. Such studies continue to thrive in United States, represented by activities of the American Psychological Association, of the John Hopkins University and Stanford University.

Also, there is a growing realization among the researchers of information needs and uses, of the lack of and need for a conceptual framework within which enormous amount of data gathered and cumulated over the last decade can be meaningfully integrated (Skelton)\textsuperscript{33} Such a framework could stem either from a summary of the global growth of literature on science and technology or from a summary of the information behaviour patterns of individual scientists and technologists. Efforts in the former category have been attempted by Griffith et al\textsuperscript{34} in the use of mathematical models of growth functions. Efforts in the latter category include Crane's use of a diffusion model to explain growth of science and Lin's discussion of a general communication model.

1.12.1: Factors Affecting Information Need:

Lin and Garvey (1972)\textsuperscript{35} identified the type of work as the most important factor influencing need. There is a distinction between a researcher and a teacher. While many are engaged in research and teaching, priorities are usually assigned between the two. Since rewards differ for researchers and teachers, their information needs also differ. Priority is important not only for significant discoveries
but for any new information. Thus it should be expected that researchers in general should have greater need of information than non-researchers.

Specification that identifies whether work is relatively basic or applied also induces different information needs. Another factor affecting different information need of scientists and technologists is the discipline within which one is working. Goldberg\textsuperscript{36} observes in the Russian study that social scientists in Russia tend to demand materials from libraries much more frequently than do scientists in other disciplines.

Information needs may also be influenced by the system available to satisfy them (Lin and Garvey, 1972).\textsuperscript{37} Other environmental factors such as social, political, economic and legal systems within which a person operates and interpersonal relationships can be important as well (Crawford, 1978; Krikelas, 1983; Paisley, 1968).

1.2: Information Seeking Behaviour:

Seeking information refers to the process of collecting and receiving information by different means. It may be through reading published materials, communicating with colleagues etc. Behaviour is concerned with mode of action, process of selection of information resources, process of carrying out search for information, factors that affect his approach. Information seeking is a basic activity indulged in by all people and manifested through a particular behaviour. It is also an aspect of scholarly work of most interest to academic librarians who strive to
develop collections, services and organizational structures that facilitate information seeking (Wiberley)\(^{41}\)

Information seeking behaviour which results from the recognition of some need (Wilson)\(^{42}\) is defined by Krikelas\(^{43}\) “as any activity of an individual that is undertaken to identify a message that satisfies a perceived need. In other words, information seeking begins when someone perceives that the current state of possessed knowledge is less that that needed to deal with some issue (or problem).”

Ching-Chih Chen\(^{44}\) has defined information seeking as follows, “Information seeking patterns are the paths pursued by the individual in the attempt to resolve a need.”

T.D. Wilson\(^{45}\) defines what he calls ‘information behaviour’ as, “those activities a person may engage in when identifying his or her own needs for information, searching for such information in any way, and using or transferring that information.”

The highest objective of information seeking behaviour is information satisfaction. It is indeed the highest ideal of user education. It helps to improve the performance of an information system through user involvement. The highest level of information satisfaction is to be achieved by actively involving the user in the information retrieval system, which through a process of conceptualization results in the user re-defining his query or reformulating his information need.

King\(^{46}\) 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
information system.”

Girja Kumar\(^47\) defined information seeking behaviour as, “a field which is
composed of studies that are concerned with who needs what kind of information and
for what reason; how information is found, evaluated and used, and how these needs
can be satisfied and identified.”

Thus information seeking behaviour is concerned with establishing
relationship with the people, information and system of an order so as to obtain the
best results.

1.21: Information Seeking Process:

Many models have been framed in order to explain the information seeking
process. A model is a framework for thinking about a problem and may evolve into a
statement of the relationships among theoretical propositions.

Ellis,(1989) and Ellis, Cox and Hall(1993)\(^48\)\(^49\) – Ellis and co. use the term
‘features’ rather than ‘stages’ in information seeking. The features according to them
are:

(i) Starting: the means employed by the user to begin information seeking, for
example, asking a knowledgeable colleague.

(ii) Chaining: following footnotes and citations in known material or ‘forward’
chaining from unknown items through citation indexes.

(iii) Browsing: semi-directed or semi-structured searching.
(iv) Differentiating: using known differences in information sources as a way of filtering the amount of information obtained.

(v) Monitoring: keeping up-to-date or current awareness searching.

(vi) Extracting: selectively identifying relevant material in an information source.

(vii) Verifying: checking the accuracy of the information.

(viii) Ending: i.e. the typing up of loose ends through a final search.

Fig 1: Ellis’s behavioural framework

According to Kuhlthau\textsuperscript{59} the whole information seeking process consists of the following stages:

(i) Initiation (when a person becomes aware of lack of knowledge or understanding);

(ii) Selection (at this stage the task is to identify and select the general area to be investigated or the approach to be pursued);

(iii) Exploration (the task is to investigate information on the problem in order to extend personal understanding);

(iv) Formulation (This is the turning point of the whole process, when feelings of uncertainty diminishes and confidence begins to increase, the task is to form a focus from the information encountered in exploration)
(v) Collection (the task is to gather information pertinent to the focused problem)

(vi) Presentation (the task is to complete the research and resolve the problem)

Fig 2 locates the concepts of information need, information seeking, information exchange, and information use in a flow diagram that can be seen as charting the behaviour of an individual faced with the need to find information. Wilson\textsuperscript{51} argued that a general model of this kind is useful in identifying areas where additional research could be of value.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{wilson_model.png}
\caption{Wilson's 1981 Model of Information Behaviour}
\end{figure}
The model suggests that information-seeking behaviour arises as a consequence of a need perceived by an information user, who, in order to satisfy that need, makes demands upon formal or informal information sources or services, which result in success or failure to find relevant information. If successful, the individual then makes use of the information found and may either fully or partially satisfy the perceived need - or, indeed, fail to satisfy the need and have to reiterate the search process. The model also shows that part of the information-seeking behaviour may involve other people through information exchange and that information perceived as useful may be passed to other people, as well as being used (or instead of being used) by the person himself or herself.

Taylor defines information behaviour as the product of certain elements of the information use environment. The elements are:

- "The assumptions formally learned or not, made by a 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 within which any group or sub group of this set of people operates and works.
- The conscious, and perhaps unconscious, assumptions made as to what makes information useful and valuable in their contexts."
Girja Kumar’s presentation of the information seeking process is as follows:

(i) Identifying objective

(ii) Defining need

(iii) Assessing information systems

(iv) Establishing sources of information

(v) Information acquisition

(vi) Use of information

(vii) Satisfaction/Dissatisfaction

1.22 Factors Affecting Information Seeking Behaviour:

The study of information seeking behaviour can stand on its own area of applied research where the motive for the investigation is pragmatically related to system design and development. A different motivation is involved if we wish to understand why the information seeker behaves as he does. This is an area of basic research and although the resulting knowledge may have practical applications, there is no necessity that it should.

However, many information scientists are practitioners in information work or information systems management and they look to studies of information needs for guidance on aspects of system design, development and operation. A confusion then arises between what is intended by Information need research and what is expected of such research. As a consequence, basic research may fail to be funded because
referees do not find in the proposals indications of potential practical applications which were never intended by the researcher.

If we examine the literature on human needs we find that this concept is divided by psychologists into three categories:

- Physiological needs, such as the need for food, water, shelter, etc.;

- Affective needs, such as the need for attainment for domination etc.;

- Cognitive needs, such as the need to plan, to learn a skill etc.

These three categories are interrelated; physiological needs may trigger affective and/or cognitive needs; affective needs may give rise to cognitive needs; and problems relating to the satisfaction of cognitive needs (such as a failure to satisfy needs, or fear of disclosing needs) may result in affective needs. These interrelationships show that, as part of the search for the satisfaction of these needs, an individual may engage in information seeking behaviour. Indeed it may be available to remove the term ‘information needs’ from our professional vocabulary and to speak instead of information seeking towards the satisfaction of needs.

Many factors other than the existence of a need will play a part, the importance of satisfying the need, the penalty incurred by acting in the absence of full information, the availability of information sources and the costs of using them, and so forth. Many decisions are taken with incomplete information or on the basis of beliefs, whether we call these prejudices, faith or ideology. So, information seeking may not occur at all, or there may be a time delay between the recognition of the need and the information seeking acts; or, in the case of affective needs neither the need
nor its satisfaction may be consciously recognized by the actor; or the availability of the information may bring about the recognition of a previously unrecognized cognitive need. These factors are personal, interpersonal and environmental barriers to information seeking.

1.23: Need for studying information seeking behaviour:

The study of information seeking behaviour assumes considerable importance because information is now accepted as resource with equal emphasis on its content and means of delivery. It is concerned with integrative utilization of three basic sources: (i) people, (ii) information, and (iii) system. While the first two categories have to do with content, the last category has to do with the means of delivery of information. This category of people is concerned with relationship between the originator (author/writer) intermediary (librarian/information scientists) and user/seeker of information. Information has to do with all forms of data, documents and literature etc. In other words, it is the message. Lastly, system is concerned with the creation, storage, repackaging, disposal and interpretation. The behaviour is the best that yields the highest information satisfaction to users. That information system is best that yields maximum information satisfaction at minimal cost through modulated information behaviour.

1.3: Information Need and information seeking Behaviour:

Information seeking behaviour cannot be isolated from information need. When a need is felt for anything more often than not, people take action in
order to satisfy that need. Different strategies or modes of action are resorted to. It also applies for the satisfaction of information needs. An individual realizes that he needs information; he knows that in all probability the information will come to him on its own, therefore, he has to go to about seeking it.

It is also injudicious to examine information needs in isolation. To comprehend information needs it shall be necessary to view those in the context of information seeking process in theoretical terms. It raises a plethora of questions that need to be answered. In this regard, the ‘information need’ and ‘information seeking behaviour’ are related. But on the other hand, there is a quite difference between the two. Information needs refer to individual needs of user regarding information which should be satisfied by the specific information system used by him. This means to find out types, kinds, levels and amount of information needed by the users. Whereas information seeking behaviour is concerned with how and from where he gets the information. It results from the recognition of some need perceived by the user. That behaviour may take several forms: for example, the user may make demands upon formal systems that are customarily defined as information systems (such as libraries, on-line services, information centers), or upon systems which may perform information functions (such as agents, offices or car sales agents, both of which are concerned with selling but which may be used to obtain information on current prices, areas of suitable housing or details of cars that hold their secondhand value). Alternatively, the user may seek information from other people, rather than from systems.
1.4 : Objectives of the Present Study:

The main aim of the present study is to find out the information seeking behaviour of degree students of general colleges of Barak valley. All provincialized and private colleges of Barak Valley are being taken into consideration for the purpose of the present study.

Following are the objectives:

i) To identify the information needs of the undergraduate students of the valley.

ii) To assess the purpose of information need of students studying in different streams.

iii) To identify the various information channels used by the students for seeking information.

iv) To identify the dependence on various information sources available to the students.

v) To assess various barriers undergraduate students experience in seeking/collecting their information.

vi) To assess various services provided by the college library and whether these are conducive for their academic programme or not.
1.5: Hypothesis:

Following hypothesis have been formulated for the present study:

i) It is felt that users are not aware of the different services which a college library can provide.

ii) It feels that one can easily get through the examination without going to the library.

iii) It is felt that students are much more dependent upon the notes provided by their teachers/private tutors/model question answer books.

iv) It also seems that most of the teachers don’t take any initiative to motivate their students towards the library.
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