CHAPTER- II

THE STATE- OF- THE- ART

REVIEW
2.0 INTRODUCTION

Any library and information centers are meant for the users, so all its activities and operations are centered towards users satisfaction. Therefore, it is the role of librarians to keep a very close contact with the users knowing their reading interests, behavior, and information privation attitudes towards the library. Thus it is very much essential to study the previous research on users, which has been a subject of frequent discussion. The first survey was made by Bernal (1948) to have real impact of user's in library information science field, which was carried out in 1948 and it is valid till today's research. Bernal's result indicated that pure and applied research had different needs and that work activity was a factor that could affect use of libraries and other sources of information. Other investigators have also correlated with the finding of Bernal. Another information scientist Menzel (1964) who has reported that the end of 1963 seems to have been something of a take off point for empirical research on the information needs and user of scientists and technologists. Thus this is a continuous process in the field of LIS.

There are different studies on LIS and has been a subject of frequent discussion. It must be stressed here that most of these studies have been concerned with user demands rather than user needs and accordingly is lost without limitation. This is certainly a defect as there is a great deal of difference between a demand and a need. Demands made on libraries reflect not only the basic needs of users but also the nature and sometimes the deficiencies of the system that is being used to satisfy these needs. The possible reason for the earlier studies being restricted to the study of demand or use is perhaps because it is difficult in practice to separate the two and that it is easier in practice to study demand and reduce needs.

2.1 METHODOLOGIES USED IN EARLIER STUDIES

User studies' is a term which covers a very wide range of potential research, from the study of users' choices of books from a university library, through reactions to on-line search outputs, to the in-depth analysis of the underlying needs that result in information-seeking. It should be equally clear that this implies the use of not one model of the research process or one method of research but multiple models and methods. However, in the past the dominant method has been that of 'scientific method' (often mis-interpreted) with the
large-scale social survey as the predominant method of data collection. It is not suggested here that the 'scientific method' is necessarily inappropriate in the study of information users. The process of problem definition, classification of phenomena, hypothesis formulation, data collection, hypothesis testing and so forth, and the interaction of theory and method, is probably relevant to any kind of study. The point at issue, however, is whether quantitative methods have been employed in user studies inappropriately.

**Quantitative social survey methods** are powerful data collection devices, so much so that they are often misused to collect a great deal of data without the researcher having a theoretical (or even descriptive) framework into which to fit the data. In effect, collecting data becomes a substitute for thinking about the problem. This is to criticise the unthinking application of methods, rather than the methods themselves. As a result, it might fairly be said that the practitioners of information work have been disappointed by user-studies research, largely because they fail to find within it recommendations for service provision. Equally, information researchers have generally failed to make an impact within any social scientific discipline because their work lacks integration with theories within those disciplines. It is suggested below that the answer to the first of these problems may lie in turning to a different model of research, where its application or utilization is considered to be part of the process. An answer to the second problem is more difficult to propose because it is bound up with the problems of socialisation into research within a field of practice without a research tradition: 'qualitative research' is proposed as a way of confronting directly the issue of the lack of theory in user studies. Wood (1969) has taken a bird’s eye view of the methodologies used by earlier investigators on information needs of library users. He has discovered and enumerated the following five methods for the assessment of the information needs of library users. - Questionnaire; Interview; Diary method (systematic self observation by the user); Observation (by the person studying the user); and analysis of existing data.

**The Citation Analysis Method** and analysis of circulation and other statistics maintained by the library may be taken to cover by the final category in Wood’s list. Each method of investigation has its own merits and demerits. Moreover, because of the variant nature of the information needs of the various types of users, no one method can be applicable in all the studies with the same accuracy of results.
**Questionnaire and Interview Method**, although not devoid of limitations, are the two well established and to a certain extent reliable methods. Among the direct studies questionnaire is found to be favorite method of study, with interview running second and observation a poor third.

**Interview** is a face-to-face interpersonal role situation in which, the there interviewer asks respondents questions designed to obtain answers pertinent to the research hypothesis. The questions, their wording and sequence define the extent to which the interview is structured. The structured interview involves the use of a set of predetermined questions and of highly standardized techniques of recording. Against this, the unstructured interview appears to be the central technique of collecting information research studies. Interview of users, most of the time, reveals data on user and non-user attitudes and perceptions about library use. The response received there from gives the greatest amount of probing and answer seeking. Another method of survey of users is telephone interview. It is characterized as a semi personal method of collecting information. This method as gained general acceptance during the last few years as a substitute for personal interviewing. It is convenient and produces a significant cost saving and higher response.

**Questionnaire** method is normally regarded as an impersonal survey method. In this process, a clearly and specifically defined group of users are asked to answer a number of identical questions. These individuals are administered with a questionnaire either by local distribution or through mail with a request to fill out on their own. This method seems to be the most suitable and convenient due to its lower cost, greater autonomy and accessibility. A questionnaire is the most common accepted device used in measuring library use and users’ attitudes towards library resources. This technique gives detail information about users habit, perception on the functioning of the library and opinion on improving the standard of existing library services.

**Observation** is regarded as the basic, most primitive and widely accepted modern method of scientific research. Scientific research begins with observation and ends in observation. It includes the most casual, uncontrolled experience and practical experimentation. User study in the library environments can be undertaken in observing the phenomena primarily associated with the library use. By observation, information concerning to different behavior patterns of the users can be collected in the library without putting any
obvious burden on the part of the users. Most of the user studies conducted through observation method in the libraries are confined to the use of card catalogues, circulation of library materials, type of reference queries they put and the extent of their independent approach to library resources.

**The Diary Method** involves the analysis of the user-records of information related activities. Otherwise being the most reliable source of information on the subject, its usefulness is undermined by the difficulties in getting access to it. Herner (1967) records the experiences of two investigators.

The limitations of the individual technique of study and the multidisciplinary trend in the development of subjects has made it imperative on the part of the investigator to use more than one technique so as to patch up the limitations of one technique with the help of another one. Earlier investigators perhaps realized this fact too, but not many studies with combination of techniques are found to be on record. Usually two and in some cases three techniques have been used for similar studies.

### 2.2 RESEARCH TRENDS IN USERS STUDIES

USA and European countries have witnessed the beginning of systematic trend in research in the field of library science during 19th centuries. The USA witnessed systematic research activities under an institution when Graduate Library School at the University of Chicago opened Ph.D programme in 1928. In U.K. only in 1963 formal research programme (Ph.D) was started with the initiative of PG school of Librarianship and Information Science at the University of Sheffield. Library Science education in India though started as early as in 1911, it was only after the World War II that it was gradually recognized as a full-fledged discipline and separate departments were set up in universities offering courses leading to bachelor and master degrees. There were only 5 universities in India offering Diploma course before 1947. In 1948 S.R. Ranganathan started Ph.D programme at the University of Delhi. Dr. D.B. Krishna Rao was the first Ph.D awardee in Library Science (1957), though in 1950 Calcutta University awarded a Ph.D. degree in Science to M.N. Basu for his work on preservation of museum articles and library materials. However, all such works were carried out in departments other than LIS and under the guidance of scholars belonging to other fields. Besides some library personnel and LIS
teachers have done research work leading to Ph.D. in LIS at universities abroad or Ph.D. on subjects other than LIS. Thus, there are four categories of research work conducted by Indian Library personnel, including library workers and LIS teachers, relating to LIS or inter disciplinary topics involving LIS. Since, then the pace of research in LIS in India was quite slow till 1970, but during the next decades, it accelerated considerably. Today, there have been several studies in LIS field and the numbers of publications are estimated to be more than 2000 with several review articles.

Researchers in the library and information science, as the time marches, have laid much emphasis on user studies, particularly in the field of LIS research. As a result, the research literature in the field of library and information science, particularly during the last decade, witnessed a spectacular growth in all its ramifications. During the 1930s, when early research on user studies was undertaken, the scope then was mostly limited to inside the library. But taking into consideration the variety of users in multidisciplinary field, such studies were undertaken concerning to the problems of the users beyond the library premises. The same phenomenon can be exemplified through an illustration in which, two such studies i.e. one concerning to inside the library or other outside the library of the university o Colorado were undertaken. The study concerning outside the library i.e. student union is a better represented study of library use compared to the study made within the library premises.

Library being the center of information for both science and social science research, researchers have stressed the need for developing an effective communication setting so as to make a sound system for free flow of information. To practice the same, communication m, as scientific method of dissemination, was adopted t o providing a comprehensive description of all facts of the subjects concerned. APA project of scientific information exchange in psychology, for instance, applied several method and techniques to bring out a comprehensive picture of the free flow of information in psychology and of the characteristics of all major media used to acquire and disseminate information in the concerned field. This study was more concerned with the participants who were seeking specific information through their attendance, their success in obtaining it, and the nature of information they sought.
Another well-known trend is the recognition of the social role of scientific communication as reflected in the studies of invisible college. Since the information generators are also among the principal users, they stem continuously fed back on itself. With the adoption of system approach to the study of scientific communications, inter-reations and interdependence of various methods of communication system too have received increased attention.

Satish (1994) in his work “attitude towards information...”, mentions one definite trend that is being however discerned towards comprehensive description of all facts of scientific communication in particular disciplines. There major trend in the communication research which he maintains including growing awareness of social characters and social organization of scientific communications as reflected in the studies made by Donohew Lewisn (1978) on invisible college defining the role of scientific meeting and enhancing its effectiveness as a means of information exchange.

Early models of user studies are more related to the document seeking and library use. Researchers used to confine their work on the practical aspects of library usage by the users. The center of their attention was more of the library than that of the user. All the early models of user studies were primarily concerned with document seeking or library use that with the characteristics of behavior, which might usefully discriminate among information users and provide guidance to service planning. On the other hand, Wilson (1981) also recognizes the necessity of identifying the ends served by the information seeking behavior within the wider contact of users’ totality of experiences or users life-world centered upon the individual as an information user. He feels much of the user studies in the past have suffered from a concentration as the means by which people discover information, analyzed in terms of how the users ought to have been seeking information.

However, during the later period, there was a shift in the focus. The behavior of the users and the coverage received utmost attention in most of the studies. Information user, as an organizational user, influences the whole spectrum of information environment and was taken as a model of study. In formation requirement of social scientists (INFROSS)” a study taken at Bath University Line et al, during 1971 can be accepted as a remarkable example in the field of user studies. This study, in fact, gave a new direction to the problem associated
with the user study especially in social sciences have identified the deep understanding of the behavioral pattern of the social science users.

Another study conducted at the Bath University in 1973 on ‘Design of Information systems for social science project’ a milestone in analysis of the requests made to the national children’s Bureau Questions and Answers Service, is a user evaluation of an information service in Social Welfare conducted by Satish (1994) This study, in fact, had shown that while 65% of the enquirers were for information in a great variety of particular subjects, less than 35% of users, on the other hand, asked for references, various research findings and statistics.

A three phases research project on information needs and information services in local authority social science department (INISS) undertaken in 1975 to experiment the multifaceted problems of the users aptly concludes that, specialization of information services according to the scheduled work roles where common needs can be discerned is desirable and information services should be integrated in the organizations communication pattern stated by Wilson and Stretfield, (1979).

The foregoing studies have, therefore, established the fact that more comprehensive description of all facts of scientific communication in a given discipline becomes the perquisite for every information system. The scholars in present trend should, therefore, agree that user studies should primarily be concerned with the document seeking approach of the library users rather than their behavior.

2.3 NEED BASED USERS STUDIES IN GENERAL

Several studies have been conducted on need based user studies in general; some of the studies are given bellow alphabetically.

Agrawal and Lal Manohar (1997) discussed the scope of user education and the value, methodology and assessment of user education programmes, describing international and Indian developments in user education and proposing the formation of a national policy on user education and a national agency to administer its programmes. Alvin and others (1970) of MIT group have described about the communications stars that serve as “gatekeepers” and
facilitate the flow of information from outside and transmit it to their colleagues. Brooke (1980) in looking at the scientific communication system commented on the importance of informal channels of communication.

Auster, E. and Choo, Chun Weiv (1991) proposes a conceptual framework for studying the information-seeking behavior of executives when they scan the business environment and literature. The framework could be especially useful in designing research to investigate some basic questions about executive scanning behavior. The questions address issues such as what information do executives require, which sources are used by them to obtain the information, and how is environmental information used in decision making. Auster (1982) studied the area of organizational behavior and the areas of information seeking are separate fields that have produced literatures relevant to librarians. Neither of these 2 fields, however, is concerned with librarians as their primary focus. Nor does the literature of librarianship generally take into account the findings from these disciplines. Presents a brief review of both areas and comments on their relevance for librarians.

Bates (1997) develops an analytical framework to support the analysis of conversation in information seeking contexts. It brings together linguistic and social linguistic issues, which serve as viewpoints for exploring how information-seeking conversations differ from casual conversations and conversations in restricted conversational domains (e.g. teacher-student, and physician-patient). A sample of 9 conversations from 2 information-seeking contexts (i.e. school library media centre, and public library) is used to test the utility of the framework and explore possible characteristics of information seeking conversations. The findings support the utility of the framework for various purposes including: training of information specialists, feedback on their performance, design of human computer dialogues, eliciting of decision making processes during information seeking, and support for natural language processing.

Brown (1991) in his study brought together various aspects of information-seeking behavior, projected over an organisational and behavior framework, into a general survey of the literature. Three dimensions of information-seeking behavior were determined: the conditions, the context, and the process including the interaction among these dimensions. Selected barriers to information-seeking behavior are reviewed. Burdick, (1996) describes an exploratory study of the impact of gender on information seeking. The study took place
during the fall trimester of 1994 at the laboratory school of a large university in the USA. The sample consisted of 47 females and 56 males enrolled in 4 English classes (one an honors class) in 10th, 11th, and 12th grades. Addresses the importance of investigating gender issues; presents a conceptual framework; reviews research questions methodology, and study site; presents a brief summary of findings; and outlines implications.

Chatman (1991) reported a study on which gratification theory (essentially, that certain populations live in an environment in which the emphasis is on immediate gratification and satisfaction of needs) was applied to an information-seeking behavior of a lower-working class population. Respondents were janitorial workers at a southern US university. Results show that, although members of this population expressed a number of areas in which they needed information (e.g., employment, everyday coping advice, etc.), they were not active seekers of information outside of their most familiar social milieu. Findings indicate that a possible explanation for this was the perception that outside sources were not capable of responding to their concern. Thus, there was little motivation in exploring the relevance of these sources. Moreover, items of most interest to them were those things that were accessible, had a firm footing in everyday reality, and responded to some immediate, practical concern.

Chen (1982) had given results of a study, supported by the Office of Libraries and Learning Technologies, US Department of Education, of the information needs and information seeking patterns of New England residents. 400 residents in each of the 6 New England States were interviewed over the telephone by researchers at Simmons College, Boston. The detailed questionnaire covered information searching both in work and in personal life during the previous month and the results is reported statistically in Tables, charts and graphs. Ellis (1993) describes an approach to the design of an information retrieval system for academic social scientists and attempts to determine their information-seeking patterns conducted by the Department of Information studies at the University of Sheffield by means of informal, semi-structure, in-depth interviews. 6 characteristics appeared in the patterns and at the same time to provide a framework for a flexible model to underpin recommendations for information system design and evaluation. These are: starting, chaining, browsing, differentiating, monitoring and extracting. Hemer and Hemer (1967) conducted a survey on the information requirements of the social scientists by the Bath University library group in England describes the different sources of information according to their use. Also the use of
informal channels for locating relevant references and keeping up with the current research is described. It was observed during the survey that older and more experienced researchers tended to use fewer libraries than others do.

Itoga (1992) presents an interdisciplinary study of research into the social aspects of information communication by bridging the existing gap between cognitive and phenomenological views of information needs and uses. Limberg (1995) aimed at to understand the interaction between information seeking and learning outcome in education. The hypothesis of the study is that what students learning about the subject content of an assignment are affected by the way this student searches and uses information for the assignment. Studies will be carried out on upper secondary and college level. Lonnquist (1990) reports a NORDINFO study designed to study the information-seeking behavior and information needs of scholars in the humanities from a holistic perspective. 64 people from Denmark, Finland, Iceland, Norway and Sweden were interviewed and result show that scholars in the humanities do not have a homogeneous information-seeking behavior or homogeneous information needs. Compared to other information channels research libraries, as expected, turned out to be of greatest importance for scholars seeking information and printed materials for their research. The study also showed that what subject search for a scholar means, in most cases, is looking up individual names of persons, (author of a book or article, or searching for information about a person). Scholars used bibliographies only to a small extent and their bibliographical awareness was rather low.

Maheswarappa and Trivedi (1986) made a study on the information needs of Indian Food Scientists a case study at CFTRI; Mysore studied the information requirements of food scientists through questionnaires and also evaluated the services provided to them. Results of this study are aimed at planners and designers of information systems to help them in designing effective information systems to help them in designing effective information services in the field of food science and technology. Nicholas (1997) studied the potential impact of the introduction of the Internet into the workplace. It is proposed to do this through a case study of one of the first groups to feel this impact: journalists and information professionals working in the print media. Of particular interest will be the empowerment of end-users, the changes in work practice that the Internet may bring about, and the effect these changes will have on information professionals as intermediaries in the information-seeking process.
Ocholla (1996) analyzes information-seeking behavior by university academics at Moi University, Kenya. A pilot study was conducted and data collected through questionnaires and interviews among 27 academics randomly sampled from: health sciences, information sciences, environmental studies and education faculties. Reports the results which covered: departments and faculties where academics belong, rank and position in the academics, information resources frequently used by academics, gaining knowledge of the existence of information sources, generation of professional ideas, reasons for looking for, where the academics get the information resources they use, and dissemination of information. Make recommendations to support information provision capacity in a university. Oliver and Oliver (1997) tests the hypothesis that information-seeking activities based on contextual and social purposes would lead to higher levels of knowledge acquisition and learning than those achieved through activities where the purpose and context was absent. Results provide tacit support for hypothesis. When students participated in information-seeking activities and tasks, the context and purpose of the activity influenced the amount of knowledge gained and retained.

Osiobe (1988) reports a study undertaken at Port Harcourt University Library, Nigeria, which investigated student’s information seeking behavior. Results of the study show that browsing is the prevalent source of reference to the literature among undergraduates followed by faculty staff and the library card catalogue in 2nd position and the subject librarian in 3rd place. Abstracts and indexes are poorly used and ranked 6th in the study. Prentice summarises the interview findings of the 5 papers in this special section. Each individual has his special information needs and each works in a field in which current information is both essential and often hard to locate. Co-workers are the most often consulted information sources, and libraries were rarely if ever used for on the job needs—perhaps there is little or no role for the library in this sphere for many workers. Library staff, too, consults co-workers when planning the libraries reference activities. Potential users know what they need. Librarians need to know the extent to which they can fill those needs.

Sasikala (1994) reports results of a study of the information and library use behavior of 436 managers in 3 groups (senior, middle, and junior) from 20 industrial organizations in Andhra Pradesh. These show that: managers seldom visit libraries; that they try to satisfy their information needs from other sources as well as from libraries; managers need data type information firstly and descriptive information on specific topics secondly; managers collect
information to keep abreast of current knowledge, to solve immediate practical problems, and additional information relating to the job. There are some differences in search and use behavior among the 3 groups. Savolainen (1995) offers a framework for the study of everyday life information seeking in the context of way of and mastery of life. Way of life is defined as the 'order of things', manifesting itself, for example, in the relationship between work and leisure time and models of consumption, and nature of hobbies. Mastery of life is interpreted as 'keeping things in order'; 4 ideal types of mastery of life with their implications for ELIS are outlined, namely optimistic-cognitive, pessimistic-cognitive, defensive-affective and pessimistic-affective mastery of life. 2 major dimensions of Ellis are reviewed: seeking orienting information and seeking practical information. The research framework was tested in an empirical study based on interviews with 11 teachers and 11 industrial workers. Discusses the main features of seeking orienting and practical information and gives suggestions for refinement of the research framework.

Selden (1992) describes the research patterns of social science researchers and humanist scholars and assesses the state of business studies. Discusses Kuhlthau's model of information searching and presents a behavioural model for information system design based on information seeking activities. Examines the conditions for research and researchers' use of libraries. Discusses the research career and the information-seeking career covering information socialization of the junior researcher, steps in the research career and information outcomes of the research career. Contrasts the structure of science and engineering information with that of business researchers and humanities scholars. Stam (1989) studies the information-gathering activities of art historians have been studied from 3 different perspectives: in terms of the books they use; through their own accounts of their working processes; and by informal, systematic observation, written up as 'user studies', by art librarians. While observation implies objectivity, a distance between observers and observed, in practice art librarians are very much involved with the art historian in the work of art history and in the development of its methodologies.

Wiberle and. Jones (1989) describes how humanists in a small, interdisciplinary group seek information, confirming findings of previous research, although with significant variations. They ignore on-line databases and seldom consult reference librarians, but they do rely on archivists and special collection librarians. Their use of formal bibliography is limited to 1 or
2 sources and occurs only when exploring new topics, their preference being to find information by going to the person or location that can supply it.

2.4 NEED BASED USERS STUDIES IN INFORMATION FIELD

Different need based user studies have been conducted so far in general. But the most relevant information studies pertaining to the above areas are of very importance to the libraries for the all-round development of it. Some of the studies are reviewed and given as the following lines. An in-depth review of literature on the subject clearly shows that a considerable number of user studies have been conducted concerning to the use of initial libraries by the various scientists and the general public alike. The outcome of few such studies which a set examples for the future scholars and the LIS professionals, testing the gravity of the individual library environment, provided a sufficient scope for the library concerned to revamp the whole system and to rebuild the library collection so as to make it more purposive, need based and meaningful for those it is intended.

Weedman (1992) conducted a study on University of Delhi Library in 1965 was the first of this kind in India, which gave a detailed account of the library development in regards to its services. No definite standard for use in developing a university library programme exists. Among other things, the quality aspects of the library development rather than users approach seem to have been predetermined in his recommendation.

Krishan Kumar (1987) conducted a study on the use of Sapru House Library servicing social science teachers an scholars provides sufficient clue concerning the average number days and hours the library is put to use, along with the priority of information sources being explored, thereby giving a scope for the library administrator to reorient the library system suitable to the requirements of social scientists.

Dhanyi (1986) conducted a survey of 100 readers at Rajasthan University Library in 1974 which revealed that readers demonstrated their interest more in using the library at college level with an optimal approach to library catalogue and handling reference books. They study stressed the need for user education for the new entrants of the college library.
The other such studies that deserve mention include the study made by Kaul (1999) on the quantum of library use and pressure demand from various categories of users; the study of Karki (1982) on ‘Analysis of industrial information service in India’ was conducted by Sridhar (1989) on users of library and information science periodicals are some of the notable works in the field. The seminar on user studies and user education held in Osmania University on 1985 also stressed the need for conducting user studies in Indian university libraries. The libraries have to conduct user studies so that they can prepare an acquisition policy that can help in acquiring appropriate information best suited to their clientele.

Reddy and Karsiddappa (1997) conducted a survey on information seeking behavior on 160 medical scientists on the use of formal and informal channels of communication which showed that journals are preferred for formal source on information for preparing course/teaching materials. Books are used more for providing consultation and offering therapeutic/diagnostic services. The time spent in borrowing/reading literature for various purposes has also been studied.

Prasad and Tripathy (1998) conducted a study with physical and social scientists to find out their information seeking behaviors. They also enumerated the various sources of information used by the scientists. The primary journals were used by both groups of scientists, but there was a difference in the usage of abstracting and indexing periodicals. Wilson, dividing the research field of information needs and uses in system studies and user studies, subsumes the studies conducted until the beginning of the seventies under the general heading of library surveys in his review of research in information needs and uses. Also, attitudes of students towards libraries and their staff and the extent to which students borrow books have been explored in the surveys. These studies report that students seldom buy books, they have difficulties in using libraries and they often use the neighboring public library and that seminars on library use have little effect. Wilson (1994) has made the new review of information behavior research. In his Vol. 1: Studies of information seeking in context ISIC III, The third international conference on research in information needs, seeking and use in different contexts

The third collection of papers presented at the International Conference on Information Seeking in Context held in Göteborg in August 2000, represents a huge variety of research conducted in this area as well as a rich range of approaches and aspects and wide
geographic distribution of researchers. A part of this wealth of studies is included in the first volume of the New Review of Information Behaviour Research published annually by Taylor Graham (2002). The editors have grouped the papers in this volume into three categories: on theoretical perspectives (5 papers), on contexts of information seeking (7 papers) and on information searching issues (3 papers). Some papers in all three groups may attract a wide audience as fascinating readings. The exploration of information habits from small world perspectives by Elfreda Chatman; the metaphorical approaches to information use by Reijo Savolainen; the differences between novices' and experts' information behaviour by Charles Cole and Carol Kulthau; the impact of information technology on the success of the management of British 'pubs' by Alistair Mutch, or sharing information among Web users by Sanda Erdelez and Kevin Rioux are intriguing and attractive by the very serious and humanistic scientific attitude to recognisable everyday areas.

On the other hand, the works that would scare off an occasional reader by specific language or statistical data are no less interesting for their new insights and approaches. There is an impressive attempt by Brittain (1982) to build a general theory of information seeking on the basis of general principles of psychology. The rigorous "quantitative investigation of the ideas developed through qualitative research", by the group of UK and USA researchers allows to identify interesting relations of uncertainty to other variables experienced in information seeking stated by Wilson and others (1991). The study done by Kuhlthau (1993) reveals the direct relation between task complexity and use of information sources. Together with the study of steelworkers' behaviour conducted by Christie, Bruce.(1981) and information behaviour of software designers by Morten Hertzum it once more proves the importance of people as information sources.

Some of the authors apply specific paradigmatic approaches or methods to information behaviour studies. Lonnquist.(1990) introduces the results of phenomenon graphic studies and their potential. Trivison, Chamis, Saracevic, Kantor, and Kantor.(1987) uses long-term ethnographic observation for better understanding of relevance judgments, with a group of researchers applies a cognitive work analysis framework to explore collective information seeking. A rare treat to the eyes of the reviewer from Central Europe is the presence of the only by Appleton (1994) paper on information needs in Estonian industry. As a general
conclusion we would say all these have a good support to many research projects, providing new perspectives and supplying unexpected research results from a related field.

Studies in information needs and seeking are a central part of research in information studies. Studies have been conducted from the 1940s and the perspective was first the view of information systems. This research tradition has been called the system-oriented paradigm. In those studies the aim has been to obtain knowledge to support organizational development and administrative decision-making. The approach has been criticized because of insufficient theories, concepts and research methods and because it hasn't taken into consideration the needs of the information-seeking persons. In analysis of data quantitative methods usually has been used by Dervin & Nilan (1986), Gould & Handler (1989); Julien & Duggan (2000) and Wilson (1994).

At the end of 1970's and in the beginning of 1980's researchers began to realize that questions in information needs, seeking and use couldn't been seen only from the systems point of view. The user of the information and his/her needs came into focus and research in cognitive science was applied in the studies. The new view was called the new paradigm or the cognitive views of Dervin, Nilan and Wilson. Today the cognitive view has been criticized for not taking into consideration peoples social and cultural contexts in studies of information needs and seeking behaviour stated by Case (2002); Mick Colin (1980), Vakkari(1998 ). To obtain better knowledge about human information behaviour there is a need for a more holistic view, which takes contextual aspects in to account in the research in information behaviour.

It has been pointed out that information seeking and use should be studied as a whole stated by Savolainen (1993, 1995) and Wilson (1981). Use of information has been studied in information as studies in scientific communication, for example citation analysis. There has been an effort to explore the question of use by studies in use and relevance of different information channels and sources. Savolainen mentioned in Brenda Dervin's Sense-making theory, and Robert S. Taylor's Information use environments etc. as examples of the few researchers who have tried to conceptualize questions concerning use of information more deeply. Existing theoretical and methodological problems have influenced that use of information hasn't been successfully studied and it has been suggested that also results of
research in other disciplines (e.g. artificial intelligence, cognitive research in learning, memory and thinking) should be taken into consideration when information scientist try to conceptualize processes in information use by Savolainen.

A qualitative study of information seeking and use in the professional workplace context: using the sense making approach was, investigators by Prof Schubert Foo, Mr Mark Hepworth (Department of Information Science, Loughborough University, United Kingdom) and Ms Bonnie Cheuk Wai Yi.(Internet Search). This study investigates the information seeking and use process in the workplace. Three professional workgroups are being studied: auditors, engineers and architects. This research project adopts Brenda Dervin's Sense-Making approach, which aims at developing a process model of information seeking and use in the workplace. The model will have implications to improve current practices of information literacy education as well as improving information/knowledge management and systems design in the workplace.

2.5 NEED BASED USER STUDIES IN EDUCATIONAL FIELD

Many of the studies in information science concerning aspects in university students' information behaviour has described students' use of library services and problems in using those services.

Wilson, dividing the research field of information needs and uses in system studies and user studies, subsumes the studies conducted until the beginning of the seventies under the general heading of library surveys in his review of research in information needs and uses. Also, attitudes of students towards libraries and their staff and the extent to which students buy books has been explored in the surveys. These studies report that students seldom buy books, they have difficulties in using libraries and they often use the neighboring public library and that seminars on library use have little effect by Wilson (1994).

Kalervo Järvelin and T.D. Wilson (2003) have studies on several kinds of conceptual models for information seeking and retrieval (IS&R). The paper suggests that some models are of a summary type and others more analytic. Such models serve different research purposes. The purpose of this paper is to discuss the functions of conceptual models in scientific research, in IS&R research in particular. What kind of models are there and in
what ways may they help the investigators? What kinds of models are needed for various purposes? In particular, we are looking for models that provide guidance in setting research questions, and formulation of hypotheses. As a example, the paper discusses [at length] one analytical model of task-based information seeking and its contribution to the development of the research area.

Studies of undergraduate students relations to libraries has been conducted in the Nordic countries in Danmark, Sweden and Finland. The results show that students are rather frequent library users quoted by Höglund et al. (1995), although there are large differences in how students of different disciplines utilize library services mentioned by Höglund. The students want more study carrels, more course literature and more generous opening hours according to Pors (1995). The students do not frequently use the user education programs of libraries. According to the Finnish and Swedish studies students themselves ask for more education in information seeking and library use. The students also expect a traditional service from the library and look at the library as a depot for literature and do not identify the library as an information center or as a place for studies. The results indicate also that systematic cooperation is needed between teachers and librarians, both regarding education in information seeking and in support of information service to students.

In these studies the perspective is the user and knowledge has been obtained about the role of libraries in the students information needs and seeking. More generally students' information behaviour has been studied by Carol C. Kuhlthau (1993). She has made empirical research about students' information seeking behaviour in libraries and developed a general model of the information seeking process (ISP). ISP consists of 6 stages: initiation, selection, explication, formulation, collection, and prestation. Students experience the ISP holistically with interplay of taughts, feelings, and actions. Limbergs study concerns the interaction between information use and learning outcome, when high school students work at an assignment implying independent use of information. According to the study, which has been done by using the phenomenographic method, variation in information seeking and use interact closely with variation in ways of experiencing and understanding the content of information. Questions concerning the relation between teaching methods and students' information behaviour has not been investigated thoroughly - although PBL-students' information seeking behaviour and libray use have been compared in a few
studies, which are described later in connection with medical students' information behaviour.

In Finland, in addition to the study of students' library use mentioned above, a few master and licentiate theses have been done in the area of students information needs and uses at the departments of information studies in Tampere and Oulu. For example Rissanen (1994) has studied health care students information needs, uses and information literacy in a case study. Teachers, staff, and the collections on the practice department, the library of the college and the public library, textbooks and journals were the most important information channels for the studied students. Their information gathering was restricted by lack of time and money, language problems and poor skills in information seeking. He has explored instruction given to students in seeking and using literature as a part of university education. The findings showed that, teachers do not usually teach the central literature in a domain and teachers regard information skills of students as satisfactory. The subject field strongly influences on teachers' thinking and actions connected to instruction given in seeking and using literature.

In 62nd IFLA General Conference, 1996, Devadason and Pratap (1996) presented a case study paper on “methodology for the Identification of Information Needs of Users” said Information needs are of various types. Apart from expressed or articulated needs, there are unexpressed needs which the client is aware of, but does not like to express. Another category of needs is the dormant variety, which the client is unaware of. Though identification of information needs is essential for designing information systems in general and for providing effective information services in particular, it has been found to be a difficult task as it is almost an investigative or detective work. In order to identify information needs one should adopt various methods to gather information on the various factors that influence the information needs. No single method or tool will serve entirely. A careful selection and blending of several techniques depending on the client whose need is being studied is necessary. In fact, the "information needs identifier" should study, prepare and equip him/her-self thoroughly to perform the task of identifying information needs. A formal step-by-step procedure that can be adopted to study the information needs of a majority of clients is proposed in this paper. Besides gathering and recording the information needs, a careful analysis is to be made to distil actual needs from the data gathered. It is hoped that the methodology discussed here, would be easy to perceive and be
translatable into practice. It is to be noted that the methodology would become clearer and clearer as each step is put into practice enhancing the understanding of the scenario and help in fine-tuning the procedure to suit particular situations. Moreover it has been found that the proposed methodology is not only useful in identifying the information needs, but also has a profound impact on finding ways and means of satisfying such needs. In other words, the information needs identifier (INI) would discover, as a bye-product, several ideas, tools, methods and techniques of satisfying the clients in meeting their needs as well as design new and novel information services and products to meet those needs.

In 64th IFLA General Conference, 1998, Nazan Ozenc Ucak and S. Serap Kurbanoglu, presented a study on Information need and information seeking behavior of scholars at a Turkish university and said Knowledge generated by user studies can help to develop information systems and information services. Information need and information seeking behavior, two of the most important research areas of the user studies, are two complementary concepts, which are affected by many factors. Research results in these areas of user studies indicate that the type of information need and information seeking behavior of scholars are dependent on their field of research, and vary from one discipline to another. Understanding such behavior help us to design services and products, which would transmit the required information most effectively. Such different needs in turn may necessitate offering services (e.g. user education) in academic libraries depending on the academic discipline users come from. In this paper we report the result of our research conducted at Hacettepe University, Ankara, Turkey on the effects of occupational factor in library usage by the scholars in science, engineering, social sciences and humanities. We also compare these findings to those reported in scholarly literature. Based on these findings we make several recommendations to improve the interaction between library staff and the scholarly community

2.6 USER STUDIES ON INFORMATION SEEKING BEHAVIOR

The important studies based on the above heading are reviewed as under alphabetically.

Akeroyd, J (1990) studies 3 different interfaces for on-line public access catalogues were evaluated using transaction logging as a methodology. In two cases exercises were set and
run against each interface so that results could be critically evaluated to indicate areas of weakness. In all cases a random transaction log was derived and this was used to diagnose system problems and identify patterns of behavior. Results showed that searches were often difficult to categorise, users employing different approaches to the same end. Users were also prepared to undertake sustained searching until something was retrieved; however they then frequently stopped. Search input problems are also identified and possible areas for further research suggested.

Albrechtsen and Hjorland (1997) presented an interview with Birger Hjorland, Danish author of a new book on knowledge organization entitled 'Information Seeking and Subject Representation: An Activity-Theoretical Approach to Information Science'. The book presents a new general theory for information science and knowledge organization, based on a theory of information seeking. Gives the author’s views on knowledge organization and subject representation. Bystrom and Jarvelin (1995) studies the relationships of broad job types and information seeking characteristics have been analyzed both conceptually and empirically, mostly through questionnaires after task performance rather than during task performance. Analyzes at the task level on the basis of a qualitative investigation of the relationships of task complexity, necessary information types, information channels, and sources. Tasks were categorized in 5 complexity classes and information into problem information, domain information, and problem solving information. Moreover, several classifications of information channels and sources were utilized. The data were collected in a public administration setting through diaries, which were written during task performance, and questionnaires. The findings were structured into work charts for each task and summarized in qualitative process description Tables for each task complexity category. Quantitative indices further summarizing the results were also computed. The findings indicate systematic and logical relationships among task complexity, types of information, information channels, and sources.

Chamis, Saracevic and Trivison, Donna (1986) reported on a project on the cognitive aspects of information seeking and retrieving. Analyses the variations in search results obtained by 9 searches on a series of questions. The objectives of the 1st phase of this project were: to analyse the degree of agreement in search results and search strategy among intermediary searchers searching the same question; and to test the cognitive characteristics of the searchers and correlate these with the effectiveness and efficiency of the search results.
obtained. Indicates wide variations in the number of citations retrieved by the 9 searches. Analyses the number of unique citations in the set of 9 searches for each question.

Derr (1984) in his study reported that 5 types of information seeking expressions of users has identified by an analysis of a sample of such expressions and of analogous expressions in another social context. The treatment of these expressions in the literature of information retrieval is reviewed. 2 recommendations are offered: information specialists should call questions 'questions', requests 'requests', statements 'statements', commands 'commands', and truncated expressions 'truncated expressions' and both the search interview and the search itself should focus upon user questions. Hjorland (1993) provides a summary of a dissertation which presents a theory of information seeking behavior based on the theory of knowledge, thus uniting the two areas in which this subject is usually studied: user studies and information retrieval. Chapters deal with the following areas: definition of subject retrieval; an overview of the field of subject representation data; subject analysis; theories of subject, interpreted, characterized and criticized from the viewpoints of objective idealism, subjective idealism and realism; methodological problems in information science; analysis of information seeking from a methodological collectivistic methodology; the concept of information needs; and the relationship between the proposed concept of subject and tendencies in philosophy and psychology.

Hyldegaard (1997) aimed to study the potentials, if any, of using a Virtual Reality (VR) user interface for visualizing, retrieving and manipulating information. A VR user interface represents the next generation of user interfaces by allowing for a high degree of transparency and non-command based interaction. Discusses the different factors affecting transparency and considers information retrieval through browsing. Kuhlthau (1991) discusses the users' perspective of information seeking. Presents a model of the information search process derived from a series of 5 studies investigating common experiences of users in information seeking situations. The cognitive aspects of the process of information seeking suggest a gap between the users' natural process of information use and the information system and intermediaries' traditional patterns of information provision.

Kuhlthau (1993) proposes an uncertainty principle for information seeking. The principle is based on the results of a series of studies conducted into the user's perspective of the information search process. A basic principle of uncertainty is elaborated by six corollaries.
Proposes the principle to explain the constructive process of information seeking and use bringing affective considerations to what has usually been regarded as a cognitive process. Liddy and Jorgensen (1993) attempted a study which aimed to empirically investigate book-index usage, behaviors, and the extent to which specific print index features affect a user's search for information; and to examine these features in an electronic environment and to determine the optimum specifications for indexes in electronic texts by gathering evidence from a controlled user study. Provides an overview of the research project, focusing on a subset of the results from the study of hard-copy book indexes. Describes observable behaviours of a sample of users when consulting different variations of a hard copy book index. Suggests a preliminary model at three levels of abstraction repressing users' behaviours when using a book index.

Malmsjo (1997) reviews the factors related to the environment and situation influencing users' information seeking behavior and the various models and equations reported in the literature to describe this activity in a quantitative manner. Overall, the aim is to examine the degree to which these models of information seeking behavior can be of use in designing practical information systems.

Marchionini (1989) conducted an exploratory study on elementary school children searching a full-text electronic encyclopedia on CD-ROM. 28 third and fourth graders and 24 sixth graders conducted 2 assigned searches, one open-ended, the other closed, after 2 demonstration sessions. Keystrokes captured by the computer and observer notes were used to examine user information-seeking strategies from a mental model perspective. Older searchers were more successful in finding required information, and took less time than younger searchers. No differences in total number of moves were found. Analysis of search patterns showed that novices used a heuristic, highly interactive search strategy. Searchers used sentence and phrase queries, indicating unique mental models for this search system. Most searchers accepted system defaults and used the AND connective in formulating queries. Transition matrix analyses showed that younger searchers generally favored query-refining moves and older searchers favored examining title and text moves. Suggestions for system designers were made and future research questions were identified.

Reneker (1993) studied the information seeking activities of 31 members of the Stanford University academic community were examined over 2 week periods, the 2,050 information seeking incidents being tape recorded and supplemented by interviews. Qualitative and
quantitative analysis was used to examine the information needs in relation to perceived environment, source use, personal characteristics, and satisfaction with the result of information seeking. Results revealed information seeking to be embedded in day-to-day tasks and relationships and triggered both by articulation of need and availability of information. Describes the methodological approach adopted and the use of the ETHNOGRAPH and SPSS/PC Plus software to facilitate data analysis. Saracevic, Kantor, Chamis, Alice and Trivison, Donna (1988:) The objectives of the study were to conduct a series of observations and experiments under as real-life a situation as possible related to: user context of questions in information retrieval; the structure and classification of questions; cognitive traits and decision making of searchers; and different searches of the same question. The study is presented in 3 parts: Part 1 presents the background of the study and describes the models, measures, methods, procedures, and statistical analyses used. Savolainen (1993) studies based on the sense-making theory, which is based on constructivist assumptions on human information seeking and use. Focuses on the epistemic and practical interests of the theory, discussing them in relation to the interests of the traditional intermediary-centered approach. Sense-making theory is a programmatic research effort suggesting user-centered ideas for the conceptualization of the information seeking and use. Its contribution to LIS researches its critique to the limitations of the traditional intermediary-centered approach. Sitter and Stein (1992) presents a dialogue model that incorporates the illocutionary aspects of information-seeking dialogues. Directives, commissive, and assertive types of dialogue acts (asking, offering, rejecting, answering, and evaluating) are represented by a complex transition network. The model determines all legitimate types and sequences of dialogue acts and regulates the role assignments (when the information seeker and the information provider temporarily exchange their roles). Such an integrated model can serve as a basis for the design of human-computer dialogue systems. The model was worked out in the COGITO (Cognitive Interaction Tools) at the Integrated Publication and Information Systems Institute, Germany.

Spink (1996) reports results of an exploratory study to investigate the ability of novice searchers to recognise stages in a user's information seeking process. The study follows a research project, which investigated the ability of experienced search intermediaries to recognise and assess the stage of a user's information seeking process. 2 aspects were examined in the study: problem definition level; and the work stage that the user was
experiencing at the time of the online search. The study aimed to investigate whether the ability of searchers is limited to skilled and experienced intermediaries or is a more fundamental human cognitive activity. Results suggest that novice searchers were able to judge the user's problem definition level more successfully than the users work stage. Implications of the results are discussed in terms of a general process model of information seeking behavior. He further goes on to argue that information science is beginning to explore feedback as a key concept within information seeking and retrieving models. Feedback has been a fundamental element in many cybernetic and social models. Gives an overview of feedback within the cybernetics and social frameworks. Compares these feedback concepts with the interactive feedback concept evolving within the framework of information seeking and retrieving, based on their conceptualization of the feedback loop and notion of information.

Summers, Matheson, and Conry (1983) suggested that on current research on information retrieval, greater attention be given to the study of information habits and needs of users of information. It has also been suggested that the user be viewed more broadly as existing within interacting cognitive, emotional, and social systems. The findings of the study offer support for the notion that information source use by educators is the result of a complex set of interactions among variables and examination of the interaction of personal, professional, and psychological attributes of users provides a useful beginning in understanding the dimensions influencing the use of information sources. Talja, (1995) discusses the theoretical foundations of information seeking research, theories of the nature of information and its users are metatheories which guide the information of concrete research programmes in IS research. The basic ontological and epistemological assumptions of these metatheories are analyzed in this project, and their implications for the development of research strategies are discussed. Trivison, Chamis, Saracevic, Tefko, Kantor and Paul (1987) describes a study made to validate a model of information seeking and retrieving and to observe the effects of a selected set of cognitive variables involved in on-line searching. Professional searchers were observed searching prepared questions in their subjects on DIALOG. The degree of agreement in search strategies was low.

Vakkari and Kuokkanen (1997) describe a study whose aim was to analyse theory growth in information science by using a case from information seeking studies. Scientific growth is identified with the growth of theories. Differentiates 3 contexts of theoretical work: unit
theories, theoretical research programmes and metatheories. States that for analysis of theory growth, tools based on the current theory of science are needed. Introduces tools for the analysis of theory growth and theory reconstruction and applies them to analysis of a theory on information seeking. Vakkari, in an independently published article analysed some theoretically most advanced studies of information seeking will to reconstruct the theoretical structure of unit theories presented in the studies. The structure of a unit theory includes a set of concepts and assertions relating those concepts in an account of some information behavior phenomena. With the help of the reconstruction linkages between unit theories are analyzed in order to reveal possible theory relations. Theory relations might refer to the fact that theoretical research programmes exist, i.e. family of interrelated unit theories. Finally on the basis of interrelated unit theories, conclusions are drawn from the nature of growth of theories of information seeking.

Wilson (1981) reviews work on information-seeking behavior and information needs in a number of disciplines, other than information science. The aim is to identify models and methods that may be transferable to information science. Wilson (1995) further explores the information-searching behavior with the framework of a model of information-seeking behavior based on the concept of uncertainty-reduction. A number of models will be tested, and the role of individual psychological factors will be investigated. A sample drawn from the staff of the University will be used, and qualitative data relating to their information behaviour will be gathered using semi-structured interviews, observation of searches, and transaction logs. Psychometric data will be measured using Riding's cognitive style analysis. Data analysis will seek to establish both statistical and qualitative evidence of relationships between different elements of information seeking. While the project is seen essentially as a contribution to the basic understanding of information behavior, a number of practical lessons should arise from it, both for the design of information retrieval systems and for the training of information intermediaries. Information provided by the British Library.

Yoon (1997) studied for his doctoral thesis about the use of certainty in information seeking in an interpersonal context. Certainty is what users know or think they know in relation to their information need whereby they describe their need using what they already know. That is, users employ certainty in order to point to what they do not know and need to find out. The uncertainty has been widely accepted as the information need in many information retrieval and user studies. The certainty, however, has not been explicitly addressed. The
The purpose of the study is to explore the extent to which the user's communication for information seeking relies on certainty, and what characteristics are in relation to uncertainty.

2.7 USERS STUDIES ON SC/ST COMMUNITIES

The Constitution of India provides certain special Constitutional safeguards for the welfare of Scheduled Castes and Scheduled Tribes and other weaker sections of the population, so that they could take their rightful place in society. But they are occupied very distinct place in the communication system of country, they have no ideas, events, contacts and links with the government provisions and facilities to words them, in terms of their developments that tremendously influence the society. SC/STs are backward and remain in poverty since our independence, which apparently reflects their social position, profession and missionary objectives in making the nation more informative. Since, education is more crucial and viable force for the all rounds development of a nation. it is also the responsible of the government, the different communication media and library professionals to make them more educative and informative.

Disadvantaged communities of the developing countries in particular, very often make the right to seek information imperative without any hindrance so as to develop their community effectively. Hence, in India SC/ST’ access to information and need for information appears to be of great significant for research scholars of Library Information Science. It is the distinct obligation of a librarian or information scientist, among other things, to know the user community (specially those are not regular user) better by assessing their information needs and determining their information seeking behaviour. In performing such a difficult tasks, the librarian has to understand the users and to acquaint himself with their myriad information requirements so as to ascertain the impact of the library on the life style of the users who can contribute substantially to social, political and economical environment of the nation.

Studying users and use of resources will ultimately pave the way for the librarian to design an effective information system tailored to the needs of the target audience. Hence, users study is one of the crucial weapons through which the information requirements of the SC/ST can be better addressed and the significant results thereof can be analysed to find out the most suitable methods of service/delivery, which can help to develop an appropriate
information system for them in India. Since no such comprehensive study has yet been undertaken concerning to SC/ST as potential users of the libraries, the present study becomes imminent. There are many survey, case studies conducted by different government, NGO’s, private organizations, agencies and institutions in the country on their socio-economic condition, education, health, status etc. to see the real problem.

Chakrabarti and Basu (1999) conducted a study on information needs of Tatos (sub-Himalayan tribal community) reveals that everyday information need of any community is incumbent upon its economic conditions and its reactions to these conditions. Socio-economic aspects include various needs of the community people such as areas of their earning, livelihood, availability of communication facilities etc. Information on political conditions relationship with the community deals with electoral process; roads, electricity and entertainment etc. are also the factors for the development of the community.

Dr. Ambedkar Research Institute (1991) Conducting various survey and studies on socio-economic status of SC / ST, research in specific and general areas to undertake ethnographic and anthropological studies on castes and sub-castes, synonyms for inclusion for inclusion/deletion pertaining to reservation policy, undertake evaluation study and sample survey during the course of implementation of SCP / TSP. to assist the research scholars (M. Phil / Ph. D.) who are interested in undertaking studies on problems of SC / ST in different regions of Karnataka, Special studies will also be taken on atrocities & unsociability and measures to be taken on preventing them, evaluation studies to examine the impact of Government welfare measures implemented by both State & Central Government.

Wankhede (2003). Presented a paper on affirmative actions and the Scheduled Castes: access to higher education in India and reveals that the issues of equality and justice gained lot of importance and such programmes have been introduced by constitutional commitments in India for these sections of the society, i.e. the Scheduled Castes. This paper addresses the issues pertaining to the Scheduled Castes and their education with reference to Affirmative Actions. Higher education is considered as an important mechanism for their development that is directly linked to better jobs and higher income. However, it is not possible for these communities to access, sustain and perform better in education due to their poor social and stigmatized background without governmental support. That is why
they have been provided with various material and non-material facilities including reservation of seats in admissions at all levels of education. However, during last five decades of the experimentation of the policy; studies have revealed that their progress in higher education is unsatisfactory due to the education system itself followed by the unfavourable socio-economic conditions and biased attitudes of the upper castes. However, this does not mean that facilities do not help them improving their plight. Their access to higher education is made easy by these programmes but could be made more effective and result oriented by implementing them properly. Since last decade, the globalization has posed a new threat to the policy supported by privatization.

National Council of Educational Research & Training (NCERT), New Delhi (2001) studied on educational problems of tribal children, aims at mapping the existing provisions for primary education in the tribal areas as well as their utilization by the recipient population. It has been carried out in seven DPEP States viz. Assam, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa and Tamil Nadu.- The aspects studied include educational infrastructure and facilities available, status of teachers in tribal areas, status of curriculum and teaching learning materials, use of tribal language, status of school enrolment and school dropout, monitoring, evaluation and community participation.

A national research project on Scheduled Caste and Scheduled Tribe college students and teachers in Orissa was conducted during 1972-1975, by Prof. Rath (1975), Dept. of Psychology, Utkal University, Bhubaneswar, sponsored by the Indian Council of Social Science Research (ICSSR), New Delhi. The aim of the study was to find out educational problems faced by SC/ST in Orissa, suggested different schemes on socio-economic development to ICSSR.

Thus, there are different studies conducted by Dr. Ambedkar Research Institute, Ministry of Human Research Development, Social Welfare Organisations and SC/ST Welfare Department of India, to find out their socio-economic conditions, socio-educational development and different social needs for planning, designing and overall development of these communities in different period of time. Any such studies are necessarily not only for planning and designing information system for the government for the sake of development but also for their efficient and effective operation and implementation as a whole. This can be also applicable for the librarian to study their information needs for their educational advancement. There are likely to be many surprises to even an experienced librarian about his
own clientele, as he would not have heard them all in a systematically planned set up in his day-to-day work. The obvious drawback in relying on experience is a bias towards outspoken and intensive users, which is, at times, either too pleasant or too bitter. These types of user studies on SC/ST students in academic environment of Orissa can also help to improve the relation of the library with users in an objective way, provided it is done with the organisation concerned. Accurate and objective knowledge about users and their information behaviour are the essential ingredients for designing an information system in Orissa for the betterment of the disadvantaged community. The effectiveness of educational planning and library information system depends on the extent to which the system characteristics correspond with the user and on how much the potential user is willing and able to make use of it.

2.8 RESEARCH GAP AND RATIONALE FOR THE PRESENT STUDY

All the major works on users studies have been done in this field in the western countries, especially UK, USA. and China. Very little work has been done on the information needs of library users in India and especially in the field of higher education; perhaps no comprehensive study has so far been pursued. Typical Indian user studies represent an over emphasis on bibliometric studies in general and citation studies in particular. But the utility of such studies in understanding the users dynamism is limited. Most of the studies conducted earlier have adopted individuals as the unit of analysis taking the similarities and differences among the users in terms of their backgrounds like status, age, experience, education, discipline and specialisation into account. Very few studies have been conducted taking an organisation as the unit of analysis treating organisation as the composite entity with sample individual respondents as the typical representative. As indicated in the above a numbers of 127 total doctoral theses has been awarded by different universities in India. Since, last 6 years on LIS field, out of which only 21 numbers are specifically made on users study based on information needs of student teachers and faculties in general. But on the other hand, there has been a number of theoretical and review type of works carried on by government departments, private agencies and NGO's for educational development of minority communities in Orissa. Yet, no single comprehensive user study has been reported in the state relating to SC/ST in higher education. Therefore, The present study is the outcome of the need to fill up this very gap as a sample from Orissa State.
I come forward to find out the real problem for them for seeking information in various fields for their socio-economic development as well as their education and information needs. Hence, this study is focused on the information needs and seeking behavior of the SC/ST student/researcher/ faculties with specific reference to higher education and a need for networking of these educational institutions without any preconceived expectations or hypothesis. The study also suggests a model for need based information system among the Colleges and Universities in Orissa and cooperation at all levels starting from the local to the global level. Cooperation is a pre-requisite for all types of networking for resource sharing. Therefore, the following must be ensured before preparing the plan for linkages between university and college libraries of Orissa.

1. Institutional commitment to accept the given measures.
2. Fund and support resource sharing solution.
3. Attitudinal changes in library staff to undertake additional responsibility in resource sharing environment.
4. Training of library staff to understand and appreciate the changed situation.

If these pre-requisites are made available the university libraries could plan for resource sharing programmes, apprenticeship in libraries for learning new skills and IT training programmes, consultancy in retro-conversion and in developing IT infrastructure. All these put together will be the basis of preparing a perspective plan and evolve a vision for academic libraries in the State. In fact research in library and information science like this is more meaningful if the findings increase the efficiency and effectiveness of information flow to suit the interest of the SC/ST communities in the state and attract them towards the library information sources to minimize their illiteracy.