CHAPTER – III

REVIEW OF RELATED LITERATURE

3.1 INTRODUCTION

The review of literature is an important component of any research study. The analysis of review of literature enables one to identify the past trends and area of research concentration in any particular field. It also provides base for interpretation and discussion of findings. Further an acquaintance with earlier related studies is necessary to formulate appropriate Research Methodology, keeping in mind the objectives set forth for the study. Moreover, there has been a number of literature published so far emphasizing the need for study of information seeking behavior.

The researcher must have up-to-date information about what has been done in the area of research which he/she wants to carry out. In brief, it presents an overall review of studies conducted in abroad as well as in India. The investigator has reviewed only such studies which were similar to the present study and grouped according to the area of study.

3.2 USER STUDIES
A study conducted by Reddy… et.al. (1973) to assess the satisfaction of the periodical collections of the library of University of Hyderabad revealed that the majority of the faculty members were not satisfied with the periodical collections.

Sethi (1990) made a study on information seeking behaviour of Social Scientists. Result indicates that they did not differ with regard to “how they seek their information” in their chance of channels and source of information. The information seeking behaviour of social scientists is developing and developed countries to be different on account of differences in the social systems, infrastructure for collection and storage utilization of information.

Hammond and Mitchel (1997) report a survey on the information seeking behaviour of particulars in accounting, architecture, psychiatry and recreation. The aim was to improve information skills instruction performances of students. Fewer than half of the survey respondents had discipline specific library instruction. Practitioners identify a need for information but a low use of electronic resources. Data support the necessity of information skills for those entering the professions. Instruction should be information centred rather library centred continuing education for preferred information field is needed.

Hernes (1959) made a study of 450 medical students on the use of formal and information channels of communication. Research showed that the majority of medical scientists get the idea of new project through personal
contacts/discussion with their colleagues and the remaining get from their own personal view.

Krishan Kumar (1968) conducted a survey concerning teachers and research scholars in the department of chemistry, University of Delhi. The important finding of this survey was quite a large percentage of research fellows do not use the library as much as they ought to. The majority of the researchers (71%) feel the need to improve their skills in the service of science and Technology literature and current information for their study.

Nelson (1970) surveyed the faculty awareness of library services at six colleges and found that an average faculty member was aware of the services actually available in the college library. The study commented that it is unfortunate that libraries which should essentially exist as communication devices, themselves communicate so ineffectively. It might be more effective in terms of information exploitation if the effort currently devoted to design and implementation of new systems is changed to the efficient making of the existing services.

Pawar and Vyas (1976) insist that teachers are the communicators of thoughts to the students, their increase in demand for the reference books and text books for their own intellectual development and student readings need to be given special attention. Teachers and Students also engage themselves in research. Therefore Basic reference works of important subjects need special
attention and consideration by library authority, faculty members and library staff.

Subramanian (1983) conducted a study of the information seeking behaviour of Doctoral Researchers in Social Sciences. The study stated that researchers make use of non formal sources very much. It also brought out that the University library services need to be further geared up to meet the information need of the researchers.

Ann (1984) conducted a survey concerning Doctoral studies in college of Education who were involved in library research work. The research showed that knowledge of the library and its resources were important to this academic success. She further states that library usage was also important to the academic service.

Kailsh and Ashok Kumar (1984) carried out a survey on information gathering habits of R &D Scientists namely Physicists, Chemists and Mathematicians using questionnaire method. Result indicated that Scientists need latest information to their field of interest and information on new research findings.

Abraham and Karisiddappa (1986) carried out a study to evaluate the existing library services of Calicut University and found that all the faculty members were satisfied with the services of Calicut University.
Rao (1987) made a study on the information seeking behaviour of scientists at National Institute of Nutrition, Hyderabad by questionnaire method. Result showed that they were satisfied with the services rendered by the staff members of the institute.

A Survey was conducted by Anuradha (1997) to examine the users of Government of India libraries using a questionnaire method and interview method. The study stressed the need for providing assistance to potential users through interaction, library orientations and manuals.

Leanne, Solomon and Haunam (2002) have conducted a study on information seeking beyond initial interaction negotiating relational uncertainty within close relationships and found that this essay extends previous work on uncertainty & information seeking within close relationships by considering how relationship parameters correspond with the directness of people Information Seeking strategies.

A Study conducted by Wolfe (2002) on information seeking within organizations and revealed that both the literature on employee feedback seeking behaviour and the literature on information seeking by organizational newcomers are reviewed. This review highlights the various motives that affect the decision of the organisation.

Baldwin, John and Stephen (2002) conducted a study on ‘Information Seeking Behaviour in intercultural and inter group Communication’ and found
that this review essay analyses the current status of information seeking research & theory in the field of intercultural communication broadly after drawing distinctions between different types of intercultural communication.

Bawden (2006) discussed that Wilson's article had a significant effect on the development of information science. It dealt with several fundamental issues, including the nature of information itself and of information need, models of information seeking and information behaviour, particularly those based on phenomenological or “whole life” concepts, appropriate research methods for these areas, and the nature of information science as an academic discipline. The paper provides a perspective on the development of information science over 30 years with particular emphasis on the study of human information behaviour.

Padmamma, Vijayakumar and Vasudean revealed that one third of the scientists visit the information center to satisfy the information needs of research activity about 30% scientist opined that education of the dependents is one of the factors which hinders their information seeking behaviour.

Jamali and Nicholas (2008) carried out a study on ‘Information seeking behaviour of Physicists and Astronomers’ The study reveals differences among subfields of physics and astronomy in terms of information-seeking behaviour, highlights the need for and the value of looking at narrower subject communities within disciplines for a deeper understanding of the information behaviour of scientists.
In a study in the University of Botswana (Fidzani, 1998) to establish the information needs and information-seeking behaviour of graduate students, there was a heavy reliance on library books, textbooks and journals as sources of information used for course-work. Students primarily relied on scanning the shelves or browsing through journals rather than using the index and abstract databases to locate information.

3.3 INFORMATION NEED

Adeadebu and Adro (1997) revealed that 707 of respondents spent 3-8 hours per week in the library consulting books relevant to their area of specialist and 68% of the category approached library staff for assistance in searching for the books and their choice. All the samples agreed that the library staff are days willing to assist. The respondents made various suggestions for the improvement of the library and the staff duty.

Dillion (1997) explained three aspects of preferred development: need for, use of and occur to preferred information. The study found that teacher librarians have pivotal role to play in survey the preferred information needs of rural secondary school teachers and that computer networks provides an important means of overcoming these teacher’s preferred and geographical isolation.

Shenton (2008) has conducted a study on The information-seeking problems of English high scholars responding to academic information need.
The findings have implications for the improvement of Web filters and the teaching of information skills, especially with respect to the effective use of search engines and the training of learners in information-seeking methods beyond the use of the Internet.

Wilson (2006) has studied on ‘On user studies and information needs’. The study found that the problem seems to lie, not so much with the lack of a single definition, as with a failure to use a definition appropriate to the level, and purpose of the investigation. The analysis may be used as a springboard to research based upon a wider, holistic view of the information user.

Fiona, Timmins (2006) on Exploring the concept of information need and found that the identifying information need is frequently exposed in textbooks policy documents and reports of research studies, provision of Health-care is also now described as ‘needs based’ rather than ‘service-based’. Yet, there is little understanding.

Marcella … et.al (2007) studied on 'The information needs and information-seeking behaviour of the users of the European Parliamentary Documentation Centre (PDC)‘ : A customer knowledge study. The findings of the study showed that the information-seeking behaviour and skills of the PDC clients are discussed, as are the criteria by which they assess information quality. The study revealed that users were frequently uncritical and pragmatic in use of the most readily available information, sacrificing quality in favour of ease of access.
Zhang (1998) stressed that a thorough understanding of user information needs and information seeking behaviour is fundamental to the provision of successful information services. Wilson (1994) points out that the scope of information-seeking behavior research is vast and many new concepts and methods are being developed with the help of this research. It is clear that the study of human information-seeking behavior is now a well-defined area of research. According to Devadason and Lingman (1997), the understanding of information needs and information-seeking behavior of various professional groups is essential as it helps in the planning, implementation, and operation of information system, and services in work settings. White (1975) states that if academic librarians are to realistically serve academic researchers, they must recognize the changing needs and variations in information gathering and provide services that would be most useful.

The study of information needs and gathering behavior dates back to 1948 when Bernal and others presented a paper on scientific information at the 1948 Royal Society conference (Bernal, 1960). During the past 30 years or so, a considerable body of literature has been produced dealing with information needs and information-seeking behavior of both individuals and groups in a variety of contexts (Anwar, Al-Ansari, and Abdullah, 2004). It is estimated that the number of publications on information-seeking behavior were more than ten thousand in the 1990s alone (Case, 2002). Many studies have been conducted to investigate the information-seeking behavior of library users based on their subject interest, occupation, information environment, and
geographical location. Information needs and information-seeking behavior of academics have also been a popular area of research for the information scientists for decades (Majid and Kassim, 2000). Many authors have pointed out that the studies on information-seeking behavior and needs of social scientists are fewer than those involving the natural sciences, and the studies of humanists' information needs are fewer still (Line, 1969; Hopkins, 1989; Blazek, 1994; Challener, 1999).

A user needs assessment survey (Clougherty et al., 1998) of undergraduate students was carried out by the University of Iowa in order to determine the purpose of undergraduate visits to the library and overall user satisfaction with the services and resources in the library; thus facilitating feedback on how the library services and resources used by undergraduate students could be improved. Results of this survey of undergraduates indicated that 72 per cent of respondents used the library as a place to study, 70 per cent to use the photocopiers and 68 per cent to borrow books, magazines and journals. Students primarily turned to library staff for assistance (70 per cent), but they also sought help from each other (56 per cent). A library web-based tutorial was only used by approximately one-fifth of the respondents, almost one-third using printed handouts. Approximately 84 per cent never attended any instructional classes. With regard to library services, however, the undergraduate students desired more publicity for the available services.

3.4 SOURCES OF INFORMATION
Birader and Kumar (2003) attempted to identify the usefulness of library collection and information use pattern by sericulture scientists. Results showed that reports (52%), conference papers, Textbooks, bibliographical sources (each 48%) and primary periodicals (46%) are frequently used sources. Study also showed that sericulture scientists not only depend upon their own institute library collection but also a large number of scientists depend upon agriculture libraries (42%) and other sericulture libraries (34%).

Korobili, Tilikidou and Delistavrou (2006) found that majority of the faculty of TEI uses printed sources more than e-sources, but they also use e-sources quite frequently. Use is mostly of books, websites and printed journals. It was also found that the use of e-sources is higher in the School of Business Administration and Economics among those who hold a PhD degree and among younger members of the faculty. Also, the results indicated that the use of e-sources is positively influenced by the respondents' perceived usefulness of resources, the convenience of access to the sources and their academic productivity.

In the University of Washington (Hiller, 2002), undergraduates preferred to visit the library to study rather than to seek journals or books. Seiden et al. (n.d.) conducted a focus group with undergraduate students from Skidmore College in New York and found that the students had a strong overall preference for digital resources. These preferences were reinforced by a lack of familiarity for printed sources. Undergraduate students in a focus group (Wei,
1995) revealed themselves to be inexperienced in online systems. They were keen to receive instruction on how to find periodicals (58 per cent) and almost half of them wished to receive instruction on using electronic resources in the science library.

Majid and Ai (2002) studied the use of information resources by computer engineering students in Singapore and found that the top five information resources in order of preference were books (94 per cent), lecturers (89 per cent), the internet (86 per cent) and friends (84 per cent). They relied heavily on printed sources of information and their use of electronic journals and databases was very low. According to Hartmann (2001), undergraduate students experienced difficulty in locating items from the library collection and did not understand the processes for retrieving journal articles.

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

3.5 INFORMATION SEEKING BEHAVIOUR MODELS

Reddy and Karisiddappa (1977) studied the information seeking behaviour of 160 professionals in the field of disabilities in India which reveals that informal channels are used for information gathering. Journal are preferred
as found of information and books are used for providing consultation and they therapeutic/diagnostic services

The study carried out by Curtis and Hurd (1981) on information seeking behaviour including use of bibliographic tools by faculty members at the Illinois University of Chicago revealed that over 70 per cent of the faculty used Index studies. It was also found that there was a wide variation in the number and format of secondary services used by the Faculty.

Al-Salem (1989) made a study on the investigation of the relationship between academic role and the information seeking behaviour of adult education faculty members at Madison in the U.S.A. using a questionnaire method. Result indicated that most of the faculty members need information for improving their academic role.

Banwell and Leay (2000) investigated the information seeking behaviour of U.K. students and activities in relation to electronic information services. The study provides illuminative and conceptualized pictures built up over a time and in different disciplines.

Majid and Kassim (2000) on Information Seeking Behaviour of International Islamic University of Malaysia Law Faculty Members. The Result of the study was that Books were ranked as the most important source for teaching and research purpose followed by Law Reports and structure. On the
whole, library Collections, services and functions as adequate to meet their information needs effectively.

Vijayalakshmi and Maheswarappa (2001) studied the types of information required, purpose of using information, methods used for keeping up-to-date, awareness, use and usefulness of information sources, information searching undertaken and the methods used searching, use, frequency of use, purpose of using and the success in getting information from the university library, frequency of visits to other libraries, consultation with library staff, difficulties encountered in access and use of information, instruction received and the need for instructions in the use of library, its resources and services by post graduate lady students of Gulbarga University, Gulbarga Concludes that there is a need for educating these post-gradate students in the use of information sources, library, its resources and services.

White Rowland Robbert (2001) studied the information needs and practices of part time and distance learning students of higher education in the UK outside the Open University and Thorsteinsdottir (2003) survey the Information Seeking Behaviour of distance long studies in Library & Information science in Sweden.

Davies and Bathi (2002) identifies the use of maternity information sources by Somali women living in northern city in the UK through exploring focus group and semi structured interviews and found that they seek and use information from several interpersonal sources from friends and neighbors.
Herperum (2002) studied the information gathering habits of arts scholars in Sri Lanka University and found the arts scholars gather information for three basic types of activities viz. teaching, research and administration.

Singh, Satija and samlhu (2002) conducted a survey of information seeking behaviour of the famous of Punjab which reveals that farmer and progressive and they adopted the new technology relating to agriculture, comparing earlier and faster than their counterparts in other states.

Meho and Tibbo (2003) revised Davial Ellis’s ISB model of social scientists which include six generic features such as starting, chaining, browsing, differentiating, Monitoring and extracting. The authors included additional features namely accessing, maturing, verifying and information managing besides the six features of Ellis’ model.

Lkoja-odouja and occholla (2003) examines the information needs, information seeking behaviour and the impact of information use on artesian fishes folk and extension agents at three major lakes in Uganda. The findings revealed that the fishes folk requires different kind of information to carry out fishing activities effectively and the methods adopted for accessing information.

Kingkaaw and Neela (2005) conducted a study on Information Seeking Behavior of Faculty Members of Rajabhat Universities in Bangkok, Thailand.
Results showed that most of the respondents stated their method of seeking information is by consulting a knowledgeable person in the field.

### 3.6 INFORMATION LITERACY

Leach, Arundale and Bull (1996) studied on ‘the use of information networking for continuing professional development’. Reports on a survey on the extent and interest in continuing professional development revealed that librarians and information professionals keep themselves up-to-date by means of computer networks, network-based course materials and teleconferencing.

Haqq (1996) studied on ‘Making time for teacher professional development’ and examined the problems with providing professional development for teachers and offers a variety of ways to overcome these obstacles. The inefficiency of inflexible schools schedules is cited as a major barrier, as well as the culture of schools in which a teacher’s absence is considered unfavourably.

Riggins-Newby (2002) studied ‘Enhancing professional development’ and suggests incorporating a variety of experiences into the professional development plans of public schools as they face increasing demands brought by social and economic changes. She offers three professional development strategies designed for urban school environments; mentorship, peer coaching and study groups.
Spitzer…et.al. (1998) conducted a study on ‘Information Literacy’: Skills for the information Age. and traces the history and development of information literacy; examines the economic necessity of being information literate, and explores the research related to the concept.

Bosseau… et. al (1999) discusses the assessment of student learning: levels of assessing information literacy outcomes; methodologies for campus wide assessment of information literacy; and information on the most meaningful assessment models.

Mark (1999) concerns the inclusion of information literacy and skills training in the undergraduate curriculum. In general it was found that students have limited skills in the area of information literacy. Based on these findings recommendations were proposed to help develop information literacy and skills and incorporate their delivery in the university curriculum.

Pickering, Thomas and Nancy (1999) studied on ‘Information literacy and information skills and traced the development of information skills instruction and discussed research practice in the school library media centre.

Albrecht…et.al. (2002) highlight the importance of instruction and information literacy skills in academic libraries, in relation to market needs, literary standards, and graduate preparation for meeting these needs and standards both from the perceptive of the employer and employee.
Lupton, Mandy (2002) argues that in order to facilitate student’s “getting of wisdom”, librarians who design and deliver information literacy should see themselves as teachers rather than trainers. It compares the role of the school teacher librarian with that of the academic teaching librarian.

Wu and Kendall (2006) conducted a study on ‘Teaching faculty's perspectives on business information literacy’. The objectives of the study was to have effective integration of information literacy skills into the business curriculum requires the development of collaborative partnerships between teaching faculty and librarians. Developing a good partnership requires an understanding of the teaching faculty's perspectives. All faculty surveyed expect students to use library research for their assignments. Business faculty and librarians will be able to use these findings in developing guidelines to integrate information literacy into coursework, assignments and research tools.

3.7 E-RESOURCES

Khan and Ahmad (2009) revealed that most of the research scholars are aware of the availability of e-journals and largely use them for reference purposes in their research work. They fully agree that with the usage of e-journal the quality of research work improves with enrichment of appurtenant contents and materials leading to high-quality manuscript. It is however found that there is lack of training in proper and full utilization of e-journals.
Carlo … et.al (2009) studied Electronic journals and changes in scholarly article seeking and reading patterns and found that the average number of readings per year per science faculty member continues to increase, while the average time spent per reading is decreasing. Electronic articles now account for the majority of readings, though most readings are still printed on paper for final reading.

Swain and Panda (2009) studied on ‘Use of e-services by faculty members of business schools in a state of India’: a study. The finding of the study showed that Faculty members pay high preference to the use of e-journal articles while the least preference goes towards the use of electronic theses and dissertations (ETDs). Further it was found that a selected few online databases like Emerald Management Xtra (EMX), EBSCO, and PROQUEST are fairly in use while the use of other online databases is not up to expectations.

Haridasan and Khan (2009) reveal the awareness of E-resources among the faculty members and research scholars. The analysis shows that all respondents were aware of the online public access catalogue; 39 (90.69 per cent) research scholars and nine (100 per cent) faculty members were aware of the internet; nine (100 per cent) faculty member and 38 (88.37 per cent) research scholars were aware of e-mail and discussion groups and also e-journals; nine (100 per cent) faculty members and 33 (76.74 per cent) research scholars were aware of CD-ROM databases; all faculty members including 26 (60.47 per cent) research scholars were aware of e-books; eight (88.89 per cent)
faculty members and 26 (60.47 per cent) research scholars were aware of e-encyclopedia and e-theses; eight (88.89 per cent) faculty members and 18 (41.86 per cent) research scholars were aware of e-dictionaries; and eight (88.89 per cent) faculty members and 15 (34.88 per cent) research scholars were aware of e-newspapers.

Gunasekaran, Balasubramani, and Sivaraj (2008) found that among nine departments, the users belonging to Computer Science and Engineering use the electronic journals with high rate (17%) followed by Information Technology (16%), Computer Applications (15%), Electrical and Electronics Engineering (12%), Electronics and Communication Engineering (10%), Mechanical Engineering (9%), Biotechnology (8%), Civil Engineering (7%) and Textile Technology (6%).

Sevukan and Sivaraman (2008) revealed in their study that with regard to the satisfaction of users on the adequacy of e-resources provided by Pondicherry University Library, 70.59 % of users are satisfied while 29.41% is not satisfied.

Beard, Dale and Hutchins (2007) brought out two significant findings: i) first, 66 percent of Institute of Health and Community Studies students surveyed in 2005 claimed to be using e-resources more than in the previous year, and in 2006, 76 percent of students in CS and 70 percent of students in DEC claimed to use e-resources more; and ii) 66 percent of staff from Institute of Health and Community Studies in 2005 claimed to be using e-resources
more than in the previous year and in 2006 the percentage for staff in the School of Conservation Sciences was 75 percent and for the School of Design, Engineering and Computing 53 percent.

Raza and Upadhyay (2006) conducted a study on “Usage of E-journals by researchers in Aligarh Muslim University” and found that that all the researchers are aware of e-journals in Aligarh Muslim University. Many research scholars are consulting e-journals from their departmental labs and computer centers, not only for research purposes but also to update their own knowledge. However, the study also revealed several problems, including lack of training and slow downloading.

Mohamed and Sreelatha (2006) studied the “Use of E-journals by Doctoral Students of Calicut University” and found that Most (93.40 per cent) of the doctoral students had access to E-journals and a sizeable number (48.83 per cent) of the male doctoral students used E-journals everyday. Most (73.63 per cent) of doctoral students indicated that accessing full-text of articles was the major problem faced by the browsing E-journals. The majority (52.75 per cent) of the doctoral students indicated that the INFONET was helpful for their research work. The major problem faced by the doctoral students in the INFONET centre was the lack of sufficient number of useful E-Journals. Analysis of data revealed that most of the doctoral students had access E-journals through the INFONET Consortium. They were accessing E-journals daily or twice or thrice a week. The features like easy and speedy access to
back volumes and hyperlinks attracted the researchers towards accessing E-
journals. Access to full text of Journals was the major problem faced while
browsing E-Journals. The study also brings out some major suggestions for
improving the use of E-journals and the services rendered by the INFONET
centre, like to increase the number of core Journals, to provide orientation
classes and training programmes in accessing, searching and downloading of
E-journals and to appoint properly trained and skilled library professionals in
the INFONET centre.

Kaur (2006) conducted a survey on “Use of E-resources by Teachers
and Researchers of the Science and Engineering & Technology Faculties in
Guru Nanak Dev University” the findings of the study revealed that majority of
respondents (37.50%) make use E-resources 2-3 times a week. 100%
respondents make use E-journals where as only 40.83% respondents make use
online databases. 67.50% respondents feel that the self-instruction is the most
popular method of acquiring the necessary skill to use E-resources. 90%
respondents make use E-resources for research/project work where as 75%
respondents find the information in E-resources always adequate. 85.83%
respondents feel slow access speed as the most common problem in using the
E-resources. 35.83% respondents succeeded in getting required information in
the E-resources in the range of 75-99%. More than 80% respondents feel that
E-resources are time saving and more informative in comparison to
conventional resources. 100% respondents admit that E-resources can be good
substitutes for conventional resources if the access speed is fast, access to all
the important E-journals is provided and more computer terminals are installed to provide access to E-resources. The information available in E-resources has proved to be a great asset for many of the respondents. They have been able to keep themselves abreast of the latest information and improve their academic and professional competence.

Parameshwar and Kumargoudar (2006) in their study observed in their study that most of the research scholars search printed journals and electronic journals. UGC-Infonet consortium is most helpful in fulfilling their information needs. Of the publishers subscribed under the consortium, American Chemical Society is a leading publisher in Chemistry. It is needed to train the research scholars in using the UGC-Infonet Journals. Further, more journals are required in the consortium. Users also expected other kinds of services along with the UGC-Infonet Service. Most of the users rated the consortium as excellent and good. But there is need to improve the internet facility.

Kumbar, B.D… (et al) (2006) found that maximum number of respondents (87.5%) have got awareness about the UGC-INFONET programme. E-journals are the most widely used electronic resources over Internet (85%) by the respondents. All the respondents (100%) expect more number of e-journals to be included in the UGC-INFONET programme. 95% of the respondents are recommended print journals in addition to e-journals. Majority of the respondents (82.5%) felt that they are in need of regular training programme to make effective use of INFONET programme. Maximum
number of respondents (95%) have recommended for high speed computers to access information over Internet. 65% of the respondents are opined that the present UGC-INFONET consortium programme is a good resource for research. The data reveals that the majority of the respondents i.e. 47.5% have enough knowledge in using the web, including searching of different Databases.

Doraswamy (2006) elaborated in his results of the study that about 30 percent of the students use the digital resources daily, while 8.75 percent rarely use it. So internet facility in library and online connectivity in departmental libraries should be strengthened further and also majority of the students (52.50 per cent) spend half an hour on an average using the digital resources. Therefore, the students should be trained and guided properly in order to retrieve the required information quickly. Most of the students are satisfied with the E-mail service compared to the other digital resources and services and also google search engine is considered as the most sought after search engine by 76.25 per cent of the M.Tech. Students of KLCE Library. The majority of students (51.25 percent) learnt to use digital resources Most of the students (40 percent) stated that digital resources help easier and faster access to information. If the digital resources collection in KLCE Library is increased, it will help all the students to use the library for their needs.

Lohar, Naik and Satish (2006) made a survey on “Use and Impact of Electronic Resources in Jawaharlal Nehru National College of Engineering,
Shimoga” and found that majority of faculties (32.65%) visit their library every day. About 26.14% faculties indicate OPAC where as 22.88% faculties indicate CD-ROM are available in their library. 38.96% faculty members use electronic resources every day in their library. 23.21% and 20.83% faculties use the electronic resources for the purpose of Teaching and updating the subject, general knowledge respectively. 43.33% faculty members prefer to use Google and Yahoo search engines for their academic development. 40.86% faculty members seek guidance from the library staff where as 26.88% of faculties learns through the ‘Trail and error’ method. 25.87% faculties face the problem of ‘Lack of time’ to use the electronic resources. Majority of faculty members (49.41%) disagree regarding the standard of their work would not suffer without electronic resources. 31.76% of faculty members get their required information on electronic resources between the range of ’75-99%’. The study reveals that most faculty members are aware of the availability of electronic resources and they are used frequently for their teaching purposes. However, a large number of faculty members have no time to use these resources and services.

Mallik, Saxena and Roy (2006) found that the use of resources is varied among the user groups. User groups differ in their methods of access and in their frequency of use of online resources. Lack of use or awareness of library home page could have prevented some users from quickly accessing available resources. Most probably differences exist in the information needs and the reasons for accessing the online resources among the user group. It has been
observed that users select a small number of available online resources and they seem to be unaware of the broader spectrum of available resources. Convenience seems to play a major role in selecting resources, whether print or online. These are the factors to keep in mind when considering training issues and promoting library resources. Changing use patterns will require librarians to promote library resources and end-user training to meet the information needs in the online environment.

Kaur and Verma (2006) found that users should be encouraged to use e-resources available in the library and also the library should subscribe to more web-based resources. The maximum numbers of users are unaware of various electronic resources. The electronic resources/services are available at TIEI library. They even are not aware about the use of these e-resources. Therefore, library should provide users education program/awareness program for the users to educate them about but e-resources are available in the library and how to make maximum use of these resources for academic work.

Mulla and Chandrashekar (2006) found that the collection and service infrastructure of the libraries in the sample regions are not up to the mark. Engineering college libraries are struggling in building digital collection and disseminating digital information, due to 1) Lack of ICT infrastructure 2) Lack of IT trained manpower 3) Lack of awareness of the digital resources 4) Lack of user demand 5) Lack of financial support 6) Lack of access like computer facilities 7) Lack of knowledge about the digital preservation methods 8) Lack
of training for the digital access, etc. A concrete effort on the part of individual institutions with the support from the INFLIBNET would be a better alternative in designing on appropriate collection and service infrastructure. An establishment of ICT task force for individual institutions composed of IT experts and department heads would bring fruitful results.

Mathew and Sheeja (2005) revealed that the reading behavior of faculty and students is changing. They are giving more importance to electronic version of documents. With the availability of more resources through the internet with high speed connectivity the demand for e-resources in their specific subject is increasing. Accordingly, the libraries have to evolve more scientific methods to develop a standard collection of e-resources along with print documents assessing the requirements of the academic community.

Gunter (2005) suggested that for novels and non-fiction works such as biographies, that readers would tend to read from cover to cover, the electronic reading environment works less well. With these publications, readers probably prefer to sit comfortably in an armchair with the hard copy on their laps. Sitting forward at a computer screen is a less relaxed and comfortable way of consuming these works.

Doraswamy (2005) identified that most of the respondents (61.25%) are familiar with electronic information resources. 27.50% of respondents make use the computer daily where as 5.63% of respondents never use it. 25%, 33.13%, 38.13%, 36.87% and 21.25% of respondents make use CD-ROM,
Internet, E-mail, Search engines and VRSEC Web site daily respectively where as 25% of respondents make use online databases, VRSECE catalogue once a month; 18.75% of respondents make use online journals rarely. Most of respondents make use search engines compared to other electronic information resources and also online journals; online databases are less in use compared to other resources. Majority of respondents (42.50%) make use electronic information resources for communication purposes. Majority of respondents (75.62%) are learning the necessary skills to use electronic information resources through the self study method (reading books/journals, tutorials etc.). Majority of respondents (55%) indicate the information available in the electronic resources is always adequate. Majority of respondents 46.25% and 38.12% express lack of training and lack of time respectively as the main problems while using electronic information resources.

Chakravarty and Singh (2005) made a study on “E-resources for Indian universities: New initiatives” and concluded that free/highly subsidized access to scholarly online resources will help educational institutions in translating their mission into reality. The research output will increase multifold. Also all parts of the country will have simultaneous access to some quality resources enabling academia to join the main stream. This is an opportunity for those who were earlier deprived of scholarly resources to utilize these resources in a meaningful way and contribute as such as possible to the nation’s development.
Kumbar, B.D…et al (2005) jointly conducted a study on “Use of Electronic Resources by Research Scholars in CFTRI, Mysore.” The revealed that the more and more electronic resources should be provided to the research scholar to retrieve relevant and up-to-date information an also the research scholar are more familiar with the FSTA (Food Science Technology Abstract) than other databases, which provides the necessary information regarding their area of research. Its clear from the (over all) study those, the impact of electronic resources on research scholar are unbelievable. The frequency of usage of electronic information is increasing day by day rapidly. Google search engine is considered the highly familiar search engines among research scholar (91.43%) of CFTRI. 75.71% respondents indicate that the electronic resources have change the way of doing research and the information through electronic form greatly improve their standard of research.

Bouazza and Mufaraji (2005) found that 81% of the respondents are not satisfied with the audiovisual material available in the library.

Ali (2005) highlights that Boolean logic and truncation are the most often used search facilities by IIT users. Lack of printing facilities, terminals and trained staff are the major reasons that would discourage users from accessing the EIS. The survey also reveals that some 60 per cent of users face difficulties while browsing e-information.

The article titled, “Simplifying serials sourcing: A case study in decision support for managing e-journals access.” White and Eric Davies
(2005) describe work by the Library and Information Statistics Unit (LISU) based at Loughborough University, which sought to support decision making by managers in academic information and library services in the UK by providing access to scholarly information through serials. A model was built to assess a series of propositions from different publishers for electronic journals collections through the National Electronic Site License Initiative (NESLI). NESLI represented a fusion of the quantitative analysis of empirical data with the subjective assessment of a range of serials management factors and drew on the expertise and experience of LISU’s team. The results informed negotiations between NESLI and publishers and revealed useful insights into the cooperative acquisition of electronic journals.

Zhang and Haslum’s (2005) found that the University of Nevada-Las Vegas (UNLV) library’s movement is predominantly towards electronic journal collection. Their article includes evaluation of the library collection and re-evaluation of organization structure, staff resources, and workflow to find the best ways to provide library users with timely and reliable access to electronic resources is described to demonstrate how the library moved from a predominantly print environment to an electronic environment. The paper discusses the development of the electronic resources collection, re-engineering acquisitions periodicals, new responsibilities and new skills. The percentage of print only subscriptions decreased from 59 per cent in 1990 to 20 percent in 2004, while electronic journals jumped from 35% to 75%. The percentage of the library’s acquisition budget spent on electronic resources rose by at least
10% each year. This paper’s focus on changing workflows in the implementation of electronic resources is unique.

Rajendra and Joshi (2004) that all the respondents make use journal articles in their research, study or teaching. Few respondents do not use INFONET. Most of respondents feel training is essential while only few respondents get training so far. The users do not want to lose the facility due to insufficient use and feel that to increase the use some more training, as well as increase infrastructure is essential. Wider coverage of some more subjects as well as additional titles of the same subject will be useful. Full text journals rather than abstract and content services are also demanded by many of them.

Lohar and Roopashree (2004) found that majority of respondent (26.67%) make use electronic resources ‘once a week’, and 35.09% respondents are using electronic resources for finding relevant information in their specialization. Majority of respondents 42.64%, 23.26% make use Internet and CD-ROMs respectively where as 33.33% of respondents take guidance from library staff while using the electronic resources. Majority of respondents (51.67%) indicate that the information available in the electronic resources is always adequate. Majority of respondents (30.66%) make use electronic resources for current up-to-date information. Majority of respondents (23.33%) face the problem of lack of time where as 21.11% respondents indicate lack of training is the main problem for using electronic resources. Regarding the success rate of finding the required information in electronic
resources, 40.00% respondents rated that they have succeeded in the range of 75-99.

Renwick (2004) found that the response rate was 70%, of whom 97% were computer users. 73% used computers daily and 82% felt that their computer literacy level with average or beyond. Overall, it was found that faculty had high awareness of the electronic resources made available by the MSL but low use of MSL specific resources supporting the suggested problem of underutilization. Many respondents found that e-resources were important and though many felt that they were competent users, 83% were self-taught and many still expressed a need for training. It was recommended that there be greater promotion of the library’s e-resources.

Ibrahim (2004) conducted a study on “use and user perception of electronic resources in the United Arab Emirates University” and opinioned that analysis confirmed frequency of use of electronic resources was low. Reasons cited were lack of time because of the time needed to focus on teaching; ineffective communication channels and language barrier. He also showed that the frequency of use of e-resources was higher in the College of Food Systems and the College of Science than other colleges. Respondents from the College of Business & Economics used e-resources more frequently than those in Humanities & Social Sciences.

Choukhande and Dongre (2004) jointly studied on “An Analytical Study of Electronic Sources and Services Provided to Users With Special Reference
to Research Scholars of Visvesvaraya National Institute of Technology, Nagpur” and found that majority of the users make use of reproduction facility to tap the current information from the journals. Microfische/ Microfilm use is found to be less as it is outdated. Research scholars feel satisfied with the automated information retrieval services provided in the VNIT library as the individuals are provided computer, networking, Internet and OPAC facilities in their own departments. It is also observed that the research scholars access information from various channels equally as the seminars, conference, symposia provides information on current topics. It is also found that traditional sources and electronic sources are used equally and users of VNIT library face little problem as they are aware of electronic sources and services provided in the library as they have the knowledge of handling the electronic sources.

Dylyami, Marghalani, McDonals, and Tait (2004) discuss the growth of e-journals since 1992. Their study investigates the changes in electronic journal (EJ) and printed journal (PJ) collections and acquisition interims of number of titles, type of provisions and acquisition, budgets and costs between the years 1995 and 2000. The instruments used in this study were questionnaires that were distributed to six academic libraries in Saudi Arabia. The percentages were used to show the differences between the increase and the decrease of electronic journal and printed journal collections and budgets. The most important finding shows that the percentage of electronic journal
collection sharply increased in 1996 by 98% which corresponds to an increase in their budget by 125%.

Ivin and Keene’s (2004) indicates the impact on learning (other than trends in usage and some indications of events and researchers’ attitudes), has not been quantified. This paper is designed with the primary aim of testing a hypothesis the promoting e-journals can enhance learning. The analysis of the results indicates that effective collaboration between academic and library staff, the timely embedding of e-journal induction into the learning process and associating it with the assessment process can significantly enhance the learning of students.

Murlidhar et al. (2004) in a conference paper entitled “Electronic Journals: Guidelines for licensing agreements and access monitoring,” emphasize the importance of e-journals and the need for licensing agreements. This paper addresses the core issue of the changing status and the role played by the learned periodicals and their authors. The producers of e-journals are requiring “Licenses” to content in order to protect profiles by restricting unauthorized access. It indicates the role of publisher, aggregators and subscription agents in publishing e-journals. It is widely expected that a great deal of scholarly communication will move to an electronic format.

Sankaran et al (2004) discuss that electronic resources are predominant in the last few years in the information environment. The students in the library science school in India were taught how to evaluate the print forms of
reference sources as the only form available in the libraries for the users. However, the e-resources cannot simply and easily replace print resources. Librarians should be aware of the advantages and dis-advantages of e-journals and they could identify and balance the facts that would make e-journals a success or failure in their libraries.

Chandel, Islam and Gupta (2003) found that traditional sources are still dominantly used with little use of electronic media except the use of some commercial subject databases on CD-ROM. Internet use is much below the expectation. Even free e-journals are not being referred. Users, no doubt, have the aptitude to use electronic resources including internet but lack adequate facilities as well as initiation from professionals.

Jain’s (2003, p.217-32) study focuses on the Indian Council of Social Science Research (ICSSR) which was established for development of social science research in India. The present study includes 22 institute libraries and three regional libraries in different Indian states. The study analyses their annual acquisition of books; periodicals; CD-ROMs; annual budgets; computerization; hardware and software; Internet; library network; and inter-library loan and photocopy facilities available in these libraries. ICSSR institute libraries are replacing conventional storage and network systems with digital systems. Only a few ICSSR institute libraries are subscribing to EJs and having electronic documents. However, these libraries are required to understand literature growth and use patterns in the social sciences.
The article, “Trends in use of electronic Journals in higher education in the UD-View of academic staff and students,” by Bonthron et al (2003) discusses disciplinary differences in the use of electronic journals by academic staff and students, and it considers whether library services need to differentiate between staff and students when planning support services for electronic journals. Interviews were conducted with 35 staff and over 500 students. The result indicates that academic staff incorporates electronic journal usage into their working patters in different ways than students. These differences may affect attitudes toward support services designed to promote electronic journal usage. Disciplinary differences also need to be considered.

Emery (2003) conducted a domain analytic study in four scholarly disciplines, under the title “Reasons for the use and non-use of electronic journals and databases.” She opined that today’s library users are Web users but not always Web educated. As more and more of a library’s print journals collection becomes part of the library’s electronic collection, one must taken on the role of guiding and teaching students how to navigate and learn from their interactions with electronic journals. The teaching of electronic journals educated users about how to use and cite them effectively.

King (2003) conducted a study under the title “patterns of journal use by faculty at three diverse universities.” He writes that university libraries are rapidly moving toward electronic journal collections. The readership surveys at three universities with different levels of e-journal implementation
demonstrate how transition to electronic journal collections affects use patterns of faculty and staff. When the survey was done (2000), the University of Pittsburgh acquired a large electronic journal collection, with some duplication with print journals. Although faculty use of print subscriptions remains significant, electronic personal subscriptions are used frequently by faculty even though they may access the print versions freely through the library. On the other hand, electronic journal use is very high when available in library collections.

Robertson’s (2003) study “The impact of electronic-journals on academic libraries: The changing relationship between journals, acquisitions and inter-library loans department roles and function,” looks at the impact of e-journals on the relationship between acquisition, inter-library loans and journals departments in academic libraries. The study shows that although e-journals may be affecting department in libraries, other factors may be present, e.g. budget cuts, staffing levels, etc. At present, it is still too early to judge the full impact of e-journals on library.

Sahu’s (2003) study, “Online journals: How to get up to uses desktop. A Case Study,” emphasizes the importance of online journals. He stated it varies according to kind, along with their methods of access and described procedures for having online journals accessible at the users desktops. He uses experience and given a brief overview of Inter University Centre for
Astronomy and Astrophysics (IUCAA) and its library, and which given its users full-text access to online journals.

Singh, Vajpai, and Kumar’s (2003) study, “E-journals: A challenge for university’s library situated in remote area, “examines the modern impact of the internet on the whole world. The educational system has also change, not just in India, but all over the world. Now we are looking to change media for faster development. Nowak students, teachers and research scholars are keenly interested to attend the libraries at college or university level, especially at those which are situated in remote areas. The libraries situated in remote areas should be provided special funds to upgrade resources, e.g. Internet facilities, computers, etc. Staff should be trained to manage e-journals and to help the readers and regular users.

Cox (2003) examines the proposition that EJs provide enhanced value for their costs when compared to print subscriptions. At the journal, article and user levels, the author reviews the pricing policies of two different journal publishers, one commercial and one non-profit. According to this study although much research remains to be undertaken on the basis of standards, and definitions must be agreed on the existing evidence indicates that both libraries and their readers benefit significantly from EJs in the areas of cost per use and convenience of delivery of scholarly and research literature.

Bluch et al. (2002) state that a successful selection is carried out systematically, and ultimately results in improved management and control of
the serials collection. If a more clearly articulated strategy for managing electronic serials were developed, some of the redundancy in the storage of licensing information in databases belonging to the publisher, the agent, and the library could be eliminated. Serials librarians must cope with a constant flow of changes to titles, publication frequencies, fund codes, and even vendors. Managing these changes consists of two distinct processes:

(i) Finding out that a change is needed; and

(ii) Having a system that makes the changes easy to accomplish

Hewitson’s (2002) study, “Use and awareness of electronic information services by academic staff at Leeds Metropolitan University – A qualitative study” explores the results of an investigation into the awareness and extent to which the university’s academics staff use and assimilate Electronic Information Services (EISs) into their work. The research was conducted using two methods; a quantitative study involving a questionnaire mailed to a random stratified sample of 200 university staff and a qualitative study, which addressed four specific areas; the characteristics of the respondents (age, gender, faculty); the perceived feel of the information technology (IT) literacy of staff; the frequency of use by academic staff of different EISs offered by the university and academic staff, and perception of students. The study investigated a number of other areas including: how academic staff of the university obtained information for their work; how aware university staff are of EISs; how confident are academic staff in using EISs and the barriers that
exists to their use; the extent to which academic staff integrate the use of EISs into students’ educational lenience; and what the university can do to support staff better in their use of EISs.

Lee states that the KRIC (Korea Research Information Center) was unable to buy full-text articles of every desired foreign journal and provide them of Korean researchers without additional charge due to the astronomical price demanded by the copyright owners. The KRICs proposal was that paying by ‘number of users’ should be applied, since there were relatively few users on the system at a given time because this system was available only for registered researchers (Lee, 2002) Ratchatvom stresses the importance for enhancing the effectiveness of the use of EJs (Ratchatavom, 2002).

Ke et al. (2002) analyze usage of the Taiwan based Science Direct Onsite E-journal System, one of the largest and most heavily used full-text science, technology, and medicine (STM) databases worldwide. The study suggests that the administrators of electronic resources understand the server load patterns over time and take them into consideration when scheduling hardware or software maintenance tasks. In order to achieve an optimal trade off among cost, efficiently, and size of storage devices, they should take into consideration the frequency of use of segments of electronic collections.

Emery (2001) states that although a national library has extra dimensions to consider, all types of libraries have to consider the effect of electronic acquisitions on their organizational structure. Savings from print
and CD-ROM cancellations were taken into account when assessing the total amount spent; this often proved to be a complex calculation, with various permutations of overlapping categories being considered. It can take a variety of forms, reflecting the size, nature and structure of the library. Each organization should review the different models, ranging from extending the span of existing jobs to creating new section, and select the one best suited to its own circumstances.

The pre-conference to the 20\textsuperscript{th} Annual Charleston Conference on Evaluation, Selecting and Acquiring Electronic Resources focused primarily on the evaluation of electronic resources after purchase. The premise being that tracking use of the many electronic resources offered by libraries is one of the most difficult challenges facing collection development librarians and the creators of electronic products. A lack of context may be present regarding the timing of statistics collection. Librarians need to be careful not to compare statistics drawn from one time frame with those drawn from another. There are no standards for measuring use across all of the formats in which information can be accessed, for example print, CD-ROMs, and Web-based materials. It was concluded that there is a need to develop statistical sets for internal use before attempting to provide data to customers (Gardner, 2001).

Schulz (2001) outlines the challenges inherent in EJs that have led some libraries in Australia to develop databases to assist in their management. These challenges include: new subscription options, new ways of providing access
and new staff involved in acquisition; an increase in complexity in the supply chain; license restrictions; the volume and volatility of EJs and, changes for collection development.

Research findings from PURCEL purchasing decisions of electronic resources in Higher Education Institution (HEI), show a weakness in existing models of purchase decisions in meeting the challenges of the electronic environment. They suggest that institutions may consider the short-term option of adopting separate funds for print and e-resources. The study also concludes that an appropriate policy framework for purchasing decisions for e-resources underpins effective assessment of potential purchases and establishes standards against which usage and user satisfaction can be measured (Joint Information Services Committee, 2000).

Gessesse (2000) examines the concepts and problems that an academic library must consider in order to align its collection development activities with the changing environment of digital librarianship in the twenty first century. The study reported that the availability of EJs made libraries re-examine and redesign other collection development practices.

Mongomery’s (2000) studying the Drexel Library describes the impact of EJs on staffing, shifting workloads, and new job responsibilities. Administration, management, and the computer network infrastructure all saw increases in responsibility. Mercer (2000) describes the problems encountered in trying to collect and analyze vendor information for use in service
evaluation and decision-making. Results show users accessing the EJs in numbers far exceeding the print collection.

The e-libraries programme (eLib) which was funded by the Joint Information System Committee (JISC) in the UK explored the pricing models to EJs subscriptions, licensing agreement, and infrastructure requirements. JSTOR (Journal Storage: The Scholarly Journals Archive) is building journal backfills related to costs (JSTOR, 2000).

To assess whether technology made electronic full text journals and journal articles in academic libraries a viable method of scholarly communication, Shemberg and Grossman (1999) surveyed all the ARL (Association of Research Libraries) institutions in the USA. They found that libraries were equipped with web-capable computers available for their users as well as the online public across catalogues (OPACs) and other e-services.

Ashcroft and Langdom (1999) investigated the benefits of and barriers to the purchase of e-journals in university library collections in the UK and North America. The North American Libraries demonstrated a higher level of evaluation (64%) than the UK (30%). Regarding decision-making, they found that 38% of UK librarians were responsible for decision making, while the North American respondents showed that faculty made these decisions, usually with librarian assistance or the assistance of collection development professionals.
Brennan et al. (1999) describe the experience of multi-sites higher education library consortium in purchasing EJs and databases. Factors such as database features, coverage, search features, and delivery options were considered important.

Diedrichs (1999) states that vendors and agents have a plethora of reports, databases, and tools that can be used by libraries in support of collection assessment as well as the day-to-day process of acquiring library material. The paper reviews the current status of these tools, particularly as they relate to monographic acquisitions including selection, in-print titles, out-of-print titles, and exchange of duplicates and serials acquisition including management reports, document delivery, and EJs.

Tomney and Burton (1998) conducted a study on “Electronic Journals: Study of Usage and Attitudes among Academics” and investigated that there are more users of electronic journals among academics in the Science and Engineering faculties than in the Arts or Business, while the results from the Law Department, where some staff are involved in an electronic journal project, indicate how influential the atmosphere within a department can be on the level of usage. The principal limiting factor is that of time to find electronic journals: academics initially simply need time to come to terms with the new technology and to locate electronic resources.

Finholt and Brooks (1997) in their study “Analysis of JSTOR: practice of access to on-line journals” investigated that faculty members from
humanities, economics and social sciences use online catalogues, full text electronic journals, databases and abstracting & indexing databases most frequently and they expect to them more extensively in the future.

Borgman… et al (1996) in his study “Re-thinking online monitoring method for information retrieval system: from search product to search process” concluded that use of online e-resources and retrieval systems requires a basic knowledge and searching skills.

Harter and Kim (1996) in “Electronic journals and scholarly communication: a citation and reference study” observed that the rate of e-resources use was extremely low, only 1.9% and 0.2% respectively, for the e-journals out of total articles examined.

The literature of e-resources reports the following user-centred barriers to e-resources use: a lack of skills in how to use information sources, a lack of appropriate reward for electronic scholarly communication, a lack of consistent technical support and provision and a lack of time to be spent on searching for information (Tompsett and Alsop 1997; Macias-Chapula 1995; Ray and Day 1998). Borgman (1996) concludes that use of online e-resources and retrieval systems requires a basic knowledge of computing and searching skills. In a study related to the types and frequencies of references to online sources, Harter and Kim (1996) found that the rate of e-resources use was extremely low, only 1.9% and 0.2% respectively, for the e-journals out of the total articles examined. In a similar study (Tonta 1995) reported that out of a total of 97
articles, only two contained direct references to networked information sources. In a JSTOR survey, it was found that faculty members from humanities, economics and social sciences use online catalogues, full-text electronic journal databases and abstracting and indexing databases most frequently and they expect to use them more extensively in the future (Finholt and Brooks 1997). Studies of e-resources reveal differences in use. Faculty members and other professionals in the field of science, math and medicine were early adopters of electronic journals and other digital library resources and remain the heaviest and most enthusiastic users (Kidd 2002; Voorbij 1999; Hiller 2002; Rowley 2001). Studies confirm that business school faculty members were early adopters (Tomney and Burton 1998) as well. They reported the highest use while Palmer and Sandler (2003) found economics faculty to be the most enthusiastic users of electronic journals. On the other hand, faculty members in history, education and the arts have been slower to adopt electronic journals.

Natarajan et al (2010) in their survey of 117 faculty members and research scholars on use and user perception of electronic resources in Annamalai University reveals that despite the availability of wide range of e-resources the frequency of their use was low. The reasons identified for this are lack of time lack of subject coverage; and slow downloading. The authors concluded that the use of electronic resources in found to be significant among the users of the Annamalai University. This is quite natural and expected in the present day implementation environment.
3.8 INFERENCES

In the review of related literature in the field of usage pattern of library resources nearly papers comprising journal articles, reports, conference proceedings, chapter from books on different facts such as usage of library documents, use of electronic media, awareness about library documents and infrequent use of resources and services by varied users of libraries have been reviewed, the following are the inferences of the reviews of papers which were analyzed.

The review highlights the importance of library resources and services, and shows how the user studies have been able to make an impact on the user community and libraries as well. The review examined the degree of use of documents by undergraduates, research scholars, social scientists, engineers, medical professionals and consider and the reasons for use and non use, as well as methods of access to these materials.

The reviews have surveyed the literature on the lack of utilization of library collection and discussed and evaluated the need for increased awareness among users. The reviews described the problems stemming from inadequate publicity, poor distribution and underuse.

The review highlighted how librarians can help facilitate access to these documents by bibliographical control and creating indexes of available materials. It was found that most of the review provided the outcomes in general and specific terms. There was no exhaustive study about the use
pattern of engineers. While searching for the reviews, the researcher found that there were only a very few studies that were conducted in the recent years about the use pattern of library documents by engineers in India and abroad. Therefore, the researcher proposes a further study to bridge the gap between outcomes of reviews and use pattern of library resources by engineers working in Chennai Corporation by incorporating the variables such as user Awareness, Electronic Media, Problems faced which are essential for an exhaustive study on use pattern of library resources and services by engineers of Chennai Corporation.
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