CHAPTER 2
LITERATURE REVIEW

Giorgi and Jean-Yves (2010) found that the size of digital libraries is increasing, making navigation and access to information more challenging. Improving the system by observing the users’ activities can help at providing better services to users of very large digital libraries. In order to understand which options users can select and which of them were used or ignored, they first describe the CDS production environment, underling its core functionalities and possibilities. Then they describe the logging phase and the type of information collected. Finally, they explain the automated extraction of additional information and the results obtained returned.

M. Rami Ghorab and Johannes Leveling (2010) They carried out an analysis of search logs with the objectives of investigating how users from different linguistic or cultural backgrounds behave in search, and how the discovery of patterns in user actions could be used for community identification. The findings confirm that users from a different background behave differently, and that there are identifiable patterns in the user actions. The findings suggest that there is scope for further investigation of how search logs can be exploited to personalize and improve cross-language search as well as improve the TEL search system.

S. A. Fazlur Rahiman and M. Tamizhchelvan (2011) investigated the information needs, use of information channels, information seeking process and information seeking behavior of students of colleges affiliated to Anna University, Coimbatore. The study attempts to know the primary dependent source of students to gather information. On the sidelines, the study enables to know the statistics of the library resources and the infrastructure. The study also investigates the sufficiency of the library resources and the level of satisfaction on library services. The study was conducted through survey by distributing questionnaires among 650 students and 74 percentage of students responded.

Gharib Tarzeh Zahra and Nabizadeh Tahere (2012) Evaluated digital libraries via the conceptual model of Rahman. For this purpose, using Cochran formula, a sample size of 100 people was achieved through purposeful sampling method at 5% level. The results showed that
service quality and time by satisfaction creation in the users and system service quality by motivating the users contribute to the user success.

Umesh (2012) mainly focuses on the concept of Knowledge Management and the role of library and information professionals in managing the knowledge and information in the digital environment. It also highlights the importance of library and information professionals in the organizations such as knowledge creation, acquisition, preservation and sharing knowledge and information. Also describes the development and use of Information and Communication Technologies (ICT) in the library and information centers.

Goutam Biswas and Dibyendu Paul (2009) found that Dspace and Greenstone Digital Library Software have helped spread the practical impact of digital library technology throughout the world, with particular emphasis on developing countries. As Dspace and Greenstone enters its second decade, they took a retrospective look at its development, the challenges that have been faced, and the lessons that have been learned in developing and deploying a comprehensive open-source system for the construction of digital libraries internationally. Open source digital library packages are gaining popularity nowadays. To build a digital library under economical conditions open source software is preferable. This identify the extent of adoption of open source digital library software packages in various organizations through an online survey. In their work and online survey has been done to find out the usability of these open source digital library software. It lays down the findings from the survey. They also try to compare with the features of this popular OSS digital library software.

David Nicholas Paul Huntington (2006) found that deep log analysis (DLA) techniques, a more sophisticated form of transaction log analysis, to demonstrate what usage data can disclose about information seeking behaviour of virtual scholars – academics, and researchers. DLA works with the raw server log data, not the processed, pre-defined and selective data provided by journal publishers. It can generate types of analysis that are not generally available via proprietary web logging software because the software filters out relevant data and makes unhelpful assumptions about the meaning of the data. DLA also enables usage data to be associated with search/navigational and/or user demographic data, hence the name ‘deep’. In this
connection the usage of two digital journal libraries, those of Emerald Insight, and Blackwell Synergy are investigated. The information seeking behaviour of nearly three million users is analyzed in respect to the extent to which they penetrate the site, the number of visits made, as well as the type of items and content they view.

Kirti Singh and Taru Mittal (2012) Examined some of the significant issues in the present day Library and Information System (LIS) like its structure, collection strategy, preservation, Information technology is a tool for KM, user services in libraries, user services in knowledge Management, access to information, technological issues and models of communication etc.

Peter Ingwersen (1999) Found that major focus for discussion is the availability of improved intellectual access to knowledge sources in a digitized world. Also found that purposeful knowledge organization, information filtering, and management skills are mandatory a priori elements that support accessibility and constitute the future roles of information specialists and services. It is argued that the complexity of the digital library infrastructure determines the degree of human involvement. A three-level digital library infrastructure scenario of increasing complexity serves as the framework for the discussion, the stand-alone, the distributed, and the integrated digital library.

Michalis Sfakakis and Sarantos Kapidakis (2002) compare the usage of a Digital Library with many different categories of collections, by examining its log files for a period of twenty months, and they concluded that the access points that the users mostly refer to, depend heavily on the type of content of the collection, the detail of the existing metadata and the target user group. They also found that most users tend to use simple query structures (e.g. only one search term) and very few and primitive operations to accomplish their request. Furthermore, as they get more experienced, they reduce the number of operations in their sessions.

Bashorun, M. Tunji, Isah Abdulmumin (2011) Explored that, analysis revealed frequency of use of electronic resources was low. Reasons alluded to were lack of time because of the time required to focus on teaching; lack of awareness to electronic resources provided by the library; power outage, ineffective communication channels, slow network and inadequate searching
skills. They also recommended adequate Information and Communication Technologies (ICT) training for all categories of academic staff and provision of adequate power supply.

Aphrodite Malliari and Daphne Kyriaki-Manessi (2007) focused on real-time user searches in a Greek academic library OPAC (University of Macedonia Library) in relation to user profile. Using as a test bed a Greek academic library and its OPAC’s transaction logs along with a system implanted questionnaire, data were gathered, processed and analyzed using multivariate statistical analysis techniques. The suggested multivariate statistical method is designed to become a tool for analyzing qualitative data and to be used in a variety of library applications. It is also particularly helpful in analyzing cross-tabular data in the form of numerical frequencies and allows all associations amongst pairs of variables to be analyzed as well as each association between a variable and itself.

Marco Scarno (2010) behaviour of its users were analyzed by considering their “traces”, which are stored in the web server log file. Using several web mining and data mining techniques they discovered a gradual and dynamic change in the way articles are accessed. In particular there is evidence of a journal browsing increase in comparison to the searching mode. Such phenomenon were interpreted using the idea that browsing better meets the needs of users when they want to keep abreast about the latest advances in their scientific field, in comparison to a more generic searching inside the digital library.

Enric Mor, Muriel Garreta-Domingo (2007) describes a hybrid methodology to study users in ongoing relationships based on three levels of user data analysis. Most user-centered design methods are ideal for the analysis of users’ needs, wants, and expectations at a specific point in time. Their three-level approach methodology combines qualitative and quantitative data for analyzing user behavior over an extended period of time.

Gulbasar & Prof. Saoud Sarwar (2013) offer a new look at what can be expected from a digital library system based on contemporary developments in Information and Communications Systems and Technology. First, they sketch out the basic functions which are provided to support finding and accessing material by a reader. Next they explain some extended functions which
support the use and re-use of documents - links and annotations – and the need to support learners in addition to readers and writers. Finally, they present their visions for a modern digital library and e-Learning portal system which includes for example intelligent and conceptual search support including results visualization, white lists, and adaptive user interfaces.

Janet Webster, Seikyung Jung and Jon Herlocker (2004) They focus on making digital resources more accessible through an innovative search interface that incorporates collaborative filtering. New approaches to search interfaces will help make the growing wealth of online content more accessible and useful. They discusses the problem, which explains how collaborative filtering works, describes the System for Electronic Recommendation Filtering (SERF), and then presents initial results from an installation in the OSU Libraries. The productive collaboration at OSU between the Libraries and EECS portends the future of development of search systems; by working together, we can harness the expertise of librarians, computer scientists, and information users to develop more useful search interfaces and increase access to the libraries’ resources and services.

Peter Ingwersen (1999) They have analyzed the role of libraries and information professionals in a digital library environment. The major focus is the availability of improved intellectual access to knowledge sources in a digitized world. They argues that purposeful knowledge organization, information filtering, and management skills are mandatory a priori elements that support accessibility and constitute the future roles of information specialists and services. It is argued that the complexity of the digital library infrastructure determines the degree of human involvement. A three-level digital library infrastructure scenario of increasing complexity serves as the framework.

G. Manikandan & S. Mohamed Esmail (2013) present the impact of information technology on information seeking behaviors of users of selected stated university of Tamil Nadu. A questionnaire was prepared and distribute among the faculty, research scholar students of the sample universities the result of the study provides the information about the respondents opinion recording their information gathering habits, usefulness of training programme, ICT facilities in their library and made of obtaining journal articles for their study and research.
Dr. Preeti Mahajan (2009) Focuses on the academic information needed by respondents, which resources they prefer, whether they are satisfied with the library collections, and the general pattern of information-seeking, with special reference to the influence of course of study. Descriptive survey method was used and data was gathered via questionnaire from 250 users. Respondents were also asked for their opinions and suggestions during an interview.

Dr. D. Prabhavathi (2011) Innumerable types of information, in a large variety of formats and from many different locations, are all available at one place. In the modern society, the types of information and the media which present them have become manifold and multifarious, offering men and women a choice from a wide spectrum of vast selection. Regardless of the group in a human society that is discussed, each one bases its actions upon current information and discards the earlier data. Philosophers emphasize the direct, experiential acquisition of knowledge in the material, physical plane of existence as the most proper form of information. So, no one can deny that knowledge and information are vital.

Rajesh Kumar Sharma, Dr. Lokesh Sharma (2013) explore information seeking behavior among post graduate management students, research scholars and faculty related to their process of inquiry and academic activities. Accessibility is a key factor that affects post graduate students’ choices of resources and services. Libraries need to strive to provide more electronic resources that are easily accessed within a user-friendly environment. Post graduate students, research scholars and faculty have varying abilities and experience related to finding and using resources. Libraries can provide instruction throughout the term for students at all levels, targeting post graduate students, research scholars and faculty who are not familiar with American libraries. Libraries need not assume the entire burden of instruction but can take a lead and work with academic staff to help educate them as to the resources available and how to find them.

Jaspal Kaur Bhatia, Venkata Rao P (2011) They focus on a survey of the information seeking behaviour of students at Dev Samaj College, Chandigarh. The purpose of the survey was to explore the use of information technology by the college students for seeking information
and to know how they access e-resources. The study made an effort to determine the sources of accessing e-resources in particular. It was revealed that less than fifty percent of the respondents were not aware about e-resources. It was found that the students of the College use search engines as a major source to access e-resources for their information needs and for the purpose of updating knowledge on their subjects of interest. In order to overcome the hindrances in accessing the e resources, the study recommends awareness programmes for the students and to provide training on web searching and retrieval skills.

Tuhina Choudhury (2013) attempted to find out the information needs and seeking behavior of the users of Assam University Library, Silchar. Survey method was used and data was collected from 500 users of the library by administering questionnaires. The results of the study indicate that guidance and training is required for the use of library resources and services. Textbooks and periodicals are the most popular sources of information for the users. Library automation was found to be the need of the hour by most of the faculty members and research scholars.

Weiyin Hong, James Y.L. Thong, Wai-Man Wong, Kar-Yan Tam (2001) Explore that there is a need for research to identify the factors that determine users’ adoption of digital libraries. Using the technology acceptance model (TAM) as a theoretical framework, they investigates the effect of a set of individual differences (computer self-efficacy and knowledge of search domain) and system characteristics (relevance, terminology, and screen design) on intention to use digital libraries, the results strongly support the utilization of TAM in predicting users’ intention to adopt digital libraries, and demonstrate the effects of critical external variables on behavior intention through perceived ease of use and perceived usefulness. All of the individual differences and system characteristics have significant effects on perceived ease of use of digital libraries. In addition, relevance has the strongest effect on perceived usefulness of digital libraries.

Umesha, Chandrashekar M. (2013) focus on the Information Literacy (IL) is becoming domain specific and hence the study is undertaken specifically for the dental professionals about the information needs, seeking and searching behavior, using descriptive survey of 623 dental
professional (PG students and faculty members) across Karnataka state. During the study, transition management from print media to electronic media is becoming important. It has found that impact of technology on scholarly communication also is an important aspect in developing a suitable model, which depends on the design and integration of IL to the activity of the users like learning, research and point-of-care.

Elaine G. Toms, Christine Dufour and Susan Hesemeier (2004) they have proposed a method for assessing user experience. Normally evaluation is based on usability or on the efficiency of or effectiveness of focused information search tasks. Yet all experiences with libraries (whether physical or virtual) need not be for the explicit purpose of finding, acquiring and using information. The experience and its playfulness and pleasure have equal value. To assess this experience, we modified a experiential value scale developed for online shopping and have tested it in the context of culture and heritage websites.

Dr. Sadu (2013) focuses on the Contemporary libraries which are under serious threat due to the increasing pressure of achieving higher level of performance in this Information and Communication Technologies (ICT) environment. He says that Academic libraries are facing many challenges posed by the contemporary environment, most of which are the result of ICT and Digital Revolution. He focuses on the impact of Digital environment on library professionals. And the need for acquiring core competencies and new skills to manage the modern day academic libraries. It further discusses different sets of skills required for Library Professionals to manage the contemporary change brought up by technology accelerated environment.

Kudakwashe Danmore, Keithy Tapfumaneyi (2013) focus on the crucial importance of the ability of ICTs to break the barriers of time and distance that makes them an asset in the provision of library and information services. More so in Open and Distance Learning (ODL) institution’s library services as it provides electronic information and knowledge in support of various study programmes and researches to a geographically spaced clientele. They highlight the challenges which librarians face in integrating traditional information delivery based on print with modern computerized and networking delivery of digital information. They addresses the
issues of ICT duality capacities as a basic infrastructure for information and communications, highlighting the dual challenge of ICT development and ICT for development. The survey noted accessibility challenges experienced by ZOU Mashonaland east library in accessing e-resources and their preference for print resources.

Salina Zawawi, Shaheen Majid (2001) they focused on the information needs and information seeking behavior of health science professionals in developing countries, particularly in Malaysia. They explore the information needs and seeking behavior of biomedical scientists at the Institute for Medical Research (IMR), Malaysia, and the oldest and leading medical research center in the country. A total of 84 questionnaires were distributed to the biomedical scientists and 54 filled-in questionnaires were returned with an overall response rate of 64.3 percent. The findings indicated that biomedical scientists use a variety of information sources to satisfy their information needs. Biomedical scientists who were solely involved in research work considered journal articles as the most preferred information source. On the other hand, researcher-cum-lecturers considered books as the most preferred information source in meeting their information needs. Both categories of scientists also considered interaction with colleagues as an important source for satisfying their information needs. They also revealed that in spite of having access to modern and up-to-date digital information sources, most respondents still preferred using printed materials. Nonetheless, CD-ROM was the most utilized IT based source. For the Internet-based information sources and applications, e-mail was the most popular while other applications were used infrequently.

Maghesh Rajan M, Jasimudeen S (2012) They focus on the user attitudes, understanding and user interest of e-book collection in the Mahatma Gandhi University Library and how best these e-resources are helpful for the learning higher education and research. The user access difficulties and other related problems associated with the e-books are deal with the survey study conducted.

Doreen Yemisi Olorunfemi and Janneke Mostert The purpose of their study is to examine the information seeking behaviour of undergraduate law students in a developing country. They also have reviewed literature on the information seeking behaviour and ICT utilisation skills of
law students, using Nigerian universities’ undergraduate law students as a case study. The review focuses on legal information, library information and its relevance to lawyers and law students, Information Communication Technologies (ICTs) in the legal profession, information services for legal professionals, information needs of law students, the information seeking strategy of law students, ICT utilisation skills of law students, law students’ utilisation of digital libraries, challenges and problems of digital libraries, and legal information seeking behaviour and ICT skills of law students in Nigeria.

Santoshi Halder, Anjali Roy (2010) Their study has undertaken the objective to explore the influence of the five personality dimensions on the information seeking behaviour of the students in higher educational institutions. Information seeking behaviour is defined as the sum total of all those activities that are usually undertaken by the students of higher education to collect, utilize and process any kind of information needed for their studies. They collected data from 600 university students of the three broad disciplines of studies from the Universities of Eastern part of India (West Bengal). The tools used for the study were General Information schedule (GIS), Information Seeking Behaviour Inventory (ISBI) and NEO-FFI Personality Inventory. Product moment correlation has been worked out between the scores in ISBI and those in NEO-FFI Personality Inventory. Their findings indicated that the five personality traits are significantly correlated to all the dimensions of information seeking behavior of the university students.

Gobind G. Chowdhury (2001) focuses on the point that, whether we need reference services in digital libraries, and, if so, how best to offer such services. Current digital libraries focus more on access to, and retrieval of, digital information, and hardly lay emphasis on the service aspects. This may have been caused by the narrower definitions of digital libraries formulated by digital library researchers. The study looks at the current state of research in personalised information services in digital libraries. It first analyses some representative definitions of digital libraries in order to establish the need for personalised services. It then provides a brief overview of the various online reference and information services currently available on the Web. He also briefly reviews digital library research that specifically focuses on the personalisation of digital libraries and the provision of digital reference and information
services. Finally, he proposes some new areas of research that may be undertaken to improve the provision of personalised information services in digital libraries.