CHAPTER II

REVIEW OF LITERATURE

Review of literature shows that many studies and surveys have been conducted on the usage of electronic resources by faculty, students and research scholars in academic institutions and universities. A review is an essential step to get a complete picture of what has been done and suggested already with regard to the problem under study. Review brings about deeper insight and clean perspective of the overall field. A familiarity with the literature on any problem area allows one to discover what is already known, what others have attempted to find out, what methods of attack have been promising and what problem remains to be solved. It is an indispensable step for the researcher to understand the problem. The study of the previous research findings gives a clue to the potential areas of fresh research and missing links in the process of research.

Minner-van-Neygen (1982)\(^1\) conducted his study of students’ attitude towards the behavioural approach to library and information sciences as an experiment involving the group as an agent of change. The analysis of the data revealed that there is a significant correlation between sex level of the exposure to the behavioural science, attitude towards innovation and change in libraries towards the behavioural sciences and towards psychology.

Smith (1987)\(^2\) reported that about one-half of the respondents from Pennsylvania State University relied more on their personal collections and the materials borrowed from other libraries. Guest (1987) noted that 85% of the
respondents relied on their personal collection as a major source of information for teaching and research. The author also found that libraries were as a lowest source of getting information.

Sethi (1990)\(^3\) surveyed 256 social science faculty members in Indian universities. The study found that respondents preferred journals, books, government documents and reference services to fulfill their information needs as proceedings, dissertations and theses, newspaper clippings and other non-book sources are in lesser use.

Hart (1993)\(^4\) investigated the information seeking activities of 31 members of the Standard University academic community over a two week period during the 1990-91 academic year. She adopted the naturalistic approach and employed qualitative techniques for the data collection using mainly personal interviews. Informants’ perception of their information environment is expressed in positive terms, and there is a close relationship between knowledge of the information environment and the sources used. Information seeking is embedded in the day-to-day activities and relationships of the participants and is triggered both by the articulation of need and availability of information. A large number of needs are satisfied by sources the information created or organized themselves and by interpersonal information sources. The findings of the study indicated that the action of information seeking originated from a wide variety of needs like personal, professional and entertainment.

Al-Shanbari and Meadows (1995)\(^5\) observed that scholars in developing countries prefer sources because of the inadequacy of library collections and information infrastructure, ineffective library services, and lack of trained and
cooperative library staff. Majid and Kassim (2000) studied the law faculty of the International Islamic University Malaysia, and found the ranked books as the most important information sources for teaching and research followed by law reports and statutes.

Schrock (1995) created a set of materials to help students “critically evaluate a Web page for authenticity, applicability, authorship, bias, and usability.” The author designed a series of checklists for use at the elementary, middle, and secondary school levels in both English and Spanish, which are available in both html and pdf formats on website. In a revised article, she has provided criteria for evaluating Web pages. Although both general and commonsensical in nature, her suggestions are a practical guide that students at all levels could find them useful as they navigates the web.

Alexander and Tate (1996) provided an instructional model with two goals: (1) “Provide materials to assist in teaching how to evaluate the informational content of Web resources”, and (2) “Provide a bibliography of materials on applying critical thinking techniques to Web resources”. Their bibliography contains web evaluation articles and books as well as links to additional web evaluation sites, several of which deal with more scholarly issues such as the critical analysis of information sources, including journals. They also make available several evaluation instruments that they designed for different types of web pages because they contend that different criteria are needed for different types of pages.
Beck (1997)\textsuperscript{8} viz. five criteria for evaluating web sources accuracy, authority, objectivity, currency, and coverage provides both useful descriptions of what to look for and a rationale for each criterion. The author also provides suggestions to instructors for successful internet assignments such as providing guidance, checking the site to make sure it is still functional, making sure students record time and date of access, and using established, trustworthy web guides and directories, among others.

Hirsh, Sandra (1997)\textsuperscript{9} stated that “younger students achieved lower success rates on complex-browsing tasks than on simple-browsing tasks. Many younger students also had difficulty in understanding the vocabulary on some of the bookshelf headings and that some of the cataloging vocabulary used in the system was beyond the younger students reading levels” Results from Hirsh’s study found that domain knowledge influenced the success of search on all types of tasks.

Becker (1998)\textsuperscript{10} conducted a study on the internet use by 1150 teachers from public and private schools in the U.S. The study revealed that 90% of the teachers had internet access. More than half the strength of the teachers had internet access at home. A majority of the teachers used internet to find information resources for preparing their lessons.

Hong (1998)\textsuperscript{11} reported that there were no significant differences in undergraduates’ attitudes toward computers and computer anxiety for male and female undergraduates and their different fields of study. However, low computer anxiety level and high self-efficacy with computer skills were significant predictors of success in computer-related courses.
Ray and Day (1998)\textsuperscript{12} noted that the use of online electronic resources and retrieval systems require a basic knowledge of computing and searching skills. This is because library databases use web based technologies that may not be very different from the general web based resource.

Singh (1998)\textsuperscript{13} conducted a research study on the use of internet by the librarians in Malaysia. The main findings of the study indicated that 90\% of the respondents used the internet for work related purposes. Most of the respondents were recent users.

Tomney, Hillary and Burton, Paul (1998)\textsuperscript{14} assessed the faculties’ attitudes towards electronic journals they examined the current level of use of these publications by university academics in five faculties. Consideration is given to both users and non-users, examining why they use or do not use this medium. The perceived advantages and disadvantages of electronic publication are also examined. The results suggest that, although the actual number of academics using electronic journals at present may be low, academics are willing to try this new medium. There are more users among academics in the science and engineering faculties than among those in the arts or business. This paper conducted that 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.

Bavakutty and Salih Muhamed (1999)\textsuperscript{15} conducted a study at Calicut University, which showed that students, research scholars, and teachers used the internet for the purpose of study, research and teaching respectively. The purposes of internet use were: sending and receiving e-mails in connection with academic
requirements, making a search on library catalogues, downloading images and communication with the peer.

Challener (1999) investigated artists and art historians teaching in five liberal arts colleges and three universities. Results found that they need information for teaching. The participants, almost all, subscribe to art journals and many read newspapers. They visit different libraries frequently. A large percentage of both art historians and artists use the computers for teaching.

Kooganurmath and Jange (1999) conducted a study, which revealed that a majority of the users used the internet for communication, followed by the access to information. More than 70% of the users used it for higher studies and only 39% of them used it for discussions with peer groups. The most used services of internet were e-mail, the web, discussion forums, FTP and Telnet.

Mahajan and Patil (1999) revealed that the purpose of using internet by research workers at Pune University was to conduct literature search; for students was to know the curriculum based information; for teachers to find the supporting information to write articles.

Majid (1999) found a significant relationship between computing skills and use of electronic resources in the library including online public access catalogues (OPAC). Pullinger (1999) observed that the extent to which the use of e-journals becomes part of normal research practice depends not only on the discipline concerned but also on the role and status of the researcher, the resources and on the specific information needs. The effective use of electronic resources
requires necessary relevant computing skills in a study of faculty’s use of electronic resources.

Voorbij (1999)\textsuperscript{20} examined the use of internet amongst students and academicians in the Netherlands. A questionnaire was distributed among 1000 members of the academic community and three focus-group interviews were also held with faculty members. The study revealed that the web was being used primarily to search general, factual, ephemeral or very specific information. The study also revealed that students and academicians faced many problems while searching the web.

Williams (1999)\textsuperscript{21} reported the use of information technology and the internet in his project entitled “Information Technology in Michigan: Adult and Teen Survey Report”. The results indicated that the majority of the respondents used the internet at least once a week and 45% of them at least once a day.

Ali, Naushad (2000)\textsuperscript{22} conducted a study at Aligarh Muslim University, Aligarh. The study showed that more than 50% of the study population was satisfied regarding the timings of the internet service, but were not satisfied with staff’s cooperation, and reservation facility. Majority of the respondents were not happy with the number of nodes available.

Chandran (2000)\textsuperscript{23} conducted a study at S.V University, Tirupathi, which showed that more than 25% of the respondents used the internet for 2-3 times a week and more than 56% of the students used it for accessing information. A majority of the respondents used the web and e-mail services of internet. The purposes of using internet included communication and information gathering.
The sources used for identifying information about internet included website itself, journals and magazines, staff and newspapers. A majority of the respondents used general websites as compared to recreational and discipline oriented websites.

Laite (2000)\textsuperscript{24} surveyed 400 graduate and undergraduate students from Shippensburg University. The survey showed that 57.6\% of the undergraduate students used the internet 1-2 times per week and another 37.1\% of them used it 1-2 times daily. More than 50\% of the graduate students used internet 1-2 times per week and 37.7\% used it 1-2 times daily. The survey showed that the most used internet service was e-mail. A 100\% of the graduates and undergraduates students used e-mail service.

Shaw and Giacquinta (2000)\textsuperscript{25} discovered that educational technology students reported using computers more frequently, for a wider array of purposes, and for greater number of hours each week than students in the Educational Administration, Business Education, and Higher Education programs. They also reported completing more formal instruction and more positive attitudes toward the value of computers in academic studies.

Weingart and Anderson (2000)\textsuperscript{26} reported that since electronic resources occupy no traditional shelf space, the best way to create awareness for their availability in libraries is for libraries to inform users of each new resource as it is acquired, provide training opportunities for library users and the mechanics of remote access to resources.

Wilson (2000)\textsuperscript{27} investigated information-seeking behavior and satisfaction level of teachers at the National Textile University, Pakistan. The literature has
many definition of information seeking behavior. In the course of seeking, information the individual may interact with manual information systems such as a newspaper or a library, or with computer-based systems such as World Wide Web. The study explores the information seeking behavior of community that is engaged in research and development in the field of textiles, which is the backbone of Pakistan’s commerce and industry.

Rogers (2001)\textsuperscript{28} studied faculty and graduate student use of electronic journals, printed journals and electronic databases was conducted at Ohio State University (OSU) during the years 1998-2000. The surveys were administered three times (once in a year), allowing the researcher to gain insight into the changes of attitudes and adoption over time of electronic services. The findings of the surveys showed that since 1998 there has been a significant progress in the acceptance and usage of electronic journals at OSU. In 1998, only 200 e-journals were available, while in 2000, the number of available e-journals increased to more than 3,000. In 1998, 19% of the respondents used e-journals at least once a week, while in 2000, the percentage increased to 36%. At the same time, the weekly usage of printed journals decreased from 45% in 1998 to 34% in 2000.

Ileperuma (2002)\textsuperscript{29} studied the information-gathering behavior of 151 arts scholars in six Sri Lankan universities. The study revealed that arts scholars were gathering information for three basic types of activities i.e. teaching, research and administration. Although the respondents were spending 45% to 55% of their time in the library but the majority mentioned that they try to seek information for keeping them updated with current IT resources.
Rose (2002)\textsuperscript{30} studied the technology’s impact on the art historians’ information use pattern. It was found that print and electronic journals, when available, were regularly used resource by the 40% of respondents. The computer was mostly used for e-mail, CD-ROM, drawing programs for making maps and plans, material analysis and storing images. Respondents also mentioned online catalogs as a valuable source for locating information.

Shokeen and Kushik (2002)\textsuperscript{31} studied about information seeking behavior of social scientists working in the universities located in Haryana. They reported that most of the social scientists visit the library daily. The first preferred method of searching the required information by the social scientists was followed by searching through indexing and abstracting periodicals and citations in articles, respectively. The social scientist use current journals first and then the books.

Chandel, Mezbah-ul-Islam and Gupta (2003)\textsuperscript{32} paid attention to the use of resources by research scholars in university libraries. The analysis was focused to determine the use of basic information sources in research, particularly of electronic resources. The result of the survey indicates 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. They suggest that enhancing the usability of available resources by way of adapting user to the systems and services seems to be more viable.

Kanaujia and Satyanarayanan (2003)\textsuperscript{33} conducted a study of the Science & Technology community of Lucknow city to assess the level of awareness and the demand of web based learning environment among Science & Technology information seekers. The major finding of the study revealed that 49.2% users
browsed the web for more than 2 to 4 hours and 14% for more than 5 hours a day. The study further showed that 36.6% users consulted e-journals regularly on the internet, 40.4% used internet for consulting technical reports, 24.8% to find online databases and 10.4% for telnet service.

Liaw, Shu-Sheng and Huang, Hsiu-Mei (2003)\textsuperscript{34} examined an individual attitude model towards search engines as a tool for retrieving information. This model integrates individual computer experience with perception. In addition, it also combines perception theories, such as technology acceptance model (TAM) and motivation, in order to understand individual attitudes toward search engines. The results show that individual computer experience depends on the quality of search systems. Motivation and perceptions of technology acceptance are all key factors that affect individual feelings to use search engines as an information retrieval tool.

Newton (2003)\textsuperscript{35} identified over 20 (mainly US) surveys investigating staff attitudes to e-learning and VLEs. Several themes emerged from the survey and included lack of incentives and rewards for staff involved in e-learning, and lack of strategic planning and vision.

Nicholas, Huntington, Gunter, Russell and Withey (2003)\textsuperscript{36} conducted a study in the UK to examine the use of the web for health information and advice. More than 1300 people were surveyed. The study showed that 66% of the respondents accessed the internet from home, 28% from workplace and the remaining (6%) used a combination of both work place and home.
Oduwole and Akpati (2003) investigated the accessibility and retrieval of electronic information at the University of Agriculture Library, Abeokuta, Nigeria. The 425 participants responded out of a survey population of 1,000, giving a response rate of 53.87%. The study revealed that electronic information cuts across all members of the university community that it was to a greater extent easy to use and the users were satisfied with their search outputs. The constraints identified included insufficient number of terminals available for use despite high demand and inadequate electricity supply.

Hanauer, Dibble, Fortin and Col (2004) surveyed a diverse community college to assess the use of the internet by the students for health-related information. The survey showed that although all the students surveyed had free internet access through their community college, yet only 97% of the students reported having access to the internet. The survey showed that 83% internet users had access to the internet at their home and 51% of the respondents accessed internet at college or library. 81% of the students reported to access the internet most for college work and 80% for e-mail/chat.

O’Neill, Singh and O’Donoghue (2004) supported the notion that universities are not fully utilizing technological advances, questioning whether they will continue to meet the needs of shifting knowledge-based societies and increasingly diverse student populations.

Rehman and Ramzy (2004) investigated the awareness and use of electronic information resources among health academics. Results shows that libraries were extensively used for research needs, preparation of lectures and for obtaining current knowledge. Lack of time was the main reason given for not
using electronic resources (37%) unfamiliarity with computerized searching came next (22.6%).

Scott (2004)\textsuperscript{41} reported that university students were enthusiastic towards the use of a VLE and used it regularly, and the most notable negative issue was the lack of enthusiasm from academic staff. Similarly, e-learning was viewed positively by students studying dentistry, whilst teaching staff expressed negative views. Staff were concerned that the e-learning course available to students did not provide good standards of teaching by not delivering the same curriculum as traditional face-to-face teaching, and placing lecture notes on-line would reduce lecture attendance.

Spink, Amanda et al. (2004)\textsuperscript{42} provided an overview of recent research conducted from 1997 to 2003 and they have explored how people search the web. The article reports selected findings from many research studies conducted by the co-authors of the paper from 1997 to 2003 using large-scale. The researchers examined the topics of web searches; how users search the web using terms in queries during search sessions; and diverse types of searches, including medical, sex, e-commerce, multimedia, and other information. Their key findings include changes in search topics since 1997, including a shift from entertainment to e-commerce queries. Further findings show change in many aspects of web searching from 1997-2003, including query and search session length.

Suriya, Sangeetha and Nambi (2004)\textsuperscript{43} carried out a research work on “Information seeking behavior of Faculty members from Government Arts Colleges in Cuddalore District” The purpose of their study was to investigate, how faculty members seek information from the library. It mentions that most of the
respondents visited the library several times a week to meet their information needs. Regarding the type of search made by the respondents the majority of them made their search by subject.

Asemi (2005)44 showed that all the respondents were using the internet frequently because all faculties were provided with internet connection. It was revealed that the researchers of the university were getting quality information through the internet. 55% of the respondents searched for scientific information through the internet because the university library had provided access to various databases and online journals for all the students and staff.

Bruce (2005)45 stated that, “Information plays a significant role in our daily professional and personal lives and we are constantly challenged to take charge of the information that we need for work, fun and everyday decisions and tasks” In the digital era, research on information seeking behavior has taken on even more importance worldwide. Most of the literature on information seeking-behavior comes from the developed countries, while conditions in developing countries vary significantly.

Dadzie (2005)46 investigated the use of e-resources by students and faculty of Ashesi University, Ghana, to determine the level of use, the type of information accessed and the effectiveness of the library’s communication tools for information research and problems faced in using e-resources. Results indicate that 85% of respondents used the internet to access information and that respondents mainly accessed information in the library by browsing books on the shelves.
Kumar, Rajeev and Kaur, Amritpal (2005)\textsuperscript{47} identified 2 key student attributes of student satisfaction: (a) positive perceptions of technology in terms of ease of access and use of online flexible learning materials and (b) autonomous and innovative learning styles. The authors derived measures of perceptions of technology from research on the Technology Acceptance Model and used locus of control and innovative attitude as indicators of an autonomous and innovative learning mode. First-year students undertaking an introductory management course completed surveys at the beginning and at the end of course work. The authors analyzed the data by using structural equation modeling. Results suggest that student satisfaction is influenced by positive perceptions toward technology and an autonomous learning mode.

Mishra, Yadava and Bisht (2005)\textsuperscript{48} conducted a study to know internet utilization pattern of the undergraduate students of G.B Pant University of Agriculture and Technology, Pantnagar, the findings of the study indicated that a majority of the students (85.7\%) used the internet. Out of the internet users 67.7\% were male students and 32.3\% female students. The findings of the study also showed that 61.5\% of the males and 51.6\% of the females used internet for preparing assignments. A majority of the respondents i.e. 83.1\% male and 61.3\% female respondents indicated that they faced the problem of slow functioning of internet connection.

Patitungkho, Kingkaew and Deshpande, Neela (2005)\textsuperscript{49} reported the results of a study of the information seeking behavior of faculty members of Rajabhat Universities in Bangkok, Thailand. Data were collected by using a questionnaire from seven faculties in Rajabhat Universities. Results show that most of
respondents stated their method of seeking information by consulting a knowledgeable person in the field. 213 respondents seek information for preparing lectures. 54% of faculty members access more documents with references from a book. It is revealed that most of the faculty members used textbooks. 74% of respondents read information materials in Thai and 24% read materials in English. The internet had been almost university adopted; they trace materials from the library via the internet. Google was used for searching information by respondents. They use e-mail for communication frequently. It is found that 42% of respondents use the education resources information centre database. The majority of respondents faced the common problem of unavailability of information.

Sam, Othman and Nordin (2005)\textsuperscript{50} carried out a research work on Computer Self-Efficacy, Computer Anxiety, and Attitudes toward the Internet: A Study among Undergraduates in Unimas. The finding of the study indicated that most of the undergraduates have used the internet for e-mail services (98.6%), research purposes (95.9%), downloading electronic papers (95.3%), entertainment (85.1%), and gathering product and service information (82.4%). The findings also showed that undergraduates used the internet for educational purposes and emails.

Aldojan (2006)\textsuperscript{51} investigated the internet use among education faculty members in Jordanian public universities. The population of this study included the entire education faculty members (309) in seven Jordanian public universities, ranking instructors/lecturers, assistants, associates, and full professors. The study explored about number of times types of internet tools used on a daily basis, and the degree of satisfaction of education faculty members in Jordanian public universities using the internet in their academic work. The purpose of this study
was to collect and analyze the data to determine the patterns of internet use and to identify the faculty’s concerns and its overall degree of satisfaction of its services.

Mohd Nazim and Sanjiv Saraf (2006)\textsuperscript{52} conducted a study on information seeking habits of internet users: a users’ study of Banaras Hindu University. Revealed that 44.44\% of the respondents accessed the internet from the central library, 31.98\% of the respondents accessed department library and 10.10\% of the respondents accessed through the computer centre. The study further revealed that Google and AltaVista are most popular and widely used search engine. Majority of the respondents believed that the quality of information available on the internet.

Anwar (2007)\textsuperscript{53} reported that in Pakistan, the evaluation of information needs and information-seeking behavior has gained interest, during the last two decades, on different research studies of different groups of people in Pakistan. Bhatti (2008) carried out a survey on students’ needs in the Islamia University of Bahawalpur, Shahzad (2007) conducted a survey to find out the information–seeking behavior of faculty members, from all three faculties, i.e., science and technology, social science and humanities of Government College University, Lahore.

Harley (2007)\textsuperscript{54} surveyed 831 humanities and social sciences faculty in US higher education institutions. He found that the faculty used digital resources in their teaching to improve their students’ learning, to integrate primary source materials into their teaching, or to include materials or teaching methods that would otherwise be unavailable. The most commonly used Google-type search engines to find resources, including images. Faculty’s personal collections were the second most common source of resources. Online journals and public/free
image databases were also high on the list of preferred ways of locating desired resources. “Faculty – including those active and enthusiastic in their use of digital resources – identified many obstacles to using these resources for teaching including how to find, manage, maintain, and reuse them in new contexts. One of the most cited obstacles to the effective use of digital resources was the availability, reliability and expense of the necessary equipment, both in the classroom and for personal use.”

Manda and Mukangara (2007) examined the association between gender and the use of electronic information resources among postgraduate students at the University of Dares salaam, Tanzania. The study was conducted in December 2005 and integrated both qualitative and quantitative research designs. A sample of 100 postgraduate students was selected using a stratified proportionate random sampling procedure with a 97% response. Data analysis involved the use of cross tabulation and qualitative descriptions. Findings revealed that gender is associated with the use of electronic information resources and male postgraduate students were more likely to use electronic information resources than female students.

Rowley, Jennifer and Urquhart, Christine (2007) attempted to synthesize the two main perspectives in the research studies: (a) small scale studies of student information behavior, and (b) the studies that focus on the quantitative usage of particular electronic information services in universities, often including implications for training and support. The framework developed a multi method, qualitative and quantitative methodology for the continued monitoring of user behavior. This article discusses the methods used and the project-management challenges involved and conclude that at the outset, intended impacts need to be
specified carefully and that funding needs to be committed at that point for a longitudinal study.

Chirra and Madhusudhan (2008)\textsuperscript{57} analyzed use of e-journals by doctoral research scholars of Goa University, India. The e-journals have become vital part of information for research work. This study could help in knowing the importance and use of e-journals in comparison to printed journals, particularly by the research community. Most of the respondents were accessing e-journals from the department computer labs for their research work and e-journals could meet the instant desire of users to have an access to information.

Kiili, Carita, Laurinen, Leena and Marttunen, Miika (2008)\textsuperscript{58} investigated how students evaluate internet sources in an authentic learning task. Upper secondary school students (n=25) were asked to look for source material on the internet in order to write an essay. They were asked to verbalize their thoughts during the material gathering process. Their verbalizations and actions on the internet were recorded and analyzed. The five evaluation profiles emerged: 1) versatile evaluators; 2) relevance-orientated evaluators; 3) limited evaluators; 4) disorientated readers; and 5) uncritical readers.

Lau S and Woods PC (2008)\textsuperscript{59} conducted an investigation on user perceptions and attitudes towards learning objects was carried out by Lau and Woods. This study empirically evaluated the technology acceptance model drawn from literature on information systems to investigate how user beliefs and attitudes influence learning-objects use among higher education learners. The findings clearly showed that an individual’s attitude towards the use of the learning object is
significantly influenced by the individual’s perceptions of usefulness on attitudes
than user perceptions of the learning objects ease of use.

Oral, Behcet (2008)\textsuperscript{60} a study in ZiyaGokalp Education Faculty at Dicle
University during 2005-2006 academic year with the participation of 440 student-
teachers in total “Likert Type Attitude Scale Toward the Use of Internet” was used
to determine the student-teachers attitudes toward the internet and “The Attitude
Scale forward Democracy” was used to find out the attitudes of the
student-teachers toward democracy. The data were analyzed by using variance
analysis and correlation techniques. Schaffer test was used for significance test. A
positive significant correlation was determined between subscales using internet in
teaching”, “using internet in research”, “liking to use internet in teaching”, “using
internet in communication” and “using internet in teaching”, “using internet in
communication” and “using internet in sharing information of attitude scale
towards using internet and subscales inclination to democracy,” “devotion to
democracy” and “quality of democracy of attitude scale towards democracy.
According to student-teachers’ purpose of using internet, the difference between
their attitudes towards “devotion to democracy” and “qualities of democracy” is
significant. In addition, the difference between their attitudes toward “devotion to
democracy” is significant in terms of the benefits provided by internet.

Abdullah, CheZainab, Ahmad, Hashim and Hashim, Rugayah (2009)\textsuperscript{61}
examined the attitudes toward information and communication technology (ICT)
of adult students. Attitudes were studied in an attempt to ascertain the factors such
as anxiety, confidence, liking and, usefulness at the diploma and undergraduate
levels. A total of 500 adult students at various stages of study from diploma to
undergraduate degrees participated in this research. The response rate was 56.8%. The statements were structured on a scale of one to five. Parametric and non-parametric analyses were executed by using SPSS. The results suggested that the adult students exhibited positive attitudes toward ICT in terms of usefulness and liking, but, semblances of low confidence and anxiety were also evidenced in the statistics.

Agarwal and Dave (2009)\textsuperscript{62} have studied the use of internet attempted to assess the frequency of use, location, search engine, purpose of use, etc. The study revealed that the respondents accessed Google search frequently (100\%) followed by Yahoo (85.29\%). It was also observed that equally (97.06\%) respondents used the internet for education and research. The respondents strongly desired that the library should initiate various functions and services like e-portals, online information, and abstracts retrieval along with providing access to internet.

Almobarraz, Abdullah (2009)\textsuperscript{63} examined the characteristics of internet that affect its adoption by faculty members of Imam Muhammad Ibn Saud University (IMSU) in Saudi Arabia. The framework of the study was the attributes of innovations offered by Rogers. The result revealed that the majority of IMSU faculty members used the internet for research and academic activities twice a month or less, indicating a low internet adoption rate. Multiple regression analysis showed that all attributes of innovation individually predicted internet adoption. The combination of all attributes indicated the model could predict internet adoption among faculty.

Thanuskodi (2009)\textsuperscript{64} investigated the study on Information-Seeking Behavior of Law Faculty at Central Law College, Salem. Revealed that 80\% of the
respondents report spending 15% on research publication and administration, respectively. Nearly half of respondents visit the library at least three times a week, preparing lectures is the most important reason for seeking information. More than 40% of respondents use the OPAC and more than 20% use CD-ROM databases. Google is the search engine preferred by nearly half of the respondents.

Vasappa Gowda and Shivalingaiah (2009) surveyed on attitude of research scholars towards usage of electronic information resources: a survey of university libraries in Karnataka. They found that more than half of the respondents indicated their first preference towards print resource over electronic resources. It is further found that the circulation of e-book title is more compared to print titles. And the study depicts that there is a tendency of using electronic resources than print resources. There is decrease in the use of print resources due to the electronic resources for research. Most of the respondents used e-resources for their research purpose.

Devendra Kumar (2010) indicated that 60% of respondents used the internet daily or 2-3 times a week. Virtually all respondents used the internet for accessing information quickly, and a large number also use it for entertainment. 50% say they use it for communication, while 30% say they use it for research and development. Average time spent in a week for using internet facilities for research development work. It is clear from the data that Google, Yahoo, AltaVista, and Hotbot are the most used search engines among the respondents.

Khalid Mahmood (2010) surveyed on attitudes towards the internet: A Survey of LIS Professionals in Pakistan. He found that majority of the respondents had internet facility at their offices and half of the respondents had been used the
internet. It is further found that library and information professionals working in all types of institutions in Pakistan paid a warm welcome to the internet technology. Their attitude was very positive towards internet based facilities and services.

Muhammad Safdar, Khalid Mahmood, and Saima Qutab (2010)\textsuperscript{68} reported that most of the respondents used the internet 2 or 3 days in a week and used the internet at their homes. And also used it to update their knowledge, communicate, and make friends. They took help from their friends for solving problem in using the internet. Results of the study revealed that the students were new internet users but used it regularly. They used this technology mostly for communication and educational purposes.

Nidinoshiho, Joseph Megameno (2010)\textsuperscript{69} investigated the Master’s dissertation submitted to the University of Cape Town. A self-administered questionnaire was administered to 163 students and interviews were conducted with 15 students in August and September 2007. The results revealed that the majority of students made the greatest use of the internet. The OPAC was moderately used, while e-databases were substantially under-utilized. Students used EIS for a variety of purposes including obtaining academic information and current awareness. The main barriers that students faced in using EIS were the shortage of computers, unreliable internet connection, and lack of skills. The majority of students relied upon their fellow students to acquire EIS skills.

Salaam and Adegbore (2010)\textsuperscript{70} carried out a research work on internet access and use by students of private universities in Ogunstate, Nigeria. The findings of the study indicated that majority of the students access the internet
through the university library. The finding also showed that majority of the students used search engines for academic purposes. Search engines remain the most used internet tool. This study found out that respondents send email for academic purposes more than for business or leisure, while other internet tools are rarely used.

Jayadev Kadli and Kumbar (2011) conducted a study of faculty information-seeking behaviour in the changing ICT environment: a study of commerce colleges in Mumbai. The finding of the study indicated that the majority of faculty members visit the library once in a week. The finding also showed that out of all respondents (41.25%) used OPAC, majority of respondents said the purpose of information-seeking is to prepare class notes for teaching. The users sometimes faced problems such as needed information is not available in library. It is clear that most of the users affected by the changing ICT environment.

Thanuskodi (2011) made a study entitled, “Internet Use by Researchers: A study of Annamalai University, Annamalai Nagar”. The findings revealed that 65% of the researchers in sciences use the internet facility provided in their respective departments, where as 35% go to cybercafés to have an access of internet. 55% of the researchers who use internet in social sciences use internet in their respective departments. 80% of the researchers internet use is for academic purposes by the researchers in science, whereas only 45% in social sciences use it for academic purposes. Nearly 70% of researchers in sciences use the internet for 5-6 hours per week whereas about 30% use it for about 10-12 hours per week. In the social sciences, 85% of the researchers use it for 2-3 hours per week and 15% for about an hour per week.
Anas (2012)\textsuperscript{73} studied on utilization of e-resources in Pondicherry university library: a case study. The finding of the study indicated that majority of the users were visiting the library regularly to access e-resources for their academic purpose. It further found that male respondents were more capable in searching and locating the required information as compared to their female counterpart. Therefore, it is proved from the findings that the available e-resources in the library were utilized by the good number of students for their academic activities.

Dhanavandan, Mohammed Esmail and Nagarajan (2012)\textsuperscript{74} conducted a study on use of electronic resources, which revealed that majority of the respondents used e-resources once in a week, and spent time in library for use electronic resources. The study also revealed that most of the respondents use library for the purpose of research and updating knowledge. Highest percentage of respondents preferred e-journals, e-books, and online databases. 20\% respondents faced problems when accessing e-resources due to overload of information on the internet.

Nihar Kanta Patra, Jayanta Kumar Tripathy, Rajendra Thaty and Ashis Pani (2012)\textsuperscript{75} studied on attitude of faculty and research scholars towards usage of UGC-INFONET e-Journals at Sambalpur university, India: a study. The study revealed that majority of the respondents use e-journals for research work. It is further revealed that majority of the respondents feel that the full text accompanied by all the bibliographic information listed in the table. A large majority of respondents are interested in downloading the HTML files.
Elavazhagan and Udayakumar (2013)\textsuperscript{76} conducted a study on use of E-resources in the BITS, Pilani – Hyderabad campus: a study. The study revealed that 20\% of the respondents were used e-resources daily, 36\% of the respondents used e-resources 2-3 times in a week, 26\% of the respondents were used e-resources once in a month and very few respondents used e-resources 2-3 times in a month. It is further revealed that most of them used e-resources for their research and education purpose. A very few respondents encountered problems like downloading/view pages, overload of information, etc.

Pratheepa and Jayaraman (2013)\textsuperscript{77} studied on Usage of internet at Michael Job memorial Arts and Science college library, Coimbatore, Tamil Nadu, a study. The findings of the study revealed that 65\% of the respondents visited library every day. It is further revealed that most of the respondents used internet for review and search for education purpose. Google and Yahoo was the most reliable and fast information fetching search engine.

Ravan, Lawrance Mary and Lawyed Stephen (2013)\textsuperscript{78} carried out a research work on user attitude towards digital information resources: a case study of Vellore district engineering college teachers. The study revealed that majority of the respondents were used the library for teaching and research purposes. Internet, CD’s, E-Journals, and Database are the most commonly used. A high percentage of respondents have learnt to access digital information resources by the guidance of other teachers. Google is considered the highly familiar of all search engines among respondents.
Selvaganapathi and Surianarayanan (2013)\textsuperscript{79} carried out the study on utilization of library automation and networking facilities among the faculty members of Dr. Sivanthi Aditanar college of engineering, Tiruchendur, Tamil Nadu. The study revealed that 41.77\% of the respondents made daily access to the library and 34.17\% of the respondents access library once in a week. Majority of the respondents visited library to prepare lecture notes and to improve the knowledge. And also 23.35\% of respondents are used e-journals followed by database of scholarly articles, 37.13\% of respondents are used OPAC and e-journals.

Rajaram, Jeyachitra and Santhi (2014)\textsuperscript{80} executed a study on usage of ICT among faculties in selected engineering colleges of Namakkal district. The study revealed that majority of the respondents 55\% were using ICT and 50\% of the respondents were browsing internet and mobile phone. It is further revealed that 48\% of the respondents were remarked that too much of information appearing on the screen makes it difficult for locating the required information.

Rubina Bhatti and Muhammad Waqas Javed (2014)\textsuperscript{81} studied on experience of internet utilization by Post Graduate Students at Nishter Medical college, Multan, Pakistan. They stated that the majority of respondents used internet for their education purpose (Mean= 4.52), and they frequently use it for research and update information. Further stated that problems being faced by respondents in finding authentic information, slow speed of internet, subscription of latest journal is expensive on the internet, unavailability of internet in the department and load shedding problem. They also mentioned that the speed of internet is very slow which causes problems during searching for information.
Saravana Subbu Selvan and Sridhar (2014) conducted a study on need and use of information by the faculty members of Sri Parasakthi Arts and Science college for women (Cuttralam) in Tirunelveli District- a study. They found that 48.5% of the respondents visit the library every day. 62% of the respondents opinion regarding the purpose of visited the library is to get current information. 74.6% of the respondents were highly satisfied by the reference service.

Sowemimo Ronke Adekunmisi and Abiodun Olaide Iyoro (2014) studied about internet access and usage by undergraduate students: a case study of Olabisi Onabanjo University, Nigeria. They reported that 32.5% of the respondents were browsing the internet daily; 37.5% weekly, 13% fortnightly and 17% monthly. Further they reported that the most of the respondents used internet facilities like the e-mail, webpages, search engines and chatting facilities for communication. The internet facility has enabled the lecturers and students to enhance their academic excellence by providing them the latest information and access to the worldwide information.
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