CHAPTER –II

REVIEW OF LITERATURE

Nanyang Technological University (NTU) Singapore, computer engineering students Information needs and information-seeking behavior is fully based on books, lecture notes given by the Internet, friends and manuals. Use of databases and electronic sources were quite low. This study recommended to the library science professionals promotional campaign for introducing electronic information resources to library users. Majid and Tan (2002).

Digital resources are now well established and recognized tools of communication and research. However, the electronic media could not bring any significant change in information seeking behaviour of research scholars. The resources had been under-utilized which otherwise is implicit also. Traditional resources are still in use as earlier. Chandel, Mezbah-ul-Islam, and Sudhir Gupta, (2003).

Crawford (2006), made an attempt to study the use of electronic information services and information literacy among the current students and alumni students. From the study, current students result about the use of Internet declines with year of study. Majority of respondents do use the Internet at home. 66.3 percent of the respondents’ views about the electronic information services are essential for the completion of their programme. About the information literacy programme, 67 percent of alumni believed that their information literacy skills had improved as a result of attending classes and 77 percent felt that the experience of work had improved; 64.9 percent of current students felt that their information literacy skills had greatly improved as a result of University attendance.

Haneefa, Mohamed (2007) had investigated a study about the application of information and communication technologies (ICT) in special libraries in Kerala. He revealed that ICT based resources and services were not reaching the users to the expected extent. A good number of the library users were not satisfied with the application of ICT in their libraries and indicated that inadequate ICT infrastructure it’s their major reason for dissatisfaction for their use.
Doraswamy (2007) conceded a study on knowledge and use of the digital library resources by Acharya Nagarjuna University affiliated engineering faculty members. The major objectives of the study were to find out the faculty members’ familiarity, frequency of use of library resources, services and its adequacy. He used questionnaire tool for collecting the primary data. This study results showed that 53.63 percent of the respondents were familiar with the usage of digital resources. It also found that, 86.67 percent of the respondents were using digital resources for enhancing and updating their subject knowledge, 49.37 percent of them stated that the information available in the digital form was adequate. The study also suggested that user orientation programmes should be implemented for better utilization digital resources. Awareness level should be increased for maximizing the usage of online journals.

Nikam and Pramodini (2007) had conducted a study among the users of the University of Mysore about the use of the e-journals and data bases. 200 responses used for this study. Survey based on questionnaire has been for collection of data. The paper also examines the utilization and satisfaction levels of users with respect to the e-resources. 28.50 percent of the respondents are not aware about the e-resources provided by the library. The reasons for not aware was lack of guidance and training are the main reasons. 82 percent of the respondent’s opinion about the printed journals is considerably very important.

Gunasekaran, Balasubramani and Sivaraj (2008) had conducted a study on usage of the electronic journals through consortia by the students and faculty members of the Bannari Amman Institute of Technology, Tamil Nadu. The findings of the study revealed that electronic journals which are subscribed by the institute through consortium are being used effectively by respondents. Maximum number of students used electronic journals for course work papers and to get the latest information sources.

Golwal Sonwane and Vaishnav (2008) published a research paper about the use of e-journals in Dr.Babasaheb Ambedkar Marathwada University Aurangabad. They used PG students, research scholars and faculty members of the university. 96.03 percent of the respondents are using the e-journals for their research related purpose i.e. writing papers, projects, research work and seminars. 54.26 of the users
daily use the e-journals. They accessed the e-journals at their own department (81.75 percent) and UGC Internet Center (71.16). About the satisfaction level, 48 percent of the users are fully satisfied the e-resources subscribed by the library. They also suggested that the user hands on training should be given for the proper utilization of electronic resources. Need of more trained and skilled information scientists for assisting the users in information accessing, downloading and printing of journal articles.

Singh, Nizam and Singh (2008), carried a research study about the awareness and use of the online journals among the faculty members, researchers and students in the faculty of natural sciences, Jamia Millia Islamia University, New Delhi. They investigated that 85.71 percent of the respondents were aware and the remaining 14.29 percent were not aware with the availability of the online journals. Majority of the respondents were using the e-journals for their research purposes followed by subject knowledge, publication, teaching respectively.

Kumber and Gururaj (2009) carried a research among the faculty members and research scholars about UGC-Info Net consortium. From the study reveals that, 88.09 percent faculty members and 93.33 percent research scholars felt the necessity to include more e-journals in the current UGC Info net consortium programme. From the result of the study, one-fourth of the respondents’ opinion about the UGC-Info Net e-journal programme as excellent. 66.67 percent faculty and 70 percent research scholars preferred both electronic as well as print version of journals. Almost half of the faculty members (47.61 percent) and more than half of research scholars (61.66 percent) suggestion about the content of the information available in e-journals are better than the printed version. 81.66 percent research scholars and 64.29 percent faculty members felt the need of regular training programmes.

Guruprasad and Khaiser Nikam (2010), carried a research study among the Indian Aerospace Scientists and Engineers usage patterns of the e-journals. The major observations of the study include, aerospace engineering e-Journals are extremely significant to aerospace scientists or engineers. It is a major source of scientific and technical information. The use patterns of aerospace engineering e-Journals amongst the 16 aerospace organizations are not even. It shows a heterogeneous nature in their use patterns.
Natarajan et al, (2010) had completed a case study about the Annamalai University faculty members and research scholars’ use and their perception of Electronic resources in the library. 71.79 percent of the faculty members and 82.41 percent of the research scholars were aware about the e-journals. 50 percent of the faculty members and 38 percent of the research scholars were frequently used the e-resources. 37 percent of the faculties and 32 percent of the researchers opinion about the relevance is very satisfied. 22 percent of the users are unable to use it. Reasons for not use of the e-resources are lack of awareness, shortage of time and low speed of internet for downloading of resources.

Mulla’s(2011), study reveals that, 26.67 percent of the faculty members use the electronic resources once in a week, followed by 25 percent who are using daily. 100 percent of faculty members are using electronic resources for finding relevant information in their specialization and teaching purpose, followed by 58.37 percent of faculty members are using for their research purpose. Whereas, 56.67 percent of them use to gain current and general information, similarly 48.33 percent of faculties are used for update their subject and general knowledge. 31.67 percent of faculty members indicating lack of training as the main problem while using electronic resources. The library must conduct training programmes for faculty members regarding how to use the electronic resources effectively.

Thanuskodi and Ravi (2011) are discussing the utilisation of digital resources by the faculty and research scholars of Manonmaniam Sundaranar University, Tirunelveli. This study results show that, 67.14 percent of the faculty members are familiar with the use of digital resources, and majority of members are using the digital resources for research purpose. Research work and paper publication are the main reason for the use of the digital resources. Study also reveals that majority of the respondents are learning the required skills for the usage of digital resources.

Elavazhagan (2011) had an attempt to conduct a study about the utilization of the e-resources among the polytechnic faculty members and students. The study indicates that majority of the teachers and students are dependent on e-resources to get the desired and relevant information. But practical use of the e-resources is not up-to the worth. They are mainly use the internet for the purpose of accessing the e-mail. Interestingly the users have knowledge about availability of electronic resources, most
of them as the supplementary way to use information. However, the preference for the electronic format is related to the type of resources, IT infrastructure and availability of time.

Maghesh Rajan, Jasimudeen and Suresh Kumar (2012), conducted a case study on the on-line resource tools for effective teaching and learning: e-books and e-journals. Its results show that most of the scholars and teachers using the e-books and e-journals are belonged to the science faculty. The most of the scholars are found unfamiliar with the online resources and access techniques. Study suggestion shows that periodical orientation and training programs should be conducted in general and the subject wise for better utilization of the e-resources in the digital environment.

Radjagopal and Chinnasamy (2012) carried a study about the user’s attitudes and approaches towards e-resources and services in academic libraries of Puducherry Union Territory. This study result reveals that 48 percent of the respondents are using the internet for research paper, 22.5 percent of the respondents are using electronic books, 17.2 percent of the respondents are using the electronic journals and 7.7 percent of the respondents are using the electronic database.

Parmar and Patel (2012), organized a research study about the use of the e-journal among the faculty members and researchers of the Hemchandracharya North Gujarat University Library, Patan. 83.33 percent of respondents are positively opinioned regarding the importance of e-journals. This study also indicates that 80 percent of them use the electronic journals for their education and research purpose. Result of the study has shown that PDF format is the most preferred (72 percent) choice. The major problem for accessing and usage of the e-journals is lack of training and orientation program.

Engineering college students Internet usage study was done by Madhuri (2012). From the study she examines the purpose of using the internet, frequency of Internet use, and impact of internet on engineering education. Questionnaire method was used. The main findings of the study are 81.42 percent of the colleges are providing adequate computer systems in students’ labs, 37.85 percent of the students are using Internet to update their subject knowledge, and 78.28 percent were browsing Internet for the purpose of E-mail. 82.14 percent of them are using Google as a primary search engine and 31.42 were browsing Internet through Mozilla Fire Fox.
Khushpreet Singh Brar (2012), conducted a research study among the PhD scholars in Punjabi University, Patiala. The study’s aim is to determine the awareness and acceptance of e-journals. The aim of the study is to explore the use of e-journals - purpose of utilization - frequency of use - and satisfaction level. He used survey method and structured questionnaire as a tool. From the study result revealed that 70 percent of the respondents aware about the e-journals. Nearly 50 percent of them use the hard copy of the articles for reading, 78 percent of them use the e-resources for their research reference and 34 percent of them download the article in pdf version and stored in external device.

Thirunavukkarsu and Sathivelmurugan (2012) made an attempt to findout the university researchers and faculty member skills to use of the digital sources in Coimbatore district. The study reveals that 75 percent of the researchers use the central library for the purpose of go-through the printed books and journals, 30 percent of the respondents have better skill to use of electronic sources. Maximum of 75.36 percent of the respondents are accessing e-resources in their department itself.

Prabakaran and Sankaranarayan (2012) conducted a research among the engineering college faculty members of Annamalai University Chidambaram. This study deals with the following factors like experience, purpose of use ( prepare lecture notes, update current information, career development, preparing conference papers, research and development) time spent for access problems and satisfaction of using the web resources. The result reveals that updating knowledge and carrier developments are top two purpose of using the web-resources. 50 percent of the respondents spent more than 3 hrs and 36.36 percent of them use the library as a noodle centre for web-resources. 51 percent of the respondents are fulfilled their need in the library and 2.76 percent of them lack of skills to access of web sources. They suggested that librarians may provide training and guidance to use authentic and relevant information and arrange various orientation and training programmes for faculty members for the optimum use of available web-resources.

Jebamalar, Seethai, and Vanathi (2013), had done a research work about the use of ICT based resources among the users of Arts and Science College. From the study we reveal that, 59 percent of the respondents use ICT based resources and
services less than \( \frac{1}{2} \) an hour per day. 36 percent of respondents have been accessing it for two years. It is clearly observed from the result that 51 percent of respondents accessed ICT based resources and services through Library. For finding required information by Google search engine (49 percent) has got the first place.

Hema, Nagarajan and Vanathi (2013), made an attempt to study among the faculty members, researchers and PG students in UT, Puducherry use of ICT based resources and services. The study reveals that 7.61 percent of faculty members and 5.59 percent of researchers use the online database for their purpose and 85.86 percent of them agreed that they need hands on training to use of ICT based e-resources.

Gomathi (2013), conducted a research study among the faculties and research scholars in Periyar University, Salem about the use of UGC Infonet e-journals. She used survey method and questionnaire a tool of this study. The result of this study shows that respondents are highly used the electronic sources of information for their research, teaching and learning. More than 60 percent of them have opinion about the UGC Infonet consortium providing service is good, 50 percent of them say that it is better than print contents.

IEEE, ASME, ACM, ELSEVER, J-GATE ENGG., J-GATE are the popular bibliographic database e-resources and subscribed by the all the engineering college libraries of North Maharashtra University. Majority of the libraries having only two network services namely DELNET and INFLIBNET Syed Noor Mohd and Mohamed Esmail (2013).

Velmurugan (2013), made an attempt to conduct a research study about the awareness and usage of electronic journals among Undergraduate engineering students. He adopted survey method and questionnaire as primary data collection tool. From the study he reveals that in engineering college students 78 percent of them have awareness about the e-journals and they confirm that central library as a noodle centre form information access. 70 percent of the respondents were fully satisfied about the e–Journals. He also suggested that the college library must introduce the user orientation programme about the online resources, which are available in the digital library to all the students and access techniques.
Rabindra, Ashok Kumar Das and Subrat Pati (2013) carried a evaluating study about the awareness and usage of UGC-Infonet consortium by the faculty members of Odisha state universities. They used a structured questionnaires and random sampling techniques used for collecting a primary data. The result reveals that among the total respondents, 86 percent of them used UGC-Infonet at least twice in a week. 22.51 percent of them spent more than 8 hours/week and 7.68 percent of them spent 2-8 hours/week. It mainly used for research publication followed by research work and conference work. 64 percent of the respondents said the UGC-Infonet consortium impact for their educational work is good. 52.88 percent of the respondents satisfied its facilities.

TabassumMasdul, Raknuzzaman and Maidul Islam (2015), had an attempt to evaluate the usage of a digital library system at a private university library in Bangladesh. Questionnaire based survey and observation were used to collect the primary data. Results of the study shows that users are not aware of digital library system and those who do not know how to use it. Government may support the library personals to organize orientation program for users on how to use, search and retrieve the resources in the digital libraries. This training program may strengthen the users’ information literacy skills.

Thirmagal and Mani (2016) had done a search study about the Information Literacy skills among faculty members of Engineering Colleges in Tirunelveli District. The research reveals that, majority of 82 (96.47 percent) faculty members find needed information in internet/web. 82 (96.47 percent) faculty members have the knowledge of difference section of books and e-books. Regular orientation program and workshop on information literacy skills to be conducted in Engineering college library to faculty members; Majority of faculty members are in need Information Literacy training program, Directorate of Technical Education (DOTE), All India Council of Technical Education (AICTE) have to take initiative to implement regular Information literacy training programme to faculty members through libraries.

Arvind Mittal and Sharma (2013) conducted a survey research on Familiarity and Use of Digital Resources by the library users in Agriculture Universities of Himachal Pradesh. The study reveals that the 96 percent users have awareness about the digital e-resources in the library. Most of the users use all types
of e-resources like e-books, e-journals, e-thesis etc. 31 percent of the users’ main purpose of use of e-resources is for completion of projects & assignments and 28 percent, 22 percent, 19 percent of them used for updating their knowledge, preparing notes and writing seminar/conference papers. 48 percent of the respondents have problem in searching skills and other 24 percent don’t know how to use the e-resources. Librarian to organize orientation, seminars, and workshops about the e-resources at different levels to solve the problems faced by the user. Most of the users have the opinion that print resources can’t be replaced by e-recourses in the future.

Subbulakshmi and Santhi (2016) made an attempt to evaluate the use of the e-resources among the research scholars and faculty members of 8 women colleges affiliated to Alagappa University, Karaikudi. 31 percent of the respondents use the e-resources daily and 27.67 percent of them use it for updating the subject knowledge. 24.67 percent of them use it mainly for conference work and project works. They suggested that the college authorities and the library staff should plan and conduct adequate library orientation and user awareness programmes to educate the academic community on the importance, usability and versatility of e-resources made available via N-List programme in their respective colleges.

Rabindra K Mahapatra, Dillip K Swain, Kamal Lochan Jena (2011) conducted a case study about Odisha engineering colleges teaching faculty members information seeking behavior. From the study, it is depicted that, engineering college libraries are providing internet browsing service (85.92 percent) and online database access (52.11) services to the users of the library for access on e-resources. All the respondents visited the library for seeking information. The main purpose of visiting the library for preparation teaching, research work and enhance the subject knowledge. 73.24 percent of the respondents use the online database and e-journals. Google is the most preferable search engine among the respondents.

Seeran, Nagarajan and Kanakaraj (2011), research reveals that, Vinayaka Mission University faculty members are in high dependence on books (80 percent), journals (77 percent), and internet sources (77 percent) for their information needs. During information search majority of the faculty members depend on formal sources.
Ramesh and Baskaran (2017) made an attempt to conduct Coimbatore district engineering college faculty member use of the e-resources by survey method. They collected the data about the e-resources awareness, preferred resources, purpose of utilization of library, and types of information preferred. The study results reveal that 94.6 percent of them aware about the e-resources, 33 percent of them have awareness about the e-journals and 53.8 percent of the respondents said that the library is a nodal centre for e-resources. 58.5 percent of the respondents’ visit of the library is to borrow books and referring journals.

Ravanan, Lawrance Mary and Lawyed Stephen (2013) conducted a study about the attitude towards the digital information resources among the faculties from twelve engineering college in Vellore District, Tamilnadu. Convenient random sampling method was employed for this study. This study result reveals that the purpose of use of the digital resource is teaching (62.5 percent). 10 percent of the respondents’ choices of the digital sources are e-journals and online database. Google (46 percent) is the most preferable search engine. They used the PDF version of information is most preferred format. 35.85 percent of the faculties have stated that too much information retrieved is the main barrier to access Digital resources. Researchers suggested to the librarian to plan and develop orientation about the digital to the library users for better education and research.

Parameswaran and Nafay Singh (2013) conducted a research study about the use of Internet and e-resources by the Bhagat Phool Singh (BPS) Women University, Sonipat. They used the library users of School of Engineering and Sciences. The study results show that 81.60 percent of respondents are using the e-resources. 18.40 percent of respondents are not using e-resources. It is observed from the analysis that 40.80 percent of respondents are access the e-resources daily, 31.20 percent of respondents access 2-3 time in a week, most of the respondents i.e. 60 percent of them use the e-resources for updating knowledge, 19.20 percent of respondents use it for academic purpose, 16 percent of respondents use it for project work. 59.20 percent of the respondents use search engines for accessing e-resources, 34.40 percent of the respondents type the web address directly for accessing the e-resources.
Parveen Kumar (2012), made an analytical study about the use of ICT based resources and services in Engineering College Libraries in Haryana, India. From the study he has given a suggestion for the library staff to undergo proper orientation and knowledge up gradation programmes from time to time to get familiar with latest developments in technology and serve the users community.

Rani, Nagarajan and Vanathi, (2012), organized a research work among the students and faculty members of Arts and Science Colleges in Cuddalore District about the use of ICT based resources and services. This study result reveals that 66.64 percent of the respondents have good awareness about the ICT based resources. Among the total respondents (1538), 37.52 percent of them are accessing the ICT based resources always and 56.64 percent of them some time. 48.96 percent of the respondents used the e-resources based resources for their study purpose. It is also found that 60.99 percent of the respondents felt that it is useful for their study and keeping up- to- date information.

Elavazhagan and Udayakumar (2013) had a research study about the use of e-resources among the faculty members and research scholars in BITS, Pilani, Hyderabad Campus. From the survey, result they interpreted that most of the users indicated that they are using e-resources 2-3 times in a week. But more than half of the respondents access the e-resources less than an hour/day. When compared with the availability of the conventional documents in the library, most of the respondents opinions about the e-resources are time saving, easy to use & handle, more informative, preferred, flexible & effective.

Mounissamy and Swaroop Rani (2005) conducted an assessment survey about the National Institute of Technology, Tiruchirappalli faculties’ and researchers’ usability of electronic journals. From the study reveals that 67 percent of researchers and 33 percent of faculty members are regularly using the electronic journals.

Case study was conducted by Kalbande, Shinde and Ingle (2013) about the use of e-resources by the faculty members of Mahatma Phule Agricultural University, Rahuri (M.S). Mahatma Phule Agricultural University library is subscribing hard copy journals, e-journals and databases. Among the total respondents, 82.41 percent of the respondents are more aware about the e-resources. Teaching (45.95 percent) and research (25.95) are the main purpose of access of these sources. 31.95 percent of them use the database and 26.33 percent of them use the e-journals.
Balutagi S B and Kumbar B D (2017) had conducted a research study among the Engineering Institutes teaching faculty members use and impact of e-resources. The study reveals that faculty members (83.67 percent) visited the library to study and prepare teaching materials and followed by research works/publications. For the above purposes 79 percent of faculty members use online resources (E-journals / E-books / databases), followed by print sources (73 percent). 53 percent of the respondents opinioned that the main advantage of accessing the electronic information resources was to a wide range of information and multi users access.

Annamalai University Agricultural faculty members use of e-resources study was done by Prabakaran (2013). The study reveals that 46.23 percent of the faculty members purpose of using the e-resources for updating knowledge, 25.05 percent of them used for publishing journal articles and for research work percentage is 16.47. It was analyzed by ANOVA tool and found that there is a significant variation among the designation (Asst. Prof, Associate Professor, and Professor) of the faculty members with respect to purpose of using e-resources.

Usage of Electronic Information Resources among the Academic Community of Pharmacy Colleges in Chennai City study was completed by Isabella and Mohamed Esmail (2012). From the study results show that 573 (82.33 percent) respondents used medical and pharmacy allied on-line database followed by the e-journals (73.85). 61.87 percent of them accessed the Royal society of chemistry e-journal for their needs. They also accessed Emerald, Science Direct, Springer, Taylor and Francis, Black well synergy, Cambridge university press, and Institute of physics. Among the total respondents, 88 percent of the respondents said that e-resources are the most important. Among the e-resources e-journals (85 percent), e-books (80 percent) and e-thesis (65 percent) are used by the respondents.

Navalur, Balasubramani, and Ashok Kumar (2012), carried a research about the usage of e-resources by faculty, research scholars and PG students of Bharathidasan University, Trichirappalli. 47 percent of the respondents’ choice of reading e-resource format is PDF. 44 percent of the faculties use the e-resources daily. E-journal and e-thesis are the most useable e-resources. From the study they found that users faced major problem with the available facility is slow internet connection and the students and research scholars expecting more orientation and training.
programmes for better usage of these resources. University library need to take orientation and training programmes to the users for enhance these facility usage.

Use and Impact of electronic resources study among the faculty members of St. Xavier’s catholic college of engineering, Chunkankadai was done by Selvaganapathi and Surianarayanan (2013). They concentrated the users usage of the electronic resources, satisfaction and barriers faced in the access of e-resources. Questionnaire is used for data collection tool. 77.78 percent of the respondents used library for access e-resources. 58.80 percent respondents utilized daily. The majority of the respondents using electronic resources to prepare lectures notes (31.30), and improve subject knowledge (29.61). Among the total respondents (73.33) percent of the faculty members’ level of satisfaction of access of e-Journal have very good.

Deepa and Asha (2016), made an attempt to find out the use of the e-resources by the students of Institute of Human Resources Development (IHRD) Engineering College Libraries in Kerala. They used both B.Tech and M.Tech students for their study. The study results reveal that internet resources are the most usable e-resources among the respondents. Among the total respondents 71.1 percent of them used the e-journals. 46.6 percent of them used the e-resources once in a week and 36.44 percent of the users spent 3-4 hours per week. The most preferred search engine is Google followed by Yahoo. 43.1 percent criticize about unwanted information is the major obstacle for the use of e-resources.

Prangya Das and Rabindra (2013) had completed a research among the full time and part time science research scholars’ access, awareness and use of the electronic information resources by research scholars of Berhampur University. This study result indicates that, 53 percent of the research scholars use e-resources daily and 39 percent of them access the e-resources once in a week. The main purpose of access of the electronic sources is specific information in the field of interest (83percent), 77 percent to meet research work and 60 percent to gain current awareness and keep up to date. 97 percent of the researchers use the UGC Infonet database and 74 percent CSIR institutional repositories.

Chinnasamy(2016) made an attempt to analyze Madurai engineering college students’ information need and seeking behaviour. From the study he discussed the students information need and how they are seeking information through library in the
digital environment. Respondents are using the library for preparing their examination (55.33 percent) purpose and enrich their knowledge (33.34 percent). 38 percent of them preferred the hard copy of information than the soft copy.

Awareness and use of the digital library resources among the faculty members of engineering college libraries in Warangal district, Telangana was done by Rajeshwar (2016). The study he used structured questionnaire for collection of primary data. 92.5 percent of the staff members are aware about the digital resources available in the library. 50.91 percent of them use digital resources daily for their subject information and research work. 83 percent of them aware and use the e-journals. DELNET and open access journals are regularly used by the faculty members.

Awareness and use of UGC infonet digital library consortium by research scholars of Thapar University, Patiala study was conducted by Rajbanshi and Sonkar (2016). The study results show that, 63.70 percent of the respondents are aware about this facility in the library. Respondents’ opinion about the library is a nodal centre for access of online sources. Research and gain the subject knowledge is the main reason for access of the consortium sources. 78.08 percent of the scholars wanted training in using e-resources regularly.

Science department faculty members in Shivaji University, Kolhapur use of electronic information resources study was conducted by Bituka, etc (2016). The study, result reveals that 90 percent of the science faculty has good awareness about the electronic information resources. Department is a centre for access of these sources. Teaching and research are the main reason for access of digital resources. Overload of work and lack of training are the problems faced while accessing of EIS. Faculty suggested that the library may organise a workshop about these source which is more helpful.

Sivankalai , Virumandi and Chellapandi (2013) conducted a study about the use of electronic resources among the faculty members at Paavai College of Engineering. The study reveals that 94.70 percent of the respondents are using the e-resources more frequently. They agreed that e-resources are more helpful to improve for their quality of teaching and research. 88.50 percent of the respondents agreed that the library staff members are supporting to access the e-resource.
Rajarshi Shahu College of Engineering, Tathawade, Pune faculty members use of the e-journals was done by Ranjan, Prabhat, Gudi and Daphal, Yogesh (2013). More than 50 percent faculty members have needs to search e-journals for research purposes. Writing papers, industry latest trends are the other reasons to search the e-journals. Faculty members are accessing e-journals from their work place like department.

Naik, R Krishna and Naik, S Raju (2016)’s research study about the use of the e-resource among the higher education students and faculty members in chikkamagalur district was done. The results reveal that the 67 percent of the respondents have good knowledge of Information Technology and 82.22 percent of them have knowledge of e-resources. 89 percent of the students are using the e-journals for their assignment purpose.

Shivakumaraswamy and Usha (2016) carried a research about the use of the e-resources among the faculty members and students of Shri Madhwa Vadiraja Institute of technology and management at Bantakal. 25 percent of the respondents’ are using the e-resource for writing papers and 20 percent for studying course work. 42 percent of them acquired their e-resources usage skill through training given by the library staff members and 50 percent of them opinion about the library as a centre for the e-resource access. 66 percent of them download the pdf version of information and 74 percent of them are satisfied the e-resource information.

Sirdevi and Ramamurthy (2016) had a study about the use and search patterns of electronics resources among the faculty members of autonomous engineering colleges in Chittoor District, A.P. The study results reveals that use of the e-resources are preparation of lecture notes (24 percent), career development (18.86 percent), and research article (17.72 percent). 61 percent of them use google as the most usable search engine followed by Yahoo (20 percent). 44 percent of the respondents use print and pdf version of information.

Santhi and Gopalakrishnan (2016) conducted a research study in VIT University’s faculty and researches use of electronic resources. They analysed the frequency of use of the e-resources such as e-books, e-journals, e-magazine / newspapers, NPTEL, E-theses /dissertation, Audio / visual products (CD) and e-database. Databases and electronic journals are used by faculties for both teaching
and research. Faculties and researchers have indicated high level of satisfaction with their use of electronic resources and have committed their interest to the continuous use of e-resources because their use leads to better research and enhances scholarly communication. The paper has shown high level of acceptance of electronic resources by academics in universities.

Kumar, Chandra Mohan and Rajan (2015) had a research about the user satisfaction of library service among the engineering college students in Coimbatore district. In the study result reveals that 55.25 percent of the respondents are satisfied with the library functioning and the availability of e-resources. About their library visits, 40 percent of the respondents visit the library weekly once and 35 percent daily. The main purpose of their library visits are to borrow books (11 percent), to read journals (11 percent), to refer theses /dissertation (15.6 percent), refer the question bank (15 percent), e-Book (5.5 percent), e-Journals (11.7 percent) have been regularly utilized for their needs.

Krishna Dassand Jayaraman (2014) made an attempt to study about the utilization of e-resources by the faculty members and research scholars in management institutions affiliated to Bharathiyar University, Coimbatore. The Study result reveals that, 77 percent of the respondents’ opinion about the internet connection in the library is adequate and 31percent of them said that the library is center for e-resources access. 33 percent of them always and often use the e-resources for the purpose of research, general information, and communication of investigation. The following online database EBSCO, Emerald ProQuest J-gate Elsevier and DOAJ are utilized by them.

Milind B. Ghangare (2016) had a study about use of electronic resources by faculty members of engineering college libraries in Rashtrasant Tukadoji Maharaj, Nagpur University (RTM), Nagpur. He used questionnaire method for the collection of primary data. Faculty members’ purpose of use of e-resources is to deliver the lectures (74 percent), to cover topics given in the syllabus (44.40 percent), to present paper in the conference, symposium, workshop and conferences (58.60 percent). 45.8 percent of the respondents said that search engines are very important, 39.5 percent of the faculties said on-line database is important sources for research, 39.2 percent said electronic books are important resource. 38.6 percent faculties said
electronic journal are important for their research and teaching. 69.8 percent of the libraries purchased e-packages for their libraries

**Pradeepa, Rajasekar, and Nithyanandam (2013)** had conducted a research study about the information access pattern of engineering college library users in the digital environment. From the study reveals that 67.9 percent of the library visitors use the digital sources for preparing their class assignments and 37.1 percent of them use the e-journals/e-books.

**Nirmal Singh and Dhirajkumar (2013)** examined to find out the Guru Angad Dev Veterinary and Animal Sciences University faculty members’ information access and utilization in the electronic era. Among the total sample, 80.06 percent of the respondents are visited the library daily for their research work (93.5 percent) and updated with the current developments in respective subjects (87.9 percent). Open access journals are the preferable source to the users (90.38 percent). About 79.03 percent of respondents use the resources because of its availability is 24x7.

**Kumar, Mamatha Pramod and Bhandi M K (2015)** organised a research about the nursing faculties and postgraduate nursing students use pattern of e-resources. The study faculty members’ preferred e-books, e-journals, e-theses and dissertation, online bibliographical databases, abstracting and indexing databases, image databases and web resources. To search for the e-resources 71.4 percent of the faculty members and 67.9 percent of the postgraduates preferred web search engines, 42.9 percent of the faculty and 58.3 percent of the postgraduates preferred to search through online databases with full text links. 90.5 percent of the postgraduates preferred pdf file formats. Google search engine was the most preferred by the respondents. Keyword and title were the most preferred bibliographic search tag.

**Alwarammal and Chinnadurai’s (2013)** study was focusing on using the digital resources, factors, motivating the user to access the digital resources, online resource search techniques, preference of text format, online resource access problems and suggestion of the respondents to improve the library services among the faculty members of engineering colleges in Tamilnadu. Main aims of the uses of digital resources among the faculties are to prepare study materials, class exercises and curriculum plans. Enhance teaching is the primary motivating factor for the access of
e-resources. 52.44 percent of the respondents preferred to read the online resources in full text format on the screen in PDF is the first choice.

Ananda S K et.al., (2017) made an attempt to get an opinion about the use and awareness of electronic information resources among the students of T John College, Bangalore. They used a standard structured questionnaire for collection of primary data. Among the respondents, 81 percent of the respondents opined that they are aware of electronic information resources and their major purpose for using electronic information resources is research and project work (74.07 percent), 69.13 percent of the students opined that electronic information resources are very useful for academic activities like preparation of assignments and development of subject skills.

A study made by Joseph Jestin and Ally Sornam (2016) about the use of e-resources by the faculty members of engineering colleges in Kerala. They used online questionnaires method for collection of primary data. The findings show that the majority of faculty members are well aware about the e-resources and most of them are using e-resources at least once in a week (90 percent). IEEE, Elsevier, SPRINGER, Tata McGraw Hill ASME, ASCE are mainly used e-journal packages by the faculty members. The main purpose is teaching and research.

Kumar, Kiran and Kumbar, Mallinath (2013), organised a research among the autonomous engineering institutions affiliated to Visvesvaraya Technological University in Karnataka. They examined the use of various types of electronic information resources, experience of using internet, problems faced, preferred search engines, search methods and preferred version of information resources. The study reveals that various types of electronic information resources used by the faculty members has been summarized. 97.15 percent of the respondents use the e-teaching materials followed by 96.26 percent of the respondents use e-journals, 82.42 percent of the users use the e-books, 80.64 percent of them use the open source literature and 71.67 percent of the respondents use the online e-databases. Google Chrome and Internet Explorer are the most usable internet browsers. 95.13 percent faculty members preferred Google search engine for accessing electronic information resources. For search options, 48.51 percent of them preferred and use basic and advance search options. They also suggested that the faculty members should further improve their information searching skills to make better use of largely available
e-information resources and the library and information centre should organize seminars, workshops and orientation programmes for faculty and students at regular interval of time to keep them in phase with latest technologies.

**Sivathaasan and Velnampy (2013)** had a research study, about the impact of use of electronic information resources and the academic performance of the university teachers. They used a survey instrument with self-administered questionnaire for collection of data. It was developed for the purpose of collecting the primary data. Stratified sampling method was adopted for sample selection procedure. The Study results revealed that, usage of the e-resources has a strong positive association with academic performance of the teachers ($r = 0.623$, $p<0.01$). Multiple regression analysis showed that the usage of the e-resources has an impact on academic performance. The result shows that at the rate of 38.8 percent ($R^2 = 0.388$), which is statistically significant at the levels of 0.01 ($p < 0.01$).

**Selvaraj and Rathinasabapathy (2014)** have conducted a research study among the faculty members of sixteen self-finance engineering colleges in Tiruvallur district in Tamilnadu. The study aim is focusing the faculties purpose of the visits of the library, use of information sources, access and use of online sources and preferred file formats for their routine use. This study revealed that, 25.76 percent of the faculty members visited the library daily while 44.95 percent of them are visited weekly thrice followed by 17.17 percent of them are visited the library twice in a week. Borrowing books, reference materials, and internet accesses are the main reasons for visiting the library. More than 50 percent of them use the library resource for their regular class works.

**Bhat (2009)** made an attempt and clearly explains the methods adopted for increasing the usability of e-resources in university libraries. Active / regular library users need to be identified and they need to be converted to heavy users of the e-resources. Secondly, the occasional users are to be converted into active / regular users. Various methods have to be tried in order to take the attention of the users towards the e-resources. In the ICT environment use, e-mails RSS alerts bring the information for the personal attention of all users. Using Web 2.0 which includes blogs, face-book, wiki are interactive and they make the visits to the library site interesting.
Islam (2014) made an attempt to find out the awareness, usage and faced problems in using the available digital resources in NIT, Srinagar. Researcher used survey method and questionnaire tool for the research. 87.23 of the students are aware of the digital resources. Friends and journals websites are the tools for aware of digital resources. They frequently used e-journals and database for their research work.

Sami and Uppal (2016) carried a research about the awareness and use of the electronic information resources in the research institute libraries of Mohali, Punjab. They used a questionnaire method for collecting the primary data. They used the following Research Institutes, Engineering & Production, Research & Development, Administration, Finance, Marketing & Planning Health Centre staff members are the sample of this study. From the study result reveals that, all most all the users are an aware (35 percent) regarding the e-resources, e-journals, e-mail and websites to full extent.

Kaur and Verma (2009), made an attempt to find out the use of electronic information resources among the students, researchers and faculty members at the Thapar University, Patiala. Respondents’ response was received with the help of questionnaire tool. Faculties, Research Scholars and Postgraduates were more aware of their library e-resources and services. Most of the users are using the e-resources in hostels and computer centers. The e-journals were used by faculty and research scholars more in the departments. The findings show that a large number of users have started using electronic journals. The impact of e-resources is visible and there is a decrease in the collection of print journals.

Natarajan, (2010) conducted a survey of 117 faculty members and research scholars use and their perception of e-resources in Annamalai University, Annamalai Nagar. Research result revealed that respondents’ frequency of use of the e-resources was very low. The reasons identified for this were lack of time, lack of awareness, lack of subject coverage, and slow downloading.

Bhatia, JaspalKar (2011) organised a research study about the use of the e-resources in degree college libraries in Chandigarh. This study revealed that the types of e-resources access are in descending order of their choices are 47.27 percent e-books, 39.22 percent e-journals, 231.56 percent bibliographic database and 9.35 percent CD-ROM database. Majority of the users (71.43 percent) of the users indicated that they required training for learning more about the internet sources.
Information seeking behaviour of the faculty of Engineering Colleges affiliated to Mahatma Gandhi University, Kottayam, Kerala research study was done by Abraham and Ponnudurai (2012). It is a structured based questionnaire survey for collection of primary data. This questionnaire was prepared and distributed among the 26 engineering institutions faculty members. 1164 field questionnaires were collected and used for analysis.

Kiran Kumar and Mallinath Kumbar (2012) conducted a research about the use of electronic resources among the faculty (Assistant Professor, Associate Professor and Professor) in five autonomous Engineering Colleges in Bengaluru. This research evaluates the purpose, benefits, preference of web browsers, search engines, file formats, problem faced, and search patterns as the key parameters. The survey depicts that faculty (74.74 percent) use the e-resources mainly for the purpose of writing research proposal, reports and projects works, followed by those who use for: preparing teaching materials (73.07 percent), reading & writing research articles (71.73 percent), preparation for seminars (68.39 percent) and conference and workshop (59.36 percent). Faculties mainly prefer Google (94.81 percent) search engine for their immediate search than other search engines. The most popular format for downloading electronic resources by the majority is PDF (87.29 percent).

Chandran, Velmurugan (2013) organised a case study about the Engineering College library use and the user’s perception of electronic information resources. He used a structured questionnaire as a data collection tool. The purpose of using electronic resources 34.14 percent of the respondents used the e-sources for projects works. 26.01 percent of them used the e-journals and 24.39 percent of them used the e-databases. 95.12 percent of the respondents were aware of electronic resources in the library by the library orientations.
References


