CHAPTER II

REVIEW OF RELATED LITERATURE

The review of related literature is necessary for a researcher to get more information about the knowledge in a particular area. A systematic reviewing of the related literature is the means of determining whether the proposed study unnecessarily duplicates some earlier investigations. The knowledge obtained from such review in terms of sources, the representation of procedures and results to essential orientation for proper definition of the problem, selection of methods and interpretation of findings enhances better understanding. In this chapter, an attempt has been made to present an overview of the literature pertaining to the user perceptions and usage of open access resources by the academic community in the higher education system. A total of 90 studies are identified, reviewed and organized systematically in a reverse chronological order. These studies are organized into the following headings.

1. Information literacy of users towards e-resources
2. Usage and user perception on e-resources
3. Usage on open educational resources
4. Usage and user perception on open access resources

2.1 Information Literacy of users towards e-resources

Studies related to information literacy among the user towards both electronic resources and open educational resources is pre requisite for the effective utilization. A total of 15 studies related to information literacy in different contents are reviewed and chronologically presented as given below.
Ramamurthy, Siridevi and Ramu (2015) conducted a study on information literacy search skills of students in five selected engineering colleges in Chittoor district, Andhra Pradesh. The study revealed that 26.9% of respondents searched for IEEE Xplore database, 18.54% of respondents search for Science Direct database of Elsevier science, followed by ASCE (11.27%), ASME (9.09%) and COMPENDEX (8.1%). The 44% of respondents affirmed that encyclopaedia as the appropriate source for learning about a subject.

Khan (2015) explained the use of information sources and need of information literacy among students in Aligarh Muslim University, Aligarh. The study revealed that 25.45% of the PG students and 13.33% of research scholars do not know the meaning of IL (Information Literacy), while 20% of the respondents of each category heard about IL, but do not understand it. While 54.55% PG students said that the basic concept of IL is related to bibliographic instruction. The 36.36% PG students and 54.34% researchers know about the basic concept of information literacy.

The usage of information communication technology application in National Physical Laboratory Library, Delhi was studied by Salauddin (2015). The study revealed that among 60 represents, 40% are research scholar, 20% are scientist and 40% are other staffs of National Physical Laboratory. The finding indicates that all respondents are well aware about the computers. The study also revealed that all research scholars are aware of the internet, all scientists are familiar with the scanner, CD-writer, laptop and copier and other staffs of national physical laboratory are aware with internet. Most of the research scholars are aware with ICT application through colleges.
Janakiraman and Subramanian (2014) examined the utilization of ICT in R&D institution libraries in Chennai district. The study revealed that 22 (71%) of the respondents were male librarians and 8 (29%) female librarians. Subject wise, majority of the respondents were from engineering research institutions which is of 30%, followed by agriculture and social sciences of 23.3% each, science of 20% and medicine of 3.4% respectively. The ICT applications like e-resources, online databases, e-articles, e-newspapers and DVD/CDs were availed in the libraries. The study also revealed that most of the respondents from the different research area have identified that the CD/DVD mode of information as the most preferred ICT resource by the user community, because of its good storage capacity. The rating of these ICT resources CD/DVDs get maximum of 4.07 out of 5, followed by e-news paper (3.61), e-articles (3.10), online databases (2.31) and e-resource (2.07) respectively. Majority (83.3%) of the librarians were familiar with open access journals and 76.7% were familiar with library consortium.

Sinha and Bhattacharjee (2013) presented a report based on the report collected from 400 undergraduate students, faculty and research scholars on ICT literacy and internet usage pattern among college library users of Barak Valley, South Assam, North East India. The study revealed that majority 256 (84.21%) of respondents were aware of ICT and internet, whereas only 48 (15.8%) respondents were unaware of ICT and internet facility. Majority 204 (67.1%) of the respondents face difficulty of non-availability of adequate reading materials, followed by 174 (57.2%) slow speed on internet, 112 (36.8%) lack of awareness of e-resources, 108 (35.5%) lack of time to visit the library, 88 (28.9%) inability to search catalogue and 59 (19.4%) of the respondents mention about non cooperation from the library staff.
Emwanta and Nwalo (2013) investigated the computer literacy and use of electronic resources by undergraduate students of Federal University of Technology Akure (FUTA) and Obafemi Awolowo University Ile-Ife (OAU) in South-western Nigeria. The study revealed that 30 (26.8%) of the respondents from the Federal University of Technology, Akure (FUTA) use the internet to do class assignment, 2 (1.8%) respondents indicated that they use the CD-ROM for class work, while 19 (17.0%) stated that they use the electronic book to write projects. The study also revealed that 22 (19.6%) respondents use electronic journals to write seminar papers, while only a few 2 (1.8%) use electronic databases for class work. Ninety five (60.1%) respondents of Obafemi Awolowo University (OAU) stated that the internet is very relevant to their subject background, 8 (5.1%) indicated that electronic journals are marginally relevant and 67 (42.4%) respondents stated that electronic databases are irrelevant to their subject background. The interview with the university librarians also revealed that the content of the available electronic resources in the university library are relevant to their subject background.

The computer literacy level in students of Government Medical College, Chandigarh was examined by Kumar (2012). The study revealed that most of the students 70.21% used the computer regularly, 65.95% of the students used the internet for literature search, whereas only 12.76% students used the internet to get information for patient. The 70.21 percent respondents mentioned that medical education will not be effective without ICT-based study and teaching. More than 40 % of the respondents recommended that the medical college library subscribe more e-resources for effective study and research and 38.29% of the students recommended that library should be connected with other medical library and information systems through networking.
Sinha (2012) conducted a survey on internet literacy skills and internet usage patterns to access e-resources by the PG students, research scholars and faculty members of Assam University library users. The study revealed that 81% of respondents were aware of internet services, 19% did not have much knowledge of internet access/usage. The respondents 49% have ranked e-journal access at first place. The respondents 45.00% were using electronic resources for study purpose, which is followed by publishing journals 25.00%, research and development 15% and project works by 11.00%, where as only very few respondents (4.00%) are using e-resources to exchange ideas. Most of the respondents affirmed the importance to access internet for on-line access of e-journals consortium like UGC-INFONET, INDEST etc. Majority (68.00 %) of the respondents faced problems while accessing to e-resources like lack of adequate number of computers, low speed of the net connectivity and lack of infrastructure facilities.

Saravanan, Gopalakrishnan and Suganthi (2012) analysed the awareness on internet among the users in higher educational sector in various discipline at the Annamalai University. The study revealed that the IT awareness levels were found to be excellent for 51% and good for 33%. The respondents 41.5% accessed internet daily, 25% once in 2 days, and 15.5% were 2 to 3 times in a week. The purpose of using the internet for collecting course materials by 11.3%, subject searching by 7.8%, searching catalogue by 6%, e-books by 10%, e-journals by 12.2%, e-magazine by 2.2%, e-mail by 12.8%, games by 0.7%, career information by 12.6%, downloading by 12.5% and chat by 5.1per cent.

Joshi (2011) explained on information literacy competency of science, engineering and technology students of Delhi University through a survey. A questionnaire based on information literacy standards for science and engineering
technology developed by ALA is used for the study. The study revealed that most of the students are information technology savvy. They use internet very often to browse online databases and to interact with other students and faculty members. Most of them start their search using Google search engine. The students do not use print resources frequently in their library; rather they get the information from electronic resources subscribed by their institute’s library and also through UGC INFONET and INDEST consortia. Their personal laptop is an integral part of their research life.

**Santhi, Radhakrishnan and Rani (2010)** carried out a study on use of electronic information sources and computer literacy by the academic staff of the affiliated engineering colleges of Karur district under Coimbatore Anna University. The study revealed that 47.1% of respondents started using computer only during the last five years, whereas 27.4% of faculty members were using computers for more than ten years. The respondents of 90 (78.9%) were using the library OPAC and the respondents of 62 (54.4%) indicated that they were accessing the internet. All these respondents were using the e-mail facility. Online news services were accessed by 51 faculty members. Only 20 faculty members were using the internet for accessing course outlines of other universities. The majority 87 (94.5%) of the respondents were interested in learning more about the internet and 36% wanted to learn more about OPAC searching. Sixty per cent of the respondents were excellent in computing skills and over 91% were very good in computing skills.

**Dalvi (2010)** stated the information literacy skills for the students of selected colleges affiliated to the University of Mumbai. The study revealed that majority (93.05%) of the students know about the e-resources and only 6.94% of respondents were not aware about e-resources. When asked their experience about e-resources only 11.25% of the respondents find them to be comfortable, 4.30% found it as
difficult to locate the information required, 48.88% of the students avoid using e-resources as they do not possess the required skills and 5.55% were deprived of access to e-resources for various reasons. About 21% of respondents used internet for searching educational databases, 72.91% of the respondents used internet for email and chatting, 39.58% for gaming and other entertainment purpose.

Korobili, Malliari and Christodoulou (2009) assessed the information literacy skills in the Technological Education Institute of Thessaloniki, Greece. The study revealed that the students’ information gathering methods like 44.5% asked their friend, 32.7% are self informed, 21.7% students ask the faculty members, 20.5% inquire the librarian, 11.7% respondents received some information literacy principles integrated in a course and only 7.3% attend the library seminars.

Abdullah, Kassim, Saad and Tarmuchi (2006) investigated the information literacy measures for higher education in Malaysia University, Klang Valley. The study measured students’ information literacy competency in the key areas namely the ability to identify, access, retrieve, evaluate, and organize needed information to achieve certain purposes. The study revealed that 50.1% of the respondents are at the intermediate IL (Information Literacy) level, 38.4% were beginners and 11.5% can be categorized as at advanced competency level. Respondents with higher competency levels are those who frequently read materials in English, use internet and download softwares, search databases for academic materials, use the library to read academic journals and discuss academic matters.

Kavulya (2003) carried out a study on challenges facing information literacy efforts in selected University libraries, Kenya. There are different forms of information literacy programmes provided in Kenyan universities. These include library orientation, library instruction courses, individual instruction or reference
service and use of library manuals and guides. Library orientation aims to make students aware of the library facilities, information resources, lectures and demonstrations available to them, how to find and retrieve information using different tools such as catalogues and journal indexes. The library orientation is useful as an initial introduction to the library and its function. The timing of library orientation programmes in the first and second week of starting the courses.

The analysis of available studies shows that no systematic studies have been conducted so far on information literacy among the higher educational institutions.

2.2 Usage and User Perception on E-Resources

Electronic resources are the resources that are made available both on line and off line through computers and internet. Several studies have been conducted to the usage of e-sources, purpose of use, use of internet, place and purpose of use of internet, advantages of e-resources and also problem faced by the academics. A total of 48 studies related to resources are chronologically arranged as follows.

Dhanasekaran and Chandrakumar (2015) conducted a study on usage pattern of e-journals among the teaching professionals in University of Madras. The respondents 78.2% were male and 21.8% were female. The study revealed that 42.6% of faculty members were low level on basic knowledge about computer, only 8% were good knowledge in e-chatting. The female faculty members have good knowledge in computers, internet and e-mails. Majority of female faculty members used UGC-INFONET, whereas 37% of the male faculty members used the same. Forty two per cent of the respondents used e-journals for writing research papers, 39% used e-journals to carry out research project and 21% used for class room teachings. It was found from the survey that all the faculty members are using e-journals to prepare and publish research journals and to carry out research projects. The study also revealed
that 37% had strongly agreed that slow system process act as a barrier in accessing e-journals.

**Ambika and Selvakumar (2015)** analysed the faculty perception on library resources and services in Hindustan College of Engineering and Technology, Coimbatore. The study revealed that 33% of the faculty members used the library twice in a week, 24% of them use once in a week, followed by 13% of them responded for monthly once and 11% of them use occasionally. The study also revealed that 31% of the respondents use library for the purpose of borrowing library materials, followed by reading newspaper and magazines (26%), preparing lecture notes (18%), research purpose (11%), accessing general information (8%) and update the subject knowledge (6%). Majority (85%) of the respondents satisfied internet facilities in the library.

**Chikkamanju and Kumbar (2015)** examined the use of N-LIST services by the students of first grade colleges affiliated to Tumkur University in Karnataka state. The study revealed that 86.27% of the University college students, 30.34% of the government college students, 36.94% of the aided college students and 15.69% of the unaided college students were aware of N-LIST Services, whereas 13.73% of the University college students, 69.66% of the government college students, 63.06% of the aided college students and 84.31% of the unaided college students are not aware of N-LIST Services. Majority (73.79%) of the respondents learn to use N-LIST services through guidance from the library staff. About 58% of the respondents access N-LIST services for the purpose of preparing assignment, while 31.95% for reading research papers, followed by 22.30% for preparing/accessing teaching resources, 21.38% for
collecting general information, 14.02% for preparing project and only 10.57% of the respondents for the preparation of seminar, conference and workshop.

Khan and Haridasan (2015) conducted a study on use of online databases in the faculty of arts at Aligarh Muslim University (AMU) and University of Delhi (DU). The study revealed that the 100% faculty members and research scholars of AMU were using online databases for teaching and research work respectively, while 93.18% of the PG students use it for preparing notes and assignments. In Delhi University, majority (94.44%) of the faculty members use online databases for teaching purpose, 100% of the researcher scholars completely depend on online databases for their research work and 89.18% of the PG students prefer it for preparing notes and assignments.

Kumar and Naik (2015) examined the utilization of electronic information resources by postgraduate students of Bangalore University constituent college libraries. The study revealed that 65.95% students use internet for the educational purpose, while 31.91% students use it for e-mail, 29.78% and 27.65% of the students use for entertainment and to download research articles respectively. Eighty eight per cent students used full text database and open sources for their study. The study also revealed that 85.10% opined that they are comfortable in the library, while 61.70% students stated that library is quiet. However, 46.80% and 25.53% of students revealed that library is welcoming and safe respectively.

Anyaoku (2015) conducted a survey on undergraduate students’ awareness and use of medical library resources in the College of Health Sciences, Nnamdi Azikiwe University, Nigeria. The study revealed that 84.8% of the students use the library. Majority (60%) of the respondents were not aware of electronic information resources in the library. The respondents major activities are reading personal
textbooks, reading newspapers, sourcing information for research or project work and doing class assignments. Major barriers reported by the student on the effective use of the medical library are lack of computer/internet.

The study by Stephen and Rex (2014) examining the use of e-journals by the research scholars in Alagappa University, Karaikudi, Tamilnadu, revealed that majority (60.2%) of the M.Phil scholars and 34.6% of the Ph.D scholars were using internet daily. Majority (72.8%) of the M.Phil. respondents were aware of e-journals and 27.2% were not aware of them. Among the Ph.D scholars 100% were aware of e-journals. The most of the respondents 54.5% access e-journals from department lab. Majority (86.4%) of the Ph.D scholars use of e-journals for the purpose of writing research papers. Overall, 100% of research scholars use e-journals for the purpose of conducting research work, followed by 86.4% for writing papers, 78.9% for current awareness and 53.7% for preparing notes.

Santhi and Radhakrishnan (2014) studied the usage pattern of electronic resources among the research scholars in Anna University of Technology, Coimbatore and its affiliated colleges. The study revealed that 20.84% of the respondents were using the e-resources at their campus and 5.21% replied that they are using e-resources outside the campus such as computer centres and home, 73.95% access e-resources both from on campus and off campus locations. Most of the respondents 26.25% prefer to use print formats when they access the e-resources, 9.02% of them prefer to use electronic formats and 64.73% of the respondents browse both print as well as electronic formats. Majority (98%) of the respondents use e-journals for their research, 32.5% browse e-dictionaries for their research, 45.7% use e-thesis for their research, 55.7% use e-magazines for their research, 15.6% browse e-catalogues for
their research and 52.3% use e-databases for their research purposes. The study also revealed that there is a significant difference among research scholars related to usage pattern for e-resources such as e-book, e-dictionaries, e-theses, e-magazines, e-catalogues and e-databases.

**Konappa (2014)** presented the use of electronic information resources in university libraries of Tirupati. The study revealed that most of the (32.86%) respondents use electronic information resources daily. Majority (64.31%) of the respondents use e-journals, it is followed by 58.33% use e-books, 50.63% use the CD-ROM database and only 25.16% of the respondents use online bibliographic databases. The study also revealed that majority (93.24%) of the respondents use electronic information sources for the purpose of preparation of notes, 63.99% use for the purpose of study work, 49.37% of the respondents use for their project/dissertation work, 28.93% of the respondents use for the purpose of attending seminars and 26.26% respondents use for the purpose of writing article for publication.

**Mohsin, Khatoon and Usman (2014)** carried out a study on use of e-resources among the faculty members of Sir Sayyed College, Aurangabad. The study revealed that most of the respondents 40% were excellent computer knowledge. Forty eight per cent of the respondents opined that the internet is used for study and research, 43.02% for e-mail/chatting and for entertainment by 8.60%. Most of the respondents (41.66%) find internet in central library as the convenient place for accessing. Majority (71.66%) of the respondents were aware of e-resources and only 28.34% were not aware. Thirty three per cent of the respondents indicate that the purpose of using e-resources is for study and teaching, followed by research work for 25.45% and paper publication for 20.61%.
Mishra, Singh and Swati (2014) investigated the awareness and use of e-journals among the research scholars of Banasthali Vidyapith, Rajasthan. The study revealed that 35.42% research scholars got awareness by library professionals and 34.38% got awareness by university faculty. Majority (67.71%) of the research scholars uses both print & e-journals, while, 19.79% uses only e-journals. The study also revealed that majority (71.88%) of the research scholars access e-journals whenever required and 77.08% access e-journals for the purpose of research & development. Most of the research scholars get the link of e-journals through the UGC-INFONET website. Only 5.21% of the research scholars reported that they are highly satisfied while accessing e-journals. Maximum research scholars feel that very few e-journals are available in their subject and yet another problem faced by research scholars is lack of orientation and training in the context of accessing e-journals.

Kandasamy and Vinitha (2014) analyzed the online database usage by research scholars of the Manonmaniam Sundaranar University, Tirunelveli. The study revealed that the majority of research scholars were aware and used Science Direct database (91.11%), it is followed by CMIE-India trader 66.66%, Biological Abstract 60%, FIIB Virtual Link 56.66%, CMIE-Prowess 53.33%, EBSCO-online journals 50%, Web of Science 47.77%, DELNET 44.44% and Mathsci Net database 47.22%. The purpose of using online databases for their research work by 91.11%, for subject knowledge 84.72%, for career development 60% and for job orientation by 47.22% respectively. Majority (88.88%) of research scholars prefer to use online databases in department computer lab followed by University library 74.44% and home by 60%. The study identified that the major problem faced by the research scholars in using online databases are lack of online databases subscribed by university on science and technology as well as social sciences. Fifty per cent of the research scholars are satisfied with the infrastructure to support accessing online databases.
Anjaiah (2014) examined the access and effective use of UGC-Infonet e-journals by the faculty members and research scholars at University library, Annamalai University, Tamilnadu. The study revealed that 74.4% of the respondents replied positively that they are using internet. The research scholars of 25.6% answered that they are not using internet. Most of the respondents (33.6%) use UGC-Infonet e-journals for their teaching & research, followed by 24.8% respondents use it for searching online databases, 18.4% for writing research/general articles for presenting at seminars/conferences and work-shops, 13.6% for general information, 4.8% for writing books. The study also revealed that majority (51.2%) of the respondents access internet from the University library. Most of the respondents 41.6% are fully satisfied with the existing usage of the e-journals. Thirty six per cent of the faculty members and research scholars are not satisfied with the availability of existing UGC-Infonet e-journals.

Tariq and Zia (2014) conducted a study on use of electronic information resources by the students of faculty of science, University of Karachi. The study revealed that majority (73.91%) of the respondents use electronic information resources for class assignments, 50.87% of them use to update the subject, 44.35% respondents used it for their research, 17.83% respondents use it for professional development and only 4.78% use it for different course tutorials. The major problems are slow net connection faced by 30.87% respondents, electricity failure faced by 30.43% respondents, feelings of insecurity and afraid of different viruses and errors by 16.52% respondents, interruption caused because of unnecessary advertisements by 13.91%, licensing issues faced by 13.04%, thinking it as wastage of time by 8.70% and thinking there is nothing but scattered data which is not helpful for them by 8.26% of respondent.
**Kumar and Kotabagi (2014)** conducted a study on usage pattern of electronic information resources by the research scholars of science departments in Karnataka University, Dharwad. The study revealed that 75% of the respondents are aware about e-resources, only 25% of the respondents are not aware about e-resources. Most of the (55%) respondents use e-journals to access the information, whereas, 28.75% of the respondents are using e-books for accessing the information, 7.5% of the respondents access information by e-magazines and e-newspapers. The study also revealed that most of the respondents 48.75% use e-resources for their research purpose, whereas, 25% use for finding relevant information, 10% respondents use it for writing papers and keeping up to date in their field of research. Majority (78.75%) of the respondents are agreed with the reliability of e-resources, and 48.75% of the respondents are satisfied with the present collection of e-resources.

**Rajput and Gautam (2014)** studied the users’ attitude towards use of the electronic resources and services by the users of Jiwaji University Central Library, Gwalior, India. The study revealed that 33.3% of the users were aware of the bibliographical services, 29% were aware of CD-ROM, 70.3% were aware of e-journals, 62.9% were aware of internet services and 51.2% of them knew about OPAC services provided in the library. Whereas 37% and 47.5% of users were not aware of OPAC and CD-ROM services respectively. Majority of the users (67.2%) were satisfied with internet facility.

**Stephen and Thanuskodi (2014)** conducted a study on use of ICT by research scholars of Alagappa University, Karaikudi. The study revealed that 84% of respondents strongly agree that higher education and research will not be effective unless ICT tools and techniques are used in the research process. Majority (90.83%) of the research scholars use internet for research purpose, it is followed by 74% for sending and receiving e-mails, 85.49% use it to download e-resources, 17.56% use internet for online shopping, 79.39%
use it for preparing assignments, 37.40% for chatting and 19.08% for playing online games. The study also revealed that physical strain and mental strain were the main problem by the research scholars while using ICT services.

**Vasishta (2014)** carried out a study on use pattern of e-resources by research scholars and faculty members from technical university libraries in North India. The study revealed that 49% of the research scholars were aware of e-resources. Majority (55%) of the respondents preferred department as their favourite place for accessing e-resources. It is followed by 41% for their home and 33% for the library. The study also revealed that 44% of the respondents use e-resources for research purpose, 34% use for writing scientific articles, 12% use for project work, 19% use for seminar presentation and 9% use for other purposes. Fifty three per cent of the respondents mentioned slow net speed and 34% mentioned lack of training as the major problems for the less usage of e-resources. The respondents of 29% were satisfied with the facilities available in the technical institution libraries.

**Das and Maharana (2013)** presented on the access, awareness & use of electronic information resources by research scholars of Berhampur University, Odisha. The study revealed that e-books were used by 65% of the respondents, it is followed by e-journals 100%, and ETD 14%, online databases 91%, internet 96%, CD-Rom databases 31%, network based information services 14% and e-news papers 60% respectively. The study also revealed that 86% of the respondents used theses/dissertations database and 73% of the respondents used conference and seminar proceedings from the university institutional repository. The problem faced by the research scholars while using e-resources are, 61% feels that materials are not available in library, 82% feels that materials information are incomplete and 61% of them mention that the internet is very slow.
Pamnani (2013) carried out a study on use of internet in college libraries of Sant Hirdaram Nagar, India. The study revealed that most (57%) of the respondents prefer library as the place for accessing internet. Only 22% of the faculty members have gone online to find information from the e-journals that are available through the Google. Again, the respondents from science, medical science and management faculties were more positive about the use of e-journals, e-books, e-encyclopedias, e-dictionaries, abstracting and indexing services and databases. Lack of awareness of the availability of material and low speed of internet were mentioned major problem by majority of faculty members. They need to provide training for searching online information for whatever purposes.

Ukpebor and Ogbebor (2013) conducted a survey on awareness of internet plagiarism, attitudes towards plagiarism and perception of plagiarism in the context of writing and doing assignments online by the secondary school students and administrators in Nigerian educational sector. The study revealed that 56.4% of the students use the internet for information and 32.7% use it for school work. The other uses obtained very low percentage like 4.8% for communication, 4.8% for chatting and 1.3% for other purpose. The majority (87.4%) of the respondents use the internet for doing assignment work and only 26.6% of the students use the internet for plagiarizing. The awareness of plagiarism with the students showed that the majority of the students have not even heard the word plagiarism while very few of them could give the meaning of the term plagiarism.

Joshi, Mukati and Naidu (2013) carried out a study on internet awareness among students in Government colleges of Indore city. The study revealed that 36% the student belongs to faculty of arts are accessing internet once in two days while 27% of students using it daily. Forty Five per cent of the students studying in various
disciplines of science faculty use internet daily. Majority (72%) of the respondents were using internet for their education purpose. Most 40% of the students and faculty of science are partially satisfied with the available internet facility. Forty five percent of the student from the faculty of arts and 46% from faculty of commerce are unsatisfied with using internet. Similarly 46% students are accessing internet to update themselves with current information, followed by 25% of response towards helpful in their research work. Thirty Eight per cent students are using internet for online learning and 23.4% of the students are using it for online examinations. Fifty per cent of respondents agreed that towards the awareness level is good.

Kalbande, Shinde and Ingle (2013) carried out a study on use of electronic resources by the faculty members of Mahatma Phule Agricultural University, Rahuri, Maharashtra. The study revealed that 82.41% of the respondents were aware about e-resources and only 17.59 were not aware. The e-databases and e-journals were the mostly used resources by the respondents, which are 31.15% and 26.23% respectively. It is followed by use of e-article by 14.75%, e-theses/dissertations by 11.80%, e-newsgroups/magazines by 7.54% and e-books by 6.56%. The respondents of 45.95% indicates that the purpose of using e-resources is for studies and teaching, followed by 25.95% for research work, 13.51% for paper publication and 6.49% for presentation in seminar/conference/workshop.

Elavazhagan and Udayakumar (2013) examined the extent use of e-resources by the faculty members and research scholars of BITS, Pilani-Hyderabad Campus. The study revealed that most of the (47%) respondents were using e-resources less than 1 hour in a week and 31% of the respondents were using e-resources from 2-3 hours in a week. Most of the respondents preferred to use e-resources in the campus & library, a few were preferred to use from the home and other places. Most of them were using the e-resources for their research and education
purpose. The respondents of 40% were indicated that slow internet speed is the major problem while using e-resources. Forty seven per cent of the respondents were partially satisfied with the e-resources facilities provided by the central library. Most of the respondents feel that the e-resources help them to save time, easy to use, more informative, more preferred, more flexible and very effective.

Maharana, Das and Pati (2013) evaluated the awareness and usage of UGC-Infonet digital library consortium by the faculty members of Odisha state Universities. The study revealed that 40% of the faculty members were accessing UGC-Infonet thrice in a week. UGC-Infonet digital library consortium is mostly used by the faculty members for publication of papers, guiding research and teaching. Library as the most convenient place for accessing UGC-Infonet digital library consortium services among the lecturers, while professors and readers are more comfortable in their department as the convenient place. Forty per cent of the faculty members are satisfied about UGC-Infonet digital library consortium. Low internet bandwidth, poor infrastructure facility of the library, poor infrastructure of the department and frequent power failures are the major problems encountered by the faculty members while accessing UGC-Infonet digital library Consortium.

Amusa, Salman and Ajani (2013) investigated the knowledge and use of electronic information resources among the academic staff in animal health, animal production, and veterinary medicine colleges in Nigeria. The study revealed that majority (97%) of the respondents used computer regularly and only 3% respondents were rarely used. Majority (79%) of the respondents were using electronic resources for their professional activities, 77% for personal research, 74% use them to support teaching activities, 41% use them for administrative matters, and 13% used for communication purposes.
Anie (2013) conducted a survey on utilization of e-journals by the research scholars of Sree Sankara University, Kalady. The study revealed that 90% of the respondents have computer knowledge and knows about e-journals, 37% of the respondents were unaware about e-journal and 60% of the users were interested to read print journals. The study also revealed that there is a high demand for library orientation program and training in the use of e-journals.

Kumar (2013) presented his findings on the use of internet resources and services among students of Maharishi Markandeshwar University, Mullana. The study revealed that majority of the respondents (65%) use the internet for entertainment purposes, while 67.5% use it for research purposes, 12.5% students use it for writing their assignment and 38.75% use it for communication. Majority of the respondents (68.75%) accessed internet at the university library and only 18.75% accessed the internet at their home. Most of the (50%) students learn about the internet through their personal efforts.

Ivwighreweta and Oyeniran (2013) analyzed the usage and awareness of e-resources by lecturers in two selected Nigerian Universities. The study revealed that 34% of the respondents used e-resources on a daily bases, followed by 31% respondents who use e-resources on weekly bases. Majority (88%) of the respondents indicated that they were aware of e-resources, while 12% indicated that they were unaware. Forty seven per cent of the respondents were using e-resources for research work and 21% used it for paper publication. Majority (61%) of the respondents indicated that they were very satisfied with the level of e-resources used, while 27% were unsatisfied with it.

Thanuskodi (2012) analysed the use of e-resources by the post graduate students and research scholars of faculty of arts in Annamalai University. The study
revealed that the majority of users were aware about the availability of e-resources. Forty eight per cent of the respondents access only electronic version, whereas only 32.78% of the respondents read the printed journals, but 19.44% respondents want to use both electronic and printed version. Majority (76.66%) of the respondents use e-resources for writing papers, 62.22% of the respondents use e-resources for studying their course work and 51.66% of the respondents use for research work. Forty five per cent of the respondents use e-resources for updating subject knowledge, 23.33% use it for teaching and only 16.11% respondents use e-resources for other purpose. Majority (50.56%) of respondents are highly satisfied with the infrastructure provided by the library for accessing e-resources at different levels, whereas only 10% of respondents are not satisfied with the same.

Dhanavandan, Esmail and Nagarajan (2012) examined the use of electronic resources at Krishnasamy College of Engineering & Technology library, Cuddalore. The study revealed that majority (82.2%) of the respondents were fully aware and 13.6% were somewhat aware of e-resources in the library. Most of the respondents 32.6% were using e-resources at once in a week and only 11.5% of the respondents use e-resources rarely. The purpose of using e-resources is for study by 41.5%, for research by 9.8% and updating their subject knowledge by 20.4%. Majority (55%) of the respondents preferred e-journals & e-books. Sixty six per cent of the respondents were satisfied with the e-resources available in the library.

Saikia (2011) analysed the perception of teachers and research scholars of school of Science & Technology, Management, Humanities and Social Science in Tezpur University towards e-journals. The study revealed that majority of the (60%) teachers in the school of science & technology reported that they were using electronic journals at least once in a week and only 9.4% teachers never used printed
journals. Most of the (50%) research scholars preferred to have both core and non-core journals in e-format, while most of the respondents of school of management, humanities & social science were frequently used e-journals.

Thanuskodi (2011) conducted a study on use of ICT among faculty members of self-financing engineering colleges of Salem. The study revealed that the 42.11% of the computer science faculty respondents access internet below 2 hours per day. Most of the electrical engineering faculty respondents (40%) have 4-5 hours of access to internet. The mechanical engineering faculty respondents 28.58% have above 5 hours of access to internet, civil and mechanical engineering faculties 2-3 hours of access to internet. The chemical engineering faculty respondents top the position with respect to their overall barriers in accessing e-resources as their secured mean score is 3.94 on a 5 point rating scale. The computer science faculty respondents take the second position, the electrical engineering faculty respondents rank in the third position, the mechanical engineering faculty respondents take the fourth position and the civil engineering faculty respondents occupy the fifth position, in their overall barriers in accessing e-resources with their secured mean score is 3.02 on a 5 point rating scale.

Parameswaran and Nagarajan (2010) examined the awareness and use of e-journals by the faculty members of Mahila Maha Vidyalaya, Banaras Hindu University. The study revealed that 23.3% of respondents use e-journals for their research work, 35.92% of respondents use e-journals for writing research papers, 8.74% of respondents use e-journals for updating subject knowledge, 18.57% of the respondents use e-journals for other works. Majority (56.32%) of the respondents take printout before using e-journals. Twenty seven per cent of respondents download the content and stored in a device after use and 16.50% of respondents use the computer
screen for reference. Only 33.98% of the respondents are satisfied with the infrastructure provided by the university to access e-journals.

**Natarajan, Suresh, Sivaraman and Sevukan (2010)** conducted a survey on use and user perception of electronic resources by the faculty members and research scholars in Annamalai University. The study revealed that majority of the faculty members (71.9%) were aware of e-journals, 58.12% were aware of e-newspapers and 41.88% aware of e-books. Majority (82.41%) of the research scholars were also aware of e-journals, 67.59% were aware of e-newspapers, 66.67% were aware of e-thesis and 59.26% were aware of online databases. Majority (58.97%) of the faculty members and 62.02% research scholars were using e-resources available in Annamalai University library, while 41.03% faculty members and 37.96% research scholars were not using it. The reasons identified for not using are lack of time, lack of awareness, lack of subject coverage and slow downloading.

**Maharana, Sethi and Behera (2010)** explained the usage of internet and e-resources by the students of Master Degree Course in Business Administration in Sambalpur University, Orissa. The study revealed that 6.59% of respondents use e-journals daily, 5.49% use e-books daily and 3.29% use digital archives daily. The study also revealed that most of the respondents 34.06% use e-resources for their study purpose, while 25.27% of them used for communication and 17.58% used for professional research activities. More than one third of the respondents use internet facility to cater their academic needs.

**Swain (2010)** carried out a study on keenness on use of e-resources by students of major business schools in Orissa. The study revealed that 63.5% of the students expressed keen interest in using of e-journals, followed by e-books (65.1%),
e-news papers (53.6%), e-reports (53.1%), e-articles (46.4%) and the use of electronic theses and dissertations by 32.8%. Majority of students are aware of EBSCO (62.5%), followed by Emerald Management Xtra (52.6%). Eighty four per cent of the students preferred Google as the search engine for accessing e-resources, followed by Yahoo 81.8%, and MSN 55.7% frequently. The study also revealed that majority (53.1%) of respondents know the Web OPAC services, but only 33% usually used it and 14% of the respondents never know about Web OPAC.

Kattimani and Kamble (2010) found out the awareness of internet and use of online information resources among the users at the Honey well software industry library, Bangalore. Data were collected from the administrative staff, supportive staff and software engineers, including all categories of library users. The study revealed that the purpose of using internet and online information source by the majority of the software engineers is for the preparation of their project work. Seventy five per cent of respondents use internet less than an hour in a week for assessing information resources. Majority (88%) of the respondents were using library home page as search engine by connecting to other web-links, 81.2% of respondents have awareness towards online information resources and 77.5% were aware of library web OPAC.

Deng (2010) presented an online survey among the students and staff in the University of Australia in order to understand how electronic resources are used. The study revealed that 96% of the respondents have used electronic resources for their work and study; only 4% of the respondents have not used the electronic resources. Out of total respondents 20.8% were use e-resources to gather information, 17.6% for obtaining answers to specific questions, 14.6% for writing an assignments, 12.7% for literature review and 10.7% for writing essays.
Kumar and Kumar (2010) examined about the perception and use of e-resources and the internet by the engineering, medical and management colleges in Bangalore city. The study revealed that 70% of the respondents use the e-resources for their study, 59% used it for teaching purposes, and one third of respondents used e-resources for project work. Regarding different disciplines 88% of medical students used e-resources for their study purposes, followed by engineering (67%) and then management studies (55%). The result illustrated that 100% of respondents used internet. The majority (54%) of the respondents used internet in the college library, followed by 41% from cybercafé/commercial centre and 39% in home. The study also revealed that 85% of medical science respondents and 44% of management studies respondents used the internet in the college library, while 47% of engineering respondents used it in the cybercafé / commercial centres.

Singh and Arora (2010) studied the use of e-resources in various college libraries of Delhi. The study revealed that majority (97.56%) of students and 100% teachers were aware about the e-resources. Most of the students (58.53%) use e-resources for the purpose of preparing assignments and notes. Majority of the teachers (75.6%) use e-resources for the purpose of preparing their lectures. It is observed that most of the college libraries of Delhi do not subscribe sufficient e-resources in the library which may be due to lack of budget for subscribing the e-resources.

Hussain (2010) explained on the user perception of usability of e-resources at IMT, Ghaziabad. The study revealed that majority (62%) of the respondents computer literacy is a necessity for using e-resources. Twenty Five per cent of the respondents were frequently using electronic resources. Majority (62%) of the respondents prefer to use e-resources from their cabin. Most of the respondents (53%) were satisfied with electronic resources as facilitated by library. It was found that the most of the faculty
members and students are well trained in using electronic resources; only a few are taking assistance from the library.

Kaur and Verma (2009) conducted a study on the use of e-resources and services provided at the central library of Indian Institute of Technology, Delhi. The study revealed that the most of the users (88%) were aware of their library e-resources and services, the remaining (12%) have no knowledge about e-resources. The main users of the e-resources are post-graduates, research scholars and the faculty. The result indicated that 71.39% of users were aware of INDEST consortium, and the rest of the 28.61% had not heard about it. Most of the users (71%) prefer to use both print and electronic format, while 17.45% prefer electronic format only and 11.52% prefer print only. The library has good collection of e-resources as per the courses run by the institute and the undergraduate students find out that the information in the e-resources are very useful to them.

Swain and Panda (2009) attempted to study on librarians opinion in use of e-resources in top five business school libraries in Orissa (India). The study was done to examine up to what extent electronic information services are offered to users of business school libraries in the state with an opinion poll of the librarians of the respective business schools. The study revealed that 52% of the faculty and 60% of the students use e-resources every day. Most of the respondents (64%) were used internet based e-resources more and well when compared with CD-ROM databases. The premier web search engine like Google and yahoo are the most frequently used search engines.

Asemi (2007) examined the awareness and use of digital resources in the libraries of Isfahan University of medical sciences, Iran. The study revealed that 70% of students were aware of digital resources, but only 69% have used them. The respondents 62% were aware of offline data bases, whereas only 19% used them
through the central library LAN network. Majority (70%) of the respondents were aware of online databases, but only 53% of respondents have used them. The study also revealed that majority (64%) of the respondents were aware of the central library books and journal database, while over half of them made use of it. In total, 87% of students felt that the available data resources met their information needs. Low speed internet connectivity and shortage of hardware facilities are the major problems faced by the users.

Nikam (2007) carried out a survey on use of e-journals and databases (UGC-InfoNet) by the users of University of Mysore. The study revealed that only 4% of the users were fully aware of the UGC-Infonet facility. The majority of the respondents (61.5%) were somewhat aware of UGC-Infonet and 16.5% were not aware of the facility. The survey also revealed that the majority of the respondents learn about UGC-Infonet, while browsing the net and create awareness through other library professionals. Lack of awareness, lack of time and improper internet connection are the reasons for not using e-resources.

Kanaujia and Satyanarayana (2003) conducted a study on use and awareness of web based learning among the science and technology community of Lucknow city. The study revealed that 49% of users browsed the web for more than two to four hours and 14% for more than five hours a day. The study further revealed that 37% of users use e-journals regularly, while 40% used the internet for consulting technical reports and 10% for telnet service.

Zhang (2001) conducted a survey on the use of the internet and its purpose among 406 graduate and undergraduate students from Shippensburg University. The study revealed that a majority of the undergraduate students used the internet one or two times per week. The survey also shows that all graduates and undergraduate students used e-mail services. The use of internet-based electronic resources shows
that e-mail was the most frequently used tool. All respondents indicated that they used e-mail at least once in a week, while almost 94% of them used it almost every day.

2.3 Usage on Open Educational Resources

The open education resources are the open content that is freely accessible worldwide from a common portal or gateway. A total of 7 studies related to open educational resources are reviewed and chronologically presented as given below.

Shukla (2015) conducted a study on assessing the impact of open access digital repositories on information seeking practices of Indian scientists. Data collected from scientists and research scholars of Central Drug Research Institute, Central Institute of Medicinal and Aromatic Plants, National Botanical Research Institute, Indian Institute of Toxicological Research, Centre for Biochemical Technology, Institute of Microbial Technology, Institute of genomics and integrative biology and National Physical Laboratories. The study revealed that most of the scientists (68%) and research scholars (87.12%) are well aware about the Open Access Digital Repositories (OADR). The 55.25% scientists and research scholars prefer to seek information via OADR, whereas 24.75 do not prefer it and 20% users are reported neutral in their response. Purpose of using Open access digital Repositories are, to update knowledge by 38.00%, followed by to access Grey/unpublished works by 28.50% and to complete research projects and assignments by 11.75%. The opinions of the users regarding the benefits of seeking information through OADR, such as access to unpublished materials by 37.50%, all time availability by 22.25%, easy and free access by 14.50% and single point access to all works by 11.25%. The users such as scientist and research scholars of 33.50% opined that the increase in permanence and all time availability of materials as the biggest impact of OADR.
Awasthi (2015) investigated about open access initiatives and use of institutional repository in academic community by the five research institutions in India. The study revealed that 86.7% respondents are well aware of the concept of open access initiatives. Thirty two per cent respondents have used the institutional repository only a few times throughout the year, 56% of the respondents agreed that they had never derived any benefit from the use of the institutional repository. About 32% respondents believed that the refereed material should be deposited in the institutional archives. Forty eight per cent respondents conversed that they are willing to self archive their own work.

Obaje and Amkpa (2013) carried out a study on use of open access institutional repository (OAIR) by academic staff of the University of Jos. The study revealed that majority (75.5%) of the academic staff has not yet uploaded their published articles in the University institutional repository and only 24.5% respondents have uploaded their articles. Major reason for not uploading in institutional repository is due to lack of motivation (32.3%) and twenty nine per cent respondents are because they published articles in subscription based journals.

Iwighreghweta (2012) studied the challenges of institutional repositories development in some academic institutions in Nigeria. The study revealed that majority of the respondents has not deposited their work with their institutional repositories. The respondents indicated overwhelmingly that they were completely aware of open access institutional repository. It was found that the major obstacles to the development of open access institutional repositories are that of funding by government and the institution parent body. Also majority of the respondents identified the university library as their preferred appropriate unit for managing institutional repository.
Manjunatha and Thandavamoorthy (2011) carried out a study on researchers’ attitude towards depositing in institutional repositories of universities in Karnataka. The study revealed that 20.87% of the respondents mentioned the popular source was the printed books and journals, while 20.4% of the respondents mentioned institutional repositories, 7.03% mentioned library websites, 10.8% of respondents mentioned open access journals, 10.55% mentioned Google scholar, 7.03% mentioned library OPAC, 4.4% mentioned subject portals and 7.32% mentioned online subscription databases. Majority (56.80%) of the respondents agreed that it was very important to publish in IRs in order to disseminate their research findings. The reason for not contributing in IRs like that other user might copy the works without permission. The study also revealed that the majority of the respondents were positive attitude towards deposit institutional repositories and providing free access to scholarly research results of their University.

Das (2011) in his study stated about the emergence of open educational resources (OER) in India and its impact on lifelong learning. The open educational resources and the open courseware are some of the recent innovations that are especially relevant for achieving equitable access to quality education. National Knowledge commission (NKC) has called for a national e-content and curriculum initiative to stimulate the creation, adaption and utilization of OER by Indian institutions. In India number of national institutions has established OER portals for providing nationwide access to their educational resources. NME-ICT launched in 2009, is a centrally sponsored scheme to leverage the potential of ICT in providing high quality personalized and knowledge modules over the internet/intranet for all the learners in higher education institutions at anytime anywhere mode.
Cullen (2010) investigated on the development of institutional repositories in New Zealand, exploring factors affecting the adoption and success of institutional repositories from the perspective of the library managers who established them, and from the perspective of the academic community. Institution covered includes the libraries of New Zealand’s eight universities and four of the largest polytechnics. These showed that New Zealand tertiary libraries are involved in a wide variety of institutional repository projects, most of which began as part of the consortia.

2.4 Usage and user perception on Open Access Resources

Open access resources are in digital form, free of charge, without copyright and licensing restrictions. Open access provides the general and academic community with the latest state of the art research and to foster the scholarly communication by providing common ground for interoperable web portals that can be cross searched for publication data without any restrictions. Open access is a very important part of the knowledge transfer and it is the best way to bring the concepts of open access resources to the wider public. A total of 20 studies related to open access resources are reviewed and chronologically arranged as follows.

Mammo and Ngulube (2015) studied the academics’ use and attitude towards open access in selected higher learning institutions of Ethiopia. The study revealed that 78 per cent of the academics were aware of open access journals. The study also revealed that the respondents have a perceived positive attitude towards open access journals and would like to use them in the future. The respondents have been using open access journals as an alternative access model to the conventional journals subscription model and yet to optimize the benefits of open access among academics and they expect university librarians to promote and enhance the accessibility of open access journals in their respective university libraries and in Ethiopia in general.
Prince and Saravanan (2015) conducted a study on awareness and perception towards open access resources among the users in the higher educational institutions in Kanyakumari district. The study revealed that majority (62.8%) of the faculty members, 45% of the PG Students and 42.5% of the research scholars were fully aware of open access resources. Majority (59.4%) of the respondent uses open access resources for the purpose of studying course work. It is followed by research/project work for 44.9 per cent, for update subject knowledge by 44.6 per cent, for teaching by 35.7 per cent, for writing papers/articles by 31.8 per cent and other academic purposes by 26.8 per cent. Sixty seven per cent of the respondents were satisfied with open access resources and its uses in their academic activities. The study also revealed that 39.5 per cent of the respondents have low level user perception towards open access resources, 26.6 per cent have medium level user perception and 33.9 per cent have high level user perception towards open access resources.

Jomyjose (2014) analysed the awareness of open access e-resources among academicians in Kerala. The study revealed that 19.16% respondents use different open access resources when necessary, 21.96% respondents use occasionally and rest of them (58.4%) use very often. The purposes of using open e-resources are for writing scholarly articles by 50.17%, workshops and seminar preparation by 27.53% and for research by 16.73%, only 3.48% respondents use open access resources for teaching.

Alwarammal (2013) investigated the utilization of online digital resources by faculty of engineering colleges in Tamil Nadu. The study revealed that the category of lecturers (87.23%) were using internet resources for the preparation of study materials, class exercises and curriculum plans and downloading software. The categories of professors and assistant professors rank first and second respectively in
using internet resources. Majority of the faculty members (75.18%) revealed that the prime motivating factor in the online digital resources is enhancement of teaching, preparing manuscripts and research proposals. Hence, it is found that the faculty members use internet resources to improve their teaching and 43.88% use internet for enhancing their communication skill. The second factor is the enhancement of research by 63.31% of respondents.

Sandhu and Daviet (2012) carried out a survey on use of open access resources by the engineering students of Punjab. The study revealed that 92% of the respondents agreed that they are familiar with open access journals and read them regularly for exams, only 8% replied in negative. Eighty five per cent of respondents were familiar with institutional repositories and only 15% replied in negative. Also 82% of the respondents had read the scholarly work posted on the personal website and only 18% replied in negative. Several respondents reported that open access materials on the web are useful for research purpose. Several respondents mentioned that they routinely check institutional repositories (IR) before completing inter library loan requests. Several respondents emphasized that they are comfortable using peer reviewed or other high quality open access resource.

Ivwighreghweta and Onoriode (2012) examined the awareness and use of open access journals by library and information science students at the University of Ibadan, Nigeria. The respondents are classified MLS I and MLS II. The study revealed that 64 respondents (46%) representing MLS I agreed that they are aware of open access journals and also 76 respondents (54%) representing MLS II agreed that they are aware about open access journals. Sixty One per cent of MLS I students and 20% of MLS II students have used open access journals. It is followed by downloading articles from open access journals with 83(59%) and 83(27%) responses
respectively. Most of the respondents were positive responses as the open access journals are free of cost.

**Baskaran (2011)** conducted a study on user perception of library services in three academic institutions in the southern districts of Sivaganga, Ramanathapuram and Madurai, Tamilnadu. The study revealed that the library users most frequently visit their respective libraries for preparing for seminars assignments and to refer journal articles (0.70) mean. The users also frequently visit their libraries to prepare for projects/seminars/assignment (0.66) mean and least level mean secure the respondent for browse database is (0.44) mean. The respondents from the faculty of science secured maximum level due to keen search and obtained information by scientific journals and electronic publications. The study also revealed that internet users prefer yahoo search engine as the most and google is next position in this study.

**Rehman, Shafique and Mahmood (2011)** studied the user perception and satisfaction with reference services in university libraries of Punjab. The study revealed that 43% of the respondents visited the library daily and 39% visited it twice a week. Respondents agreed with the statement that reference collection is adequate for their information needs (mean=3.67), well-organized and easy to use (mean=3.57), and appropriate material is available for answering the reference questions (mean= 3.56). The respondents agreed that the reference staff is competent and helpful (mean= 3.84) and demonstrates good communication skills (mean= 3.58). But most of the respondents did not give any opinion about the statement that the reference staff immediately answers their ready reference questions (mean= 3.44). The study also revealed that the respondents have satisfaction with all the library staff
rather than only about reference staff. The level of user satisfaction is also satisfactory.

**Anuradha, Gopakumar and Baradol (2011)** examined the awareness and use of open access and free resources from the internet at BITS Pilani among the students and faculty of Goa campus. Respondents of the study consist of graduate students 167(66.8%), post-graduate students 37(14.8%) and faculty members 46(18.4%). The study revealed that the internet is the most preferred first source of information among the academic community. Internet is their first source of information preferred by 101(60.48%) under degree students, 20(56.52%) under postgraduate students and 26(56.52%) under faculty members. Wikipedia as free source of information is known to everyone, and majority of the respondents are aware of free dictionary.com and encyclopedia.com. The majority (80%) of the faculty members were aware and familiar with the open access DOAJ platform. The study also revealed that the faculty uses the DOAJ platform a lot more than others.

**Vishala (2011)** investigated the awareness and use of open access journals by the users of autonomous colleges of Dakshina Kannada district of Karnataka. The study revealed that 50.3% of the respondents were familiar with open access e-journals and 49.7% were not familiar. The respondents 81.1% used the open access e-journals and 18.9% respondents reported that they had never used the open access e-journals. Majority of the Science department respondents (65%) used open access resources; it is followed by the lowest usage recorded from Social Science department (15%). The study also revealed that the majority of faculty members 77.03% expressed the idea that they were in need of orientation programme to use open access e-journals. Only 22.97% of the faculty members stated that they did not require any orientation to use open access e-journals.
Bolarinwa (2011) carried out a study on open access perceptions and reactions of academic librarians in private universities of Nigeria. The study revealed that most of the respondents had been involved with multiple assignments in the libraries interestingly and the highest proportion of the academic librarians was involved in assignments that had to do with user access facilitation services- circulation, reference and public services etc. Also high percentages of them were involved in acquisitions and administration duties and the maintenance of electronic system such as digital library, library system networks and web services. The study also revealed that 73.8% of the respondents agreed that academic libraries should create links to OA resources in their websites, while 92.9% agreed that academic libraries should include bibliographic records for OA journals in their catalogues. The respondents had positive perception about open access resources and issues concerning repository management in universities.

Dulle (2011) analysed the awareness and usage of open access resources for scholarly communication by postgraduate students at the Sokoine University of Agriculture (SUA) and the University of Dar es Salaam (UDSM), Tanzania. The study revealed that majority (58.6%) of the respondents were familiar in open access, 60.9% of the respondents have accessed open access content. Only 10.9% of them had disseminated research findings through open access resources. The respondent’s perceptions towards open access were generally positive. Low awareness of the open access concept, inadequate online scholarly communication skills, and the slow internet connectivity were possible factors affecting the exploitation of open access.

Dulle (2010) conducted a survey on the adoption of open access scholarly communication in Tanzanian public universities. The study revealed that the majority of both the policy makers and researchers were aware of open access. Sixty Two per
cent of the researchers accessed free online content more than disseminating their scholarly content and 20% through open access. The respondents general perception about open access were identified as the positive factors likely to facilitate open access adoption in Tanzanian public universities. The inadequate online publishing skills and the slow internet connectivity are the main issues that deterred researchers to disseminate the research findings through open access outlets.

Meera (2010) explained the open access journals development of a web portal at the Indian statistical institute library, Bangalore. The study generates comprehensive list of open access journals in Mathematics and Statistics, Library and Information Science and Economics. Compiling a list of open access journals and providing links to their respective home pages is one such service offered to the users. An effort was made to generate comprehensive lists of open access journals in selected fields. To begin with, two lists were compiled, one on Mathematics and Statistics comprising 89 titles and the other on library and information science with 38 titles in 2002. The study revealed that most of the respondents were using popular search engines such as Google and Yahoo, Excite etc. DOAJ and Open j-gate have been identified as the popular platforms from where open access journals can be accessed. The URL of the web page with respective title in the list has been linked. The open access journal list of Mathematics and Statistics has grown from 89 in 2002 to 139 in 2008 and Library and Information Science journals has increased from 38 in 2002 to 88 in 2008. In addition to these lists, now the new list of open access journals in Economics has 77 titles that are made available to users.

Ahmad (2010) carried out a study on citing patterns in open access journals research articles published in D-Lib magazine during the year 2002 to 2008. A total of 4775 citations were collected from 295 articles. The highest number of citations was
found in the year 2002 with average of 19.16% citations per each article and nearly equal number of citations in 2005 with an average of 16.87% citations per each article. The lowest number of citations was counted in the year 2007 with the average of 12.96% citations per articles. The main forms of the documents cited in the articles of D-Lib Magazine are web resources (56.84%), followed by journal articles (24.40%), books (8.06%), conference proceedings (6.66%), workshop reports (1.76%), research reports (1.57%), symposium (0.54%) and thesis (0.17%). The analysis revealed that the cited documents used in the research articles of D-Lib Magazine emanated from different countries. The highest number of citations was from United States (867) followed by United Kingdom (196) and Germany (42). D-Lib Magazine was published in various languages. However, English is the most prominent language of the cited documents. Out of total 1165 documents 1054 documents were in English language. English is followed by German, Chinese and French with 38, 15 and 7 documents respectively.

Chen (2010) investigated the use of information from Wikipedia for teaching and research by the higher education instructors. The findings of the study confirm that internet access was related to the use of technology by the faculty. Online resources and references were ranked as the first choice by the participants when searching for familiar and unfamiliar topics. The investigator found that participant’s academic ranking status, frequency of e-mail use and academic discipline were related to their use of online databases, web-based information and directing students to information from the web. The user community searched for the information from Wikipedia for their research and teaching. They also allowed students to use information from Wikipedia and made them likely to be the contributors to Wikipedia.
Kannappanavar and Swamy (2010) studied the user perception of library and information services in agricultural science Universities in South India. The study revealed that the respondents visit the library to use the resources and borrow or return books, refer periodicals and journals and consult reference materials. Large number of respondents also uses reports, proceedings, theses and dissertations. Other important reasons were to prepare for examinations and to do research. Majority of respondents find the library's directional signs useful and being able to easily locate required information and materials which was shelved properly. Fifty to eighty percent of respondents find the collection in good condition, and all users are satisfied with the organization of reading materials in their respective libraries.

Okoye & Ejikeme, (2010) revealed that with open access, articles can be accessed online free of charge. They identified inadequate skills to navigate the internet, unstable power supply, unavailability of internet facilities, permanence of open access movement due to unstable financial support and lack of knowledge of the existence of open access journals in the internet as constraints to the use of open access journals by researchers.

Similarly a study conducted by Fullard (2007) revealed that the extent to which stakeholders in the local research system were aware of open access publications and the prospects for the adoption of the new scholarly communication system in South Africa. The study revealed that close to 61% of the biomedical researchers could not explain properly what open access implied (88 of 145) while only 3 of the 8 officials research organizations were clear about open access means. With regard to the prospects of open access, the findings revealed that the academics shows little interest to publish in open access journals in the near future.
Moller (2006) reported the results of a study carried out in South Africa focusing on open access journals and their prospect in the country. The study gathered opinions and perceptions of the respondents regarding open access publishing. It was observed that more than one third of the respondents claimed to know open access publishing and few researchers indicated to have published in an open access journal.

After analysing all the related studies the researcher has found out that no one has worked on the user perception and usage of open access resources in the higher education system. In order to fill up the gap the researcher has chosen the title “User Perceptions and Usage of Open Access Resources by the Academic Community in the Higher Education System”. 