1. **Literature Review:**

*Misra, Jyoti* (2001) described the impact of information technology on higher education. All efforts are being made to modernise the libraries and rendering library services with modern technologies. I.T. has also advanced teaching techniques replacing traditional systems. Internet has emerged as an important tool to social and educational institutions to enhance their quality and facilitating quick access to information on the web for the betterment of academic society. Internet has also helped in increasing the research productivity.

*Franklin, Brinley and Plum, Terry* (2002). The author made a survey of academic Health science libraries, its methodology and the results of network services of USA in 1999 and 2002. He explained demographic differences between in-house operations and its users and remote library users for accessing electronic services through web. The authors found the use of services, i.e. print and electronic sources. He discussed the gateway as effective way to collect anonymous data on the usage of pattern. The author concluded that use of web will enhance e-resources collection increasing outside the library due to participation of faculty, and research project.

*Melgoza, Pauline and Mannel, Pamela A.* (2002) discussed internet and its unlimited access and more availability of both fulltext e-resources and print material in academic libraries. The author further explained that academic libraries offer free or unrestricted access to users for research and course studies. Questionnaires were distributed to determine user’s priorities and preferences for information resources and the selection criteria adopted. The survey found that the academic community needs printed and electronic resources both for their curriculum needs. They prefer internet services to access e-resources.

*McCracken, Peter* (2003). The author described the rate of enormous growth in publication of journals which are accessed electronically by libraries. He further stated that no study specifically discussed the usage of e-journals and the actual number of journals accessed by a library out the total number of journals subscribed by the library whether print or e-print. A survey was made by serials solutions Inc., about tracking of journals in comparison with a number of print journals or microfilm titles. The author made a first attempt and a comprehensive analysis as how many journals are accessed electronically rather than print. He
also discussed the increasing level of accessibility. He also explained the limitations of usage. He concluded that the actual data collection can made the research more accurate and evaluate the actual growth of e-journals and reduce of print journals.

**Kloss, Louise and Zhang, Yin** (2003). It is a case study done by the authors. He evaluated online reference service and gathered data by methods of (i) Statistic usage method (ii) Evaluative method of patrons (iii) Through questionnaires mailed to librarians as they provide service. Statistics reveals the growth of usage, staff and patrons. Patrons also link service with library functioning. Questionnaires is the media to know the status of service, participation of library, growth of the libraries. They contains answers in a print resource. These all are essential for reference service.

**Liu, Yan Quan** (2004) investigated the digital material and current practices in the libraries of United States. He further discussed some issues relating to digital material and association standards and technologies. The study reveals various issues, digitalisation practices and methods and also highlighted trends pertaining to policy and technology and its marketing.

**Jain, Vinita** (2004) described digital libraries as a workstation of acquiring, storing and retrieving information in digital form and connected with high speed networks. He said that digital libraries involves data accessing to non-text information like imaging, photographs, paintings, illustrating numerical data etc. He further explained about web server with web links.

**Singh, Digvijay and Pavan Kumar** (2004) stated the gap between the society level and accessing opportunity of information and communication, their use and digital divide. He analysed the dimension of digital divide and divided them in fine categories. He also presented the ICT and the attempt made to treat the digital divide.

**Giri, Biswanath and Chattopadhyay, Tridib** (2005) described online services provided by the libraries. Modern libraries are giving services through networking. This has reduced the number of visits of users in libraries physically. But libraries have a rich collection of printed material which always appeal a user to make its use. Users consult print documents but due to lack of time there has been a need of photocopy facilities. IIT, Kharagpur library has provided this facility on cost to cost service. This facility has encouraged the user’s faculty and students to avail the services for their studies.
Mulla, K. R. and Chandrashekera, M. (2006) stated that libraries have become developed in their infrastructure in collection development and service structure, which is an effect of information communication technology. During last decade there has been radical change in the policies and programmes of collection development. The study examines the libraries of Karnataka state. It also examines the level of efforts made by the engineering college libraries and also the increase in electronic resources in Karnataka.

Shreekumar, M. G. and Sunitha, T. (2006) described library digital environment and information access culture of worlds over. There has been sudden upsurge and abrupt penetration of a vast variety of electronic content. E-Journals are important sources of digital libraries and useful to library users. They offer concurrent and multiple access to the content and multimedia facilities, online searching and storage.

Panigrahi, Pijushkanti (2006) described information searching and retrieval of today’s web, which is not comfortable. It requires specific language for resources development framework incorporating semantic nets. This language has expressive power. The classes and properties of RDF describe a resource which required markup language and used to structure the data. The author further discusses the benefits of semantic web in knowledge organisation and management to help context sensitive search with high degree of balance between recall and precision.

Balakrishnan, N. and Reddy, Raj (2006) described the objectives of UDL (Universal Digital Library Project) and various technological changes. He explained the importance of books taken to the web projects. Digital library faster many research activities in the field of information preservation, information retrieve, machine translation and transliteration, OCR etc. The author further discussed overview activities of digital library initiative and services.

Jeevan, V. K. J. (2007) described the progress of libraries through automation of housekeeping operations, innovating old services and providing latest form of services. Electronic reference resources are also important as the reference service is based on them. Qualitative and adequate information resources are always increase the library services and benefit the patrons. Most important resources are CD-ROM databases and web access to e-journals. The advance technology retrieve information like internet technology, which help in accessing the e-
resources. But the institutions cannot achieve their target if the library professionals results to low morale and under performance. The culture of academic libraries and the librarian effect the services.

**Dollar, Daniel M. and Gallagher, John** (2007) described the transit from print to electronic resources. He focused on e-resource management and found that libraries make a plan to change and to present the e-resources before the users for the betterment of their study and learning. He further explained the library task force to make initial efforts on e-journals and most of the print subscriptions to switched to online only.

**Tanner, Simon** (2007) discussed Digital libraries and the digital contents and said that digital formats has opened 24/7 doors for the availability and management of digital access and encouraged researches. It has refreshed the way the user consume information. The benefits of digital library services have been economical in managing digital content.

**Haneefa, Mohamed K.** (2007) stated that information communication technology has changed the information environment, particularly in library and information services for in house processes and dissemination of information. Libraries are using ICT based information resources and services to satisfy the needs of the users. It has increasingly by important in special libraries. The use of e-journals CD-ROM database, online database, e-books and web has replaced the traditional resources in special libraries.

**Mahesh, G. and Mittal, Rekha** (2008) discussed digital libraries. There have been many developments in digital libraries initiatives in India. Scholarly journals have reflected the growth, development and the status of digital libraries. There have been many studies on digital libraries in India which reviewed the activities of digital libraries. Most of the studies have reflected the development and collection building of digital libraries. But on the other side few limitations of copyright issues and management problems have effected the digital libraries. There are hardly few studies which have reflected the security, digital rights and policies of digital libraries.

**Ogunsola, L. A. and Okusaga, T. O.** (2008) discussed the importance of University libraries and their contribution in the development of African countries, and their growth since 1980. University libraries no doubt, receiving economic problems, but they have enriched the academic quality of Africa society. The virtual libraries has replacing the traditional pattern of University
libraries, but it needs careful examination of resources and the need of the users. The author further stressed resource sharing among the University libraries of Africa. He further suggested the measures to be taken by African countries to share the resources and the successful execution of virtual libraries in higher education institutions.

**Gaddagimath, R. B. and Jange, Suresh** (2008) discussed the ICT facilities and services at virtual learning resources centre and digital library at Gulbarga University. There are 100 workstations of LRC and digital libraries in addition to service for accessing internet, CD-ROM databases instructional learning material and electronic learning packages. The author also highlighted ICT based information services, consortia like UGC INFONET and INFLIBNET resources, video conferencing and other instructional programs used. University library made efforts for developing various database, software, local e-resources (indigenous) and network architecture.

**Anjaiah, M. and Praveen Kumar, K.** (2008) described the role of information technology in higher education and contribution in social, economical, cultural and political field. I.T. has also helped in acquiring, storing, processing of information. The author stressed the importance of digital libraries in higher institutions and the role of digital libraries in the development academic achievements. It marks as source of digital device and consortia with wide use networks. Digital library enables the users to create and use of vast amount of information distributed and to contribute the quality and quantity of information via web based technology.

**Gruntsev, Alexander** (2008) described the internet and the future of newspaper libraries. He further stated the potentiality of internet. But still many believes in print resources. Publishers, through more confidents of producing more e-publications and provide them in libraries, but they are still not sure of replacing the print media by electronic media.

**Khullar, Leena** (2008) discussed the new emerging information communication technologies and its contribution in libraries especially institutional repositories. Every library has its special collection and publications produced time to time either by the organisation or organisational scientists. These special or scientific libraries have created their database as institutional repositories. All these repositories when collaborate each other it provide access throughout the world.
Singh, S. P. (Mrs.) (2008) discussed proliferation of technological world, which have resulted to transformation of information. Digital libraries have been emerged replacing the traditional and electronic libraries and preserving the cultural heritage and making information globally accessible. There have been collaborative efforts and libraries are joining hands to for world wide access to information to anyone, anywhere, and at any time. She further described the concept of digitalisation and the type of resources and their selection for digitalisation. He suggested to devise a policy to encounter these problems.

Moorty, A. L. (2009). The high cost of library material especially foreign journals have crunch the library budgets of developing countries and hence avoided by the libraries of such countries. But such journals cannot be avoided as these are must for researchers. Libraries tries to bridge this gap by means of consortia, a total package of print and e-journals on demand. It was a made of resource sharing for availability of e-journals and online resources. Information communication technology also facilitated the establishment of consortia. During last decade many science and technology organisations have established consortia to share their human and electronic resources.

Lake, John (2009). The author advocates early and quick implementation of new technologies in the libraries. He defined technology and its emerging level of speed in modern libraries. He compared the new technological changes with the traveler on the road, who is no sure of any change in cities and roads. The technology started with a card and paper which was replaced by photo charging, development of barcodes and other devices which can read radio frequency.

Krishna Kumar and Akhtar Hussain (2010) discussed about libraries of Indian Institute of Technology, Delhi. He described the collection and the services rendered by IIT, Delhi. He made a survey and collected data through questionnaire during session 2008-09. Its objective was to know the status of information resources available in IIT, Delhi and their access by users. He also discussed infrastructure facilities, use and collection of documents and internet services. He identified various level of services, database search techniques and user awareness programmes. He highlighted the satisfaction with overall functioning. He suggested for valuable collection resources for the benefit of the community.
Tyagi, Sunil and Krishna Kumar (2011). The author made an usage study of web 2.0 technologies and its contribution in learning environment by the teaching staff of Universities of western U.P. He further stressed on web 2.0 and the awareness of users for its maximum exploitation in the interest of academic society. He made a survey and collected data through questionnaire with questions on level of computer literacy, web 2.0 tools and improve the usage among faculty and the students. The study was aimed to know the awareness regarding web 2.0 tools like blogs, RSS feed, Social networks, Podcast etc. The author suggested for workshops web 2.0 and recommendation systematic training of staff.

Panda, Siba Prasad and Mahapatra, R. K. (2011) gave an account of web based services of GGI libraries of Gunupur. He discussed web based library services available in libraries. He also discussed electronic resources usage in GGI libraries. There is a need of institute websites and the information hosted in it. The survey revealed that students took more interest in accessing website because of its update information availability. He suggested to make effort to make the library portal more information for its maximum use by the academic community.

Chaudhary, Divya and Sukula, Shiva Kanaujia (2011) described the computer based resources and the investment made on such resources, training and services rendered by libraries. The primary objective of the library is to facilitate the users to access e-resources. The author further asked to protect the networks for the proper update information. He concluded that all security measures should be installed in libraries.

Upadhyay, M. P. and Shankar Singh (2011) has stressed more on information communication technology and transformation of knowledge. He discussed knowledge society and technological change in libraries. He further described the global information world and the application of information communication technology and innovation efforts for enhancing the quality of library service. He gave highest weightage to user’s satisfaction and the role of libraries in rural development in western Uttar Pradesh.

Ashutosh (2011) discussed the emergence of information technology and advent of digital age. There is a drastic change in the format of resources from paper format to electronic format. The author also discussed the knowledge bundling and information dissemination increased due to digital initiatives like Blogs, e-journals, online literature, institutional repositories and networks.
Open source journals have provided one step snap access to the user with the use of modern technologies and techniques. He contended with the proposal of integrated models of digital resources.

**Singh, Neeraj Kumar** (2012) discussed digital reference service and difference with traditional reference service. Digital reference service is a new phenomena emerged to provide online access reference service to meet the information need in the changing environment. The author mainly deals with academic libraries and the digital reference service provided, i.e. E-mail, chat services, video conferencing, digital robots other services. He surveyed four University libraries of Northern India and evaluated the strength and weaknesses of prevailing reference service being provided by University libraries. He made a comparison of libraries and the digital reference service provided by them.

**Nisha, Faizal and Ali, Naushad** (2012). It is a survey of IIT, Delhi and Delhi University library on the use of e-journals. Questionnaire was used to collect the date. The author found that majority of users are aware with e-journals and accessing them for update their knowledge, learning and studies. Their main aim is to retrieve information regarding their research work, paper publishing, project assignments, seminar etc. This study also revealed same problems with accessing e-journals. The authors suggested to enhance the access facilities of e-journals.

**Sharma, Pawan Kumar and Sharma, Hemant** (2012) described the significance of weblogs, which are important source of current awareness services in digital world. The author defined weblogs and discussed many issues pertaining to libraries and their effect in library services. He explained about the creation and importance of weblogs in the field of library and information science.

**Magamma, M** (2013) discussed the importance of digital reference libraries of engineering colleges of Visakhpapatnam. Digital reference service is an made of users service and access to electronic resources. The reference service increase the quality of library services and maximum use of information resources and hence increase the ability among the users for the growth of researches and dissemination of information. Digital reference service is different with traditional reference service. The digital reference service solve the user’s information needs in
I.T. environment and provide online services, Document delivery services through e-mail and websites. He suggested for staff training and orientation programmers for students.

Singh, Harmanpreet (2013) examines the use of collections and services at Dr. B. R. Ambedkar NIT central library, Jalandhar. He distributed well-structured questionnaires and collected data regarding users during 2010-11 on information seeking behavior of the users. The study examined and elaborated all aspects of collection and services, purpose of visit of library, library hours and infrastructure facilities. He further identified the levels of use of database services and access of e-resources. He also discussed various services, database search techniques and users awareness and the networks. He found library services satisfactory.

Gibson, Craig and Mandernach, Meris (2013) discussed his research project and explained how academic libraries are developing new models of research services supporting academic community, which can transform the traditional based reference service to those who needs for their research projects. He suggested a emergence model and practice which position library services in the research environment and won flows of faculty and students. He focused on this new model of academic libraries in the global research model.

Tiwari, Braj Kishore and Sahoo, K. C. (2013) discussed the importance of information communication technology which have effected the library too much. Libraries use ICT for many purposes or to say for all purposes like housekeeping operations, library services, library extension, and many other facilities. Libraries are also using computer technology to strengthen their infrastructure and services through ICT i.e. Internet and networks. The author made a survey of universities of Rajasthan and collected data about staff, collection, software, hardware, budget, network and housekeeping operations, user’s services, training and also problems faced by the libraries. He concluded with the remark that lack of proper planning and change in ICT has put many obstacles implementing the development plans.

Vasishta, Seema (2013) discussed the importance of electronic journals. These are developing a new platform in information environment. Libraries are promoting e-journals being a decisive factor in providing an effective library service. The most important promotional factor is websites and act as gateway to provide a customised interface for enhance navigation and ease of access. The author found that every technical universities have setup their websites but in
primitive stage and covering simple and basic features. They have not put the website for the promotion and dissemination of e-journals. The author recommended that librarians should make efforts to provide all information on websites keeping in view the requirement of users.

Ugwu, Cyprian I. and Onyegiri, D. C. (2014) stated the problems faced in selecting and managing information e-resources in University of Nigeria, UNN library system. It is a case study conducted to achieve the research project and its objectives. Questionnaire was prepared for data collection. The data collected were analysed using statistical formulas of (T) and standard deviation. T-Test was also used to establish the necessity of library staff and its quality to solve library problems in University libraries. The study further highlighted the policies and practices, budget, staff and I.T. infrastructure. He also identified management strategies for e-resources.

Babariya, Naresh A. and Patel, M. G. (2014). The authors discussed various aspects of information behavior. He discussed the attitude of information and role of internet in seeking information from library professionals in India. In modern era of information communication technology the user is always in need of current information for researcher to make them updated. He further explained the innovation services like library software, classification of resources and indexing, RFID system, Bar-coding methods, which are the need of modern libraries. He also made detailed study of various types of information resources and their access through internet. He suggested few issues to motivate the users to utilize the library resources to the maximum.

Raghavendra, M. (2014) described the level of satisfaction of using networking and resources sharing activities provided by the libraries in the environment where the number of libraries and the users have been continuously increasing with no serious consideration of user’s facilities and resources. The main consideration are infrastructure, collection made, subscriptions of journals, user’s visit to libraries, availability of databases. All these issues has generated new policies of resource sharing, networking as collaborative efforts of information exchange among libraries.

Dharampurikar, Ranjeet and Ambekar, Sudhir U. (2014). The author describes the importance of information technology which has entered in almost all walks of life. Information computer technology has enriched information communication technology which have generated
and created various tools and medias to provide access to information via internet and networks. E-libraries have reduced manual repetitions. Digital libraries have revolutionised the information world. But still it requires proper training of library professionals and user education to deal with new technologies.

Rane, Vrushali (2014) discussed the wave of technology and its application in libraries and explained the emergence of many new subjects, which has compelled the professionals and information providers to facilitate the users with update, quick and exhaustive information, which may be easily accessed electronic resources through internet and networks. She suggested the librarians to review library services regularly to ensure the relevancy of the resources to the users. She also suggested some criteria’s which could be guidelines for the renewal of e-resources.