REVIEW OF LITERATURE

1. **Pandey & Mishra (2014)** “Academic libraries are digitizing materials because they know the continuing value of library resources for learning, teaching, research, scholarship, documentation, and public accountability.” Academic Libraries are an important part of the National Educational System as long as they serve as information centers fulfilling basic library users needs; efficiency, effectiveness, and utility. Evaluation plays a key role in the improvement of information services. Digital era has produced many changes in the society such as expansion of the served community; products and services; the need to break the space-time barrier in communication and further expectations from library users for high-quality and user-friendly online services. Therefore, the library manager has to impartially evaluate qualitative and quantitative value of the library resources and plan services for better functionality in order of making the invisible to be visible.

2. **Hemlata & Meena (2013)** Digital libraries have their basic characteristics compared to traditional libraries and are the follows: (a) Digital library is a digital object, and can be merged with others. (b) Digital library provides faster access to information, because it provides advanced search and hyperlinks for navigation. (c) Digital library enables easy management of large amounts of data, because it provides access to a large and wide amount of information resources. (d) Digital library collections are fixed permanent, in order to provide useful and understandable information to the users. (e) Digital library support formal and informal learning procedures, as it provides access to both basic and secondary educational sources. (f) Digital library can be accessed by any user from any workplace, since it provides a user-friendly system.

3. **Achufusi and Nwosu (2013)** studied the use of information and communication Technology (ICT) in the polytechnic libraries. The analysis of the data collected was based on frequency table and it was observed that problems associated with the use of ICT are computer illiteracy, inadequate funding, unreliable power supply and lack of trained staff.
4. **Lucy Ndidiamaka and Nebeolise (2013)** examined the impact of information and communication Technology (ICT) compliant librarians on library services delivery on NOUN library. It was found that the use of ICT compliant librarians on library service delivery aids immensely in the development of NOUN library, quick delivery of information services, access and easy retrieval of information by users. The study shows that Inadequate ICT skilled professional Librarians, Inadequate provision of ICT training programmers, Inadequate Power supply and inadequate ICT infrastructures hinder the effective use of ICTs in NOUN library.

5. **Kehinde and Tella (2012)**, carried out study of websites of university libraries, It was found that most universities in Nigeria have provided their library with a Web site while more are developing Web sites for their library to meet the new information superhighway’s challenges. However, in-depth studies on the assessment of these Web sites have not been undertaken and the studies have been especially neglected or ignored by the Nigeria researcher. The available existing study only focused on the rating of the Web sites on the basis of the number of hits. In view of this, there is a necessity to research the aspects of in-depth assessment of selected academic library Web site, especially in view of the accelerating rate of university establishment in the country.

6. **Bhatt (2012)** observe that the advent of Information and Communication Technologies and Impact of Information explosion have brought many changes in diverse field of knowledge, especially in medical sciences which had profound impact on medical professionals, practitioners, students in pursuing their research and patient care. The medical professionals require pinpointed, accurate and speedy information for updating their knowledge.

7. **Egunjobi and Awoyemi (2012)** explained the constraints in the development of library automation in Nigeria, the poor infrastructure, funding and skills among library staff, as well as the software solutions. Therefore, the introduction of open source software such as Koha is therefore a positive revolution in Libraries across Nigeria. The Author urged to adoption of open source software in various libraries and information centres and automation, which can improve the library relevance to the academic community.
8. **Kanwal Ameen (2011)** Review on major challenges and opportunities the twenty-first century has brought to librarianship due to the emerging academic culture, and growing use of information and communication technologies (ICTs) in Pakistan and finds that Libraries in developing countries are being significantly affected by the ongoing ICT developments from basic infrastructure to collections to services to needed human resources.

9. **Afolabi (2011)**, examined the integration of information and communication technology (ICT) to library operations for effective library services and also reviewed the need for the effective application of ICT as the best tool for libraries to use in assisting educational researches and students in this age of information explosion, in ensuring effective services. The paper highlighted benefits and challenges of integrating ICT to library operations. The paper concluded by discussing possible solutions to various challenges to successful integration of ICT to library operations for effective services.

10. **Buczynski and Mall (2010)**, conducted a study despite all the financial resources that are directed to support and acquire learning technologies. Faculties are eager to use technology but lack the technical skills, ability, and experience.

11. **Krubu62 (2010)** study elicits the impact of ICT in Nigerian University Libraries. The primary objectives were to ascertain the level of automation; to determine the usefulness of ICT resources; the effectiveness of ICT resources; the required skills in using ICT resources and the factors militating against the effective use of ICT.

12. **Etebu (2010)** observes that the state of ICT availability for library services in the Niger Delta University libraries is not totally encouraging. There is awareness of ICT in the libraries, although the available facilities are very poor. Almost half the number of available computers in the libraries do not function. This makes electronic interlibrary loan impossible at this time.

13. **Adeleke and Olorunsola (2010)** surveyed on use of online tools and techniques for catalogue, classification in Nigerian libraries. A questionnaire was designed to elicit information from librarians on pertinent areas relating to the use of online
tools for processing library resources. They find out that high level of awareness among librarians in Nigeria about the benefits that could be derived in the use of online tools for cataloguing and classification processes and need for continuing education programmes for cataloguers for effective use of the tools. ICT infrastructural facilities are the major constraints to using online tools.

14. **Omekwu and Ifeoma (2009)** express that the library in a global information environment and examine the impact of ICT on global information network and globalization. It articulates the challenges for librarians and libraries in global information environment. It is most appropriate to begin with a conceptual clarification of the word globalization.

15. **Nemeth (2009)** exposed to analyze the initial stages of co-operation between a Finnish community intranet-developing project and a telecottage enterprise in a Southeastern Hungarian village community. Both the Hungarian telecottage and the Finnish North Karelian intranet initiatives have achieved much publicity in and outside their countries; their success stories and experiences have spread with the agency of researchers by their academic publications and the lines of their personal and professional, often-international networks.

16. **Xinpeng (2009)** analysis's the problems in the construction of the digital library. This article expatiates on the definition and architecture of cloud library, and proposes 3 development stages for cloud library, that is, the digital library constructed partially by using cloud computing technology, the regional cloud library, and the complete cloud library which has a clear division of industry and is collaboratively developed.

17. **Virkus (2008)** described the experiences of the Institute of Information Studies of Tallinn University in introducing ICT. He includes Web 2.0 technologies in library and information science education to explore the role that these can play in new models of learning and teaching. The Web 2.0 is influencing the way in which people learn access information and communicate with one another. The Institute of Information Studies of Tallinn University has a long history in using ICT in its teaching and learning. The experiences with open, distance learning, and e learning have transformed teaching and learning, provided a new
alternative delivery mode and helped to reach new target groups. Recently, the staffs have been experimenting with Web 2.0 technologies and a few have successfully adopted them in teaching and learning.

18. Womboh and Abba (2008) study found that due to the harsh economic conditions and government apathy towards library development in Nigeria, the state of ICT in university libraries is mediocre. The National Universities Commission (NUC) set up a Quality Control Division (QCD), which did research to test the quality of Nigerian university academic programmes.

19. Haneefa (2007), revealed that though the libraries had hardware, software, and communication facilities to some extent, ICT-based resources and services were not reaching the users to the expected extent. Library automation in special libraries in Kerala was largely commenced during the period 1990-2000. CDS/ISIS was used more in the libraries than any other software. The library catalogue found to be the most popular area for automation.

20. Khudair and Bawden (2007) find in their research, a detailed understanding of the current health library/information environment in Saudi Arabia, to identify problems, issues, and areas for improvement, to make recommendations for improvement and to initiate these in models and prototypes. The healthcare libraries are well used, and appreciated by their users, and the staffs are generally satisfied with their work. The problems and issues are identified as the use of information communication technologies and digital resources. The lack proactive information services, education, training and continuing professional development for health library work limited strategic planning and policy for these services. The recommendations were made for improvements.

21. Gbaje (2007) defines the status of Virtual libraries in Nigeria. Unfortunately, various virtual library initiatives in Nigeria within the past six years have remained a mirage. Misconceptions of what constitute a virtual library, unavailability of the basic information infrastructure; poor policy implementation and lack of web technologies and skilled digital/systems the librarians have identified as some of the challenges in the implementation of the national Virtual Library Project. The study also highlights the process of building a virtual library, collection
development, acquisition and access of electronic resources in the virtual library which are the basic skills required for the deployment and sustainability of the national virtual library.

22. **Islam and Islam (2007)** reported that the installation of an IBM 1620 machine at the Atomic Energy Commission (Dhaka) in 1964. The Libraries in Bangladesh began to use computers in the early 1980s. A little progress was observed in the application of computers to library services between 1964 and 1995, but there has been a considerable progress since 1996. The International Center for Diarrheal Diseases Research, Bangladesh, Library (ICDDR, B) and the Agricultural Information Center (AIC) are pioneers in creating bibliographic databases using microcomputers.

23. **Khan (2007)** identify the application and Usage of Information Technology (IT) in university libraries of UP in terms of house keeping activities as well as IT-based services provided to the users and also to determine the extent of providing status of IT in the university libraries of UP. The study is based on questionnaires, interviews and observations. The findings of study revealed that there is a bit difference between the old centralized and newly centralized universities especially in BBAU the denovo centralized university.

24. **Efe (2006)** examined the level of automation in Nigerian meteorological stations. He has found that only two stations are automated by using CLICOM softwares. The reason for low level of automation is attributed to lack of funds, faulty equipment and obsolete computer systems. Islam and Rahman (2006) explained the present status of information and communication technology (ICT) in Bangladesh to represent the scenario of growth and development of ICT in relation to the evolution of the information explosion with the aim of providing better library and information services in Bangladesh. The status of Information technology (IT) in Bangladesh is not at par with the other developed countries, but recently the situation has changed significantly. Libraries and information services centres are expected to get immense facilities to access and cooperate with information world. A UNDP funded Program SDNP virtual library has
prepared a union catalogue of 13 libraries, all of which are using CDS/ISIS software for bibliographic record keeping.

25. Oduwole (2005) studied 16 federal universities and two state universities that had automated their cataloguing processes using the TINLIB software in Nigeria, and reported that, the automation of the cataloguing process had increased efficiency in these libraries. However, the high cost of maintenance of the TINLIB software identified as a major constraint to the use of the software. Other constraints included poor computer literacy on the part of the librarians, incessant power-cuts and lack of infrastructure.

26. Okiy (2005) identified that the obstacles militating against effective application of ICT in university libraries include inadequate funding, inadequate electricity supply, shortage of competent manpower for operation and maintenance of ICT facilities, lukewarm attitude of the Nigerian government towards the provision of ICT facilities and low level of computer literacy among Nigerians.

27. Ani, Esin and Edem (2005) investigate the extent of adoption of information and communication technology (ICT) in the university libraries in Nigeria. Nearly 29 university librarians surveyed and found that only six university libraries are fully “computerized”, nine are “about to be computerized”, seven of the surveyed libraries have installed local area networks; five have online public access catalogue and only four libraries provide internet service. The major obstacles are the influence of effective adoption of ICT in the university libraries inadequate funds and the poor state of electricity in Nigeria.

28. Lee (2005), Studied the impact of ICT on visually impaired people about two fundamental freedoms – Independence and Choice in library services. Before electronic information and on-line catalogues became available visually impaired people required assistance with reading and had limited choice of reading material. But now visually impaired people are no longer disabled in searching and surfing information on digital libraries. This study examines the ICT impact on library services for the visually impaired in mainstream libraries. New opportunities for mainstream libraries to integrate visually impaired people are discussed as well as the problems facing the mainstream libraries.
29. **Fitzgerald and Savage (2004)** explore the impact on public libraries in Victoria, Australia, as they become increasingly reliant upon information communications technology (ICT) to manage access and deliver information services. The Libraries Online and Rural Libraries Online have, since 1998 been developing Internet access in Victorian public libraries. The specific projects such as satellite delivery of bandwidth, rural points of presence (POPs), Victoria’s Virtual Library, the Gulliver Consortium and the SWIFT Initiative have discussed. Aligned critically to the actual ICT models and implementations is the capacity of the 44 individual public library services to understand and meet the ongoing issues.

30. **Siriwongworawat (2003)** expressed that, many libraries in Thailand had used computers and particularly the UNESCO-developed CDS/ISIS since 1980’s for their library operations in higher education institutions. In 1987, Chiang Mai University library introduced URICA integrated software; by 1992, the National library of Thailand installed the Dynix Library Automated Systems software. These days, a number of library-automated softwares are using ALICE, Dynix, INNOPAC, TINlib, VTLS etc. The trend for library operations in the early 2000s was for electronic information resources, e-books and the virtual library.

31. **Tam and Robertson (2002)** explained that the Libraries and information services face many challenges due to the changes in the information environment. For example, the changes that took place in the author’s own workplace i.e. the University of Hong Kong libraries outlined in which, most of the changes have occurred because of the developments in electronic information resources and the evolution of the “digital age”. This paper outlines the characteristics of the information society, describes various aspects of the challenges facing libraries, both externally and internally, and makes suggestions as to how library managers can make changes within their organizations in order to ensure that they retain their place in the information world.

32. **Al-Qallaf and Azmi (2002)** surveyed the availability and use of IT in public libraries in Kuwait. The results of the study reveal that many information technology inequalities exist among the libraries. Only eight libraries make use of computers and 15 are without any type of IT-related technology. The study
shows that few libraries have connectivity, limited use of applications, and the implementation of an automated library system are slow moving. The factors impeding the development of information technology are planning, funding, human resources, and building structure. The recommendations were made with the intention to encourage the public library sector and information professionals in Kuwait to take a proactive position in overcoming the forces that hinder the development of IT.

33. Agboola (2000), reported on situation in Nigerian university libraries from 1948, when the first university institution was established in the country up to 1998, the issues relating to their governance, funding, physical facilities, staffing, services and application of IT are reviewed through the literature. He concludes that, there has been considerable quantitative growth in the number of university libraries over this period. Recommendations were made that better funding, access to foreign exchange for timely acquisition of books and journals considered very important as over 80% of the tertiary level book needs of the country meet by imported literature.

34. Siddiqui (1997), survey the use and availability of IT like computers, networks, electronic mail, online information retrieval, CD-ROMs, facsimile transmission, personal computers (PCs) and the Internet in Seven University libraries of Saudi Arabia. The study also tries to determine computerized library systems, databases and services used in the libraries, the most widely used automation systems (DOBIS and MINISIS) and the numbers of online and CD-ROM databases acquired by specific libraries.