INTRODUCTION

Chapter-1

INTRODUCTION

1.1 Introduction

Information society becomes paperless society in the 21st century. The most significant question is how the knowledge centers can openly access the information for the growth and development of information professional communities. Generally, we are keeping the documents for the users, are two types, viz, Open access and the other one is closed access. In the open access system readers can have the documents freely as their requirements i.e. without any assistance from the library professionals. But, in the closed access system, readers can have their required documents with the help of library professionals. In the digital era, Open Access is a process by which scholarly, peer-reviewed journal articles are made freely available to anyone anywhere over the World Wide Web. Open access is the 'free, permanent, immediate, full text, online access, for any user, web-wide, to digital scientific and scholarly material, primarily research articles published in peer-reviewed journals. Open access provides direct links from bibliographical data of publications to the actual full text. As well as being of use and benefit to the academic community it also permits free access to research publications to any online users. (C.Velmurugan, 2011)

Open Access (OA) resources are free of most copyright and licensing restrictions. Open Access research articles, therefore; unlike those in conventional subscription journals are free at the point of use to anyone with an internet connection without the need for any institutional login IDs and passwords. Open

access resources are one that meets the conditions of "Open Access"- composed of free, online copies of peer-reviewed journal articles and conference papers as well as technical reports, theses, and working papers. In most cases, there are no licensing restrictions on their use by readers. They can, therefore, be used freely for research, teaching and other purposes. As open access, a paper is available with no payment for access, scholars in economically disadvantaged areas can also access to the newest research. Open access resources are those that can be accessed by anyone at any time without restraint. When the resource is plentiful, relative to the demand for it, an open access system may not only be unproblematic, it may actually be the best management system since it involves so little oversight. (Muthuvennila, 2018)

Advances in computer applications during the past few decades have brought radical changes in the way information is gathered, store, organized, accessed, retrieved and consumed. The application of computers in information processing has brought several products and services to the scene. The Internet and the Web are constantly influencing the development of new modes of scholarly communication; their potential for delivering goods is quite vast, as they overcome successfully the geographical limitations associated with the print media. Further, the distribution time between product publication and its delivery has been drastically reduced. The Internet can be used for efficient retrieval and meeting information needs. This is very important for university libraries since most of them call for more and more research work. This important fact is convincing many libraries to move towards digital e-resources, which are found to be less expensive and more useful for easy access. This is especially helpful to distant learners who have limited time to access the libraries from outside by dial-up access to commonly available electronic resources, mainly CD-ROM, OPACs and Internet, which are replacing the print media. Libraries have witnessed a great metamorphosis in recent years both in their collection development and in their service structure. Over the last several years, a significant 2 transformation has been noticed in collection development policies and practices. Print medium is increasingly giving way to the electronic form of materials. (Sharma, 2009)

1.2 Definition

According to IFLA "Electronic Resources refers to those materials that require computer access, whether through a computer, mainframe, or handheld mobile device. They may either be accessed remotely via the internet or locally. Some of the most frequently encountered types are E-journals, E-books, Full text databases, Indexing and Abstracting databases, References databases, numerical and statistical databases, E-images, E-audio/Video Resources". (Johnson,2012)

According to Library and Information Technology "The term used to describe all the information products that a library provides through a computer network."(Kenchakkanavar,2014)

1.3 Objectives

- To study the different open access e-resources available for student community and faculty.
- To know the different subject considered in open archive initiative.
- To acquaint with the technological infrastructure required to avail open-access e-resources.

1.4 Scope

The study will highlight the resources available under open access initiative and will benefit student immensely.

1.5 Hypothesis:

- The open access resources are not use optimally.
- The library professionals lacks confidence using e-resources.
- The procedures and to avail e-resources is tedious.

1.6 Limitation of Study:

The study limited to 100 professions south Goa District of – State of Goa.

1.7 Research methodology:

- The researcher has browse all the literature available on the topic.
- Further the researcher has also visited all the websites related to the topic.
- The researcher has visited the different stakeholders and experts asserting the opinion.
- The researcher has conducted interview with all libraries regarding use of open access e-resources.
- The investigator has discussed with experts to analyse the functioning of the topic.
- The investigator has tried to collect different information by using different tools such as questionnaire, interview and personal discussion.
- This investigator has made the use of suitable statistical techniques in finalizing the data with required charts and graphs in presentation to make the interpretation clear and precise.

1.8 Population of study:

The study has included 100 library professions and 100 library users to acquire the desire results.

1.9 Organization of study:

- Chapter I: Introduction
- Chapter II: Review of Literature
- Chapter III: Open access E-resources and its Facets

- Chapter IV: Use of Open access E-resources at National and International level
- Chapter V: Data Analysis and Interpretation
- Chapter VI: Observation, Findings, Suggestions and Conclusion.

1.10 Conclusion:

The study has highlighted the different benefits available under open access for the benefit of researchers and library professionals. The study will allow further scope to enhance the research in the topic. Now the E-resources have become important for libraries for their building collection so libraries must involve in creating and subscribing to different E-resources because of different types/ characteristics of the E-resources and spread the awareness of E-resources among the users. E-resources are also useful for libraries as well as each and every users of the society who needs a variety of information through the globe.

1.11 References:

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REVIEW OF LITERATURE

Chapter – 2

Review of Literature

2.1 Introduction

For doing any research work Review of Literature is very important; in order to understand the background of your chosen topic review of literature is carried out. A literature review It surveys books, scholarly articles and other sources relevant to a particular issues, area of research, or theory, and by doing so, it provides a description, summery and critical evaluation of these works in relation to the research problem that is being investigated. Literature reviews are designed to provide an overview of sources you have referred to while researching a particular topic and to show your readers how your research fits with in a larger field of study. A literature review may consist of simply a summary of key sources. A summary is a recap of the important of the source, but synthesis is reorganization of that information in a way that informs how you are planning to investigate a research problem.

1. Prince, G., & Saravanan, P. (2015).[1] The present study analyses the awareness and perception of users in the higher educational institutions in kanyakumari district towards open access resources. The major objectives of the study are to determine the awareness about open access resources, purpose and reason for using open access resources, level of satisfaction and perception towards open access resources. Data were collected from students, research scholars and faculty members of Arts & Science, Engineering, Education Colleges and University of kanyakumari district. The study reveals that the majority of the respondents were fully aware

about open access resources and use for their academic activities. It is also found that the majority of the respondents were using open access resources for their course related work and satisfied its uses in their academic activity.

2. Deka, P. (2020).[2] Electronic Resource is an integral part of the current scholarly community. In the changing scenario and the learning environment, e-resources play a vital role in the research and development domain. A vast number of quality open access e-resources available in the virtual platform which can full fill the demands of the information needs of the research scholar and another academician. Across the globe, various open-access resources platforms created for journals, books, thesis and dissertation, patent, etc. This study covers the M. Phil. and PhD research scholar of the Dibrugarh University of the different subject domains. In this study, we mainly tried to reflect on what types of open access eresources used by the research scholar of various disciplines and what kinds of problems faced by the research scholar in evaluating and extraction of open access e-resources.

3. Sharma, C. (2009).[3] Today availability of e-resources in a university library is very common. But their proper and maximum use is a matter for discussion. The present paper examines the existence of various e-resource databases in Guru Gobind Singh Indraprastha University Library. The study also highlights the preferences and importance of online resources among the teachers and research scholars.

4. Madhusudhan, M. (2010).[4] This paper focuses on the use of e-resources by research scholars of Kurukshetra University, Kurukshetra (India). The main aim is to determine the use of e-resources, users' skills in handling e-resources, and the purpose of their use. Further, the paper aims to highlight the problems faced by research scholars in accessing e-resources, their opinions on feature of e-resources, and their views on usefulness of e-resources compared to that of conventional sources.

5. Brander, J. A., & Taylor, M. S. (1995).[5]This paper develops a two-sector general equilibrium model of an economy with an open access renewable resource. We characterize the autarkic steady state, showing that autarky prices (and 'comparative advantage') are determined by the ratio of intrinsic resource growth to labour. Under free trade, steady state trade and production patterns for a small open economy are determined by whether the resource good's world price exceeds its autarky price. Strikingly, if the small country exports the resource good while remaining diversified, then steady-state utility is lower than in autarky, and increases in the world price of exports are welfare-reducing.

6. Haridasan, S., & Khan, M. (2009).[6]The purpose of this paper is to present the fact that electronic resources are a significant part of library collections. A large amount is invested in the development and management of e-resources in the libraries. The study aims to identify the acceptance of e-resources in the National Social Science Documentation Centre (NASSDOC) library in New Delhi, India and determine their usage, performance, degree of user satisfaction, and barriers faced in the access of e-resources. It also attempts to find out the users' views about computer literacy among the social scientists. The major findings of the study indicate that respondents are aware of the e-resources (such as e-books, e-journals, e-encyclopedias, e-theses, CD-ROM databases, e-mail, internet and the OPAC). Large numbers of research scholars and faculty members are using these e-resources for their research work. Many faculty members strongly agreed with the necessity for computer and internet literacy to access information. A majority of users were satisfied with the e-resources available at the NASSDOC library.

7. Bala, R., & Partap, B. (2018).[7] The information resources available in electronic form are playing very important role in academic, research and teaching work in higher educational institutions all over the world. Nowadays, the trend goes with the open access resources. This study analyses the awareness and perception towards open access resources

among the management students and faculty of Tilak Raj Chadha Institute of Management and Technology (TIMT), Yamuna Nagar, Haryana. The data were collected from postgraduate students and faculty members of Management Science of the institution. The study reveals that the majority of the respondents (82.95%) were aware about open access resources and use for their academic activities. Various purposes and reasons for using open access resources, various problems facing and satisfaction level of the respondents towards the awareness and use of open access resources was also discussed in the study. Finally, the researchers also suggested that more awareness and training programs should be conducted on regular intervals so that users get familiar with the use of open access resources effectively.

8. Goria, S. (2012).[8] Consortia based access of e-resources has been provided in most of the Indian libraries of higher education and research institutes during last decade. In consortium mode, users are able to access adequate desired scholarly e-journals in Indian libraries. This paper provides brief overview of popular library consortiums of India. The present paper also describes the techniques to increase utilization of the e-resources. Various emerging technologies i.e. RSS feeds, Google Reader, Delicious etc have been demonstrated practically for effective utilization of eresources with minimum efforts. Findings of this paper highlighted emerging technologies and role of consortia for effective use of e-resources in Indian Libraries.

9. Ahmed, S. Z. (2013).[9] The purpose of this paper is to describe the pattern of electronic information resources use and satisfaction with university-paid resources by the faculty members in eight public universities in Bangladesh. The results showed that faculty members are not generally satisfied with the current level of university subscribed e-resources. They identified limited number of titles, limited access to back issues, difficulty in finding information, inability to access from home, limited access to computers and slow download speed as major constraints. These

constraints do affect e-resources use in the public universities. However, these constraints are mainly related to the poor IT infrastructure and limited access to e-resources, which may also lead to other constraints such as an unwillingness to use the resources regularly and consequently low satisfaction with such resources.

10. Swain, D. K., & Panda, K. C. (2009).[10] The purpose of this paper is to look at the prolific growth of electronic resources during the last decade. The standards and strategies are sought to access and organize the abundance of e-resources and to ensure free flow of information to the user's community. This survey attempts to measure the quantum of e-resources accessed in the academic ambience of Business School libraries in Orissa (India). Moreover, the study attempts to examine to what extent Electronic Information Services (EIS) are offered to users of Business School libraries in the State with an opinion pool of the librarians of the respective Business Schools. Furthermore, the study aims to highlight problems and constraints faced by the information professionals in accessing e-resources and delivering electronic information services with some constructive suggestions and remedial measures for the ensuing bottle-neck.

11. Kumar, B. S., & Kumar, G. T. (2010).[11] This paper aims to examine the perception and use of e-resources and the internet by the engineering, medical and management academics in Bangalore City, India. The prime objective is to find out how academics compare e-sources with print sources and how they perceive the advantages of e-sources and problems for accessing them. It further aims to establish the extent of internet use, the purpose of such use and factors influencing it. Study results show that the students and faculty who participated in this survey are aware of e-sources and also the internet. Even though a majority of the academic community use electronic information sources for their academic-related work, most of them prefer print to electronic information sources. Many of the students and faculty learned about the electronic information sources either by trial and error or through the advice of friends.

12. Okamoto, K. (2013).[12] Open access textbooks (OATs) and educational resources (OERs) are being lauded as a viable alternative to costly print textbooks. Some academic libraries are joining the OER movement by creating guides to open repositories. Others are promoting OATs and OERs, reviewing them, and even helping to create them. This article analyzes how academic libraries are currently engaged in open access textbook and OER initiatives. By drawing on examples of library initiatives across the United States, the author illustrates how libraries are facilitating the adoption and implementation of these affordable resources.

13. Thanuskodi, S. (2011).[13] Information technology (IT) has thrown a new challenge to the libraries. The technology has shown a great impact on the services of the libraries. Libraries use IT for better services and satisfying diverse user needs. Libraries have transformed into digital and virtual libraries where books, journals, and magazines have changed into e-books, e-journals, and e-zines. This has increased the global dissemination of information. Electronic resources (e-resources) are easily accessible in the remote areas. The e-resources solve storage problems and control the flood of information. Print sources are being digitised. There is a great need to study the use of e-resources and investigate the factors that are a hindrance to their use. The present study is an attempt to examine the usage of electronic resources at Dr T.P.M. Library, Madurai Kamaraj University. Study revealed that MPhil students respondents took the first position in their overall methods of searching eresources, postgraduate student respondents the second position, PhD Scholar respondents the last position. The study confirmed that respondents were aware of the e-resources and various types of e-resources, e-database, and e-journals. The study recommended the improvement in the access facilities with high internet speed and subscription to more e-resources at Dr T.P.M. Library, Madurai Kamaraj University.

14. Kashyap, S. R. (2022).[14]The major objective of this study to compare the use of e -resources by students from Arts, Social Science and Science

stream and compare preferences of the Use of e - resources by students of Arts, Social Science and Science stream of Raipur city. The study was based on survey method. Among various techniques of Survey Method, Questionnaire Technique was used for the study. Accordingly a Self structured questionnaire was designed to collect data from the regular UG and P G students of various college of Raipur city. The major findings of the study shows that The calculated value is $\chi2$ (df=2) = 5.32 and Table value is 5.991 so Ho Hypothesis is Accepted and Ha Hypothesis is rejected it means there are no Significant difference in Use of e - journals between Students of Arts, social Science and Science Stream. and e -book was found to be the most preferred e-resource by students of Arts, Social Science and Science students of Raipur city.

15. Naick, B. R., & Ramesh, R. (2018).[15] The basic aim of the study, designed based on the observation that electronic information resources (EIS) are used by engineering college faculty, was to find out or investigate the use of different types of EIS by the faculty of LBRC Engineering College Library. The objective survey design was adopted for the study. Thus, in total, 246 faculties in Lakireddy Bali Reddy College of Engineering were used as the sample for this study. Questionnaire was used as the instrument for data collection. The results obtained revealed that faculty of different branches are quite aware and highly use EIS. The study also finds that faculty are aware of how to use the available electronic resources in the library. The study also investigated the number of days the faculty are using the college library in the campus and the frequency of visit by the faculty to library? Based on the findings, the study concluded that EIS are necessary for all department faculty of Lakireddy Bali Reddy College of Engineering for their individual development, research and teaching purpose.

16. Baskar, A. (2017).[16] E-Resources focus on the various aspects. Digital technology has made it more easy, speedy and comfortable to apply the stored intellect. The advent of technology has made the libraries to add new

things to its collection. Print sources are more digitalized. E-resources information sources are very important for the academic community. Paper presentation an overview of these resources few advantages and some disadvantages and address of few web sites. This collected information through the ages has to be used for further research; betterment and overall development of the society. Electronic resources are easily accessible in remote areas. Electronic resources solve storage problems and control the flood of information.

17. SZ, S. T. (2013).[17] The Present Study is to highlight the user attitude and approaches towards electronic resources and Learning through information communication technology in the libraries. This important fact is convincing many libraries to move towards digital e-resources, which are found to be less expensive and more useful for easy access. This is especially helpful to distant learners who have limited time to access the libraries from outside by dial-up access to commonly available electronic resource, mainly CD-ROM, OPACs, and Internet (ICT Tools), which are replacing the print media. Those concepts are throwing challenges to the traditional delivery of instruction and training in the changing age of globalization and e-resources. Digital learning, digital content, online tutorial, examination and assessment, distance learning etc., it defines e-Resources, e-Learning and its characteristics, and describes the tools of e-learning. This paper briefly describes the Benefits of e-resources and e-learning, Impact on Student and selection of e-resources.

18. Kaur, B., & Verma, R. (2009).[18] This paper is an attempt to study the issues like use of electronic information resources, its impact on the collection of print and electronic journals its awareness among the users, and the places where the users are accessing these resources. A survey was conducted in the academic year 2006-07 at the Thapar University, Patiala. A total number of 504 users from the undergraduate, postgraduate, research scholar and faculty members were selected and their response was obtained with the help of questionnaire. The findings show that users from all these

categories were using e-resources; the awareness about e-resources encourages users to use such resources to the maximum; and the users are using computer centre and hostels more for accessing the information. The impact of e-resources was visible from the decrease in number of printed journals in comparison to the increase in number of electronic journals. The use of e-journals has increased manifold. The printed material is being quickly replaced by the electronic resources.

19. Kaur, B., & Verma, R. (2009).[19] The purpose of this paper is to present web and other tools which academic libraries use to enhance the usage of e-resources offered. An indirect purpose is to show a necessity for applying marketing methods in library management. They often require some organizational changes to make the library more flexible and adaptable to changing environment, but they usually result in strengthening the role and perception of the library within the community. The results of web searching, presented in charts, have been enriched with additional information provided by librarians surveyed. Users' surveys on their expectations towards e-resources, users' satisfaction measures and means of communication with endusers have been discussed. To illustrate library's efforts to enhance usage of e-resources some examples of promotional activities and results of surveys conducted at the Library of Cracow University of Technology within a ten-year period have been described. In conclusion some value-adding activities that might be applied by libraries to enhance usage of e-resources have been proposed.

20. Mal, B. K., Bajpai, R. P., & Chakraborty, H. K. (2013).[20] In library collection , e-resources has become the buzz word, which on one hand and the development and impact of the technologies on libraries whereas on the other hand, pose new challenges for library professionals to manage the electronic information resources properly. University, the topmost higher education institute also changing their collection from print media to e-resources very rapidly to fulfill the requirement of their user community.

This paper identifies the various problems of collection building of e-resources in state university libraries of Uttar Pradesh as well as provides the suitable suggestions to improve the present situation.

21. Padmaja, M., & Kishore, A. (2019). [21] The present study explores the use of electronic information resources by the users of Government and Private medical college libraries in Andhra Pradesh. The study highlights the extent of usage of online medical databases, awareness and frequency of use of electronic resources from NTRMEDNET Consortium and benefits of accessing electronic resources. Structured questionnaire was designed for the purpose of data collection. The result shows that majority of the Govt. medical college users represent 'Open access databases' regarding extent of usage of online medical databases completely where as Pvt. Medical college users represent 'Clinicalkey.com'. Most of the Govt. and Pvt. Medical College users use Cochrane databases frequently followed by useful links. Most of the Govt. Medical College users agreed 'Less expensive' regarding benefits of accessing electronic resources where as Pvt. Medical College users agreed with 'Easy access to information'. Poor Internet connectivity' is the major barrier raised by Govt. medical college users where as Pvt. medical college library users raised 'too much information retrieved' as major barrier while accessing electronic resources.

22. Song, I. S., & Buba, A. A. (2017). [22] The aim of this paper was to investigate the accessibility and use of e-resources among extension workers of Jigawa state Agricultural and Rural Development Authority (JARDA) staff. Quantitative research methodology using descriptive survey design was used for the study, and a total of one hundred and eighty-one (181) make up the registered extension workers in JARDA. A structured questionnaire was used to collect data from the respondents; the data was analyzed using descriptive and inferential statistics. Findings showed that usage of e-resources from popular agricultural databases remains low. The study also revealed that factors limiting access to e-

resources include poor institutional ICT infrastructure, unstable power supply and low information literacy skills. Recommendations include establishment of research institutes in local governments and improvement of ICT infrastructure there, as well as improving information literacy training for extension workers. Information literacy modules in agricultural training institutes could also support effective access to, and use of, e-resources. The need for awareness about e-resources available as well as approaches to searching information was also recommended

23. Wani, Z. A., & Wani, S. A. (2018).[23] The purpose of this paper is to measure the fully open access (OA) contents cited by researchers from top three universities in the USA (MIT, CIT and Stanford) in the field of physics. This study aims to identify the core fully OA journals widely used by researchers in the field of physics and evaluate the cited fully OA resources by applying various scientometric parameters to check the credibility of these OA resources. The results of this study show that fully OA resources are sufficiently used by the researchers of top three academic institutions of the world/USA. The study was also successful in identifying the core fully OA journals; besides it also reveals that these fully OA journals are highly impressive as showed by performance indicators applied.

24. Dadzie, P. S. (2005).[24] Sets out to investigate the use of electronic resources by students and faculty of Ashesi University, Ghana, in order to determine the level of use, the type of information accessed and the effectiveness of the library's communication tools for information research. The study found that general computer usage for information access was high because of the University's state-of-the art IT infrastructure. Usage of some internet resources were also very high, whilst the use of scholarly databases was quite low. The low patronage was attributed to inadequate information about the existence of these library resources. The study recommends, among others, the introduction of information competency

across the curriculum and/or the introduction of a one-unit course to be taught at all levels and the provision of more PCs on campus.

25. Gautam, A. S., & Sinha, M. K. (2017). [25] ICT has brought the revolutionary changes in the functioning of libraries and information centres. The impact of ICT including WWW and Internet is visible in every walk of life. The libraries are not the exception. Due to electronic publishing, many e-resources in the form of e-journals, e-books and online / off-line databases are being published. The academic libraries especially colleges and universities libraries have been procuring these resources for their libraries. Due to escalation in the cost of learning resources both printed and e-resources and financial problems the academic libraries are facing , the consortia models are being adopted and experimented for the procurement and access to e-resources by the colleges and universities. The first part of paper introduces the e resources, and its procurement under consortia models successfully implemented by INFLIBNET Centre since 2003. Under the UGC-INFONET Programme about 179 university libraries have been given access to e-resources which comprises of e-journals and online databases. The second part of the paper describes the use of e-resources by the research scholars and teachers of Allahabad University. In order to ascertain the usage of the journals by the research scholars and teachers of Allahabad University , the present study has been conceived to find out the use of e-resources which have been given access to the research scholars and teachers in the university campus mainly at Central Library and Departmental Libraries. To what extent the available e-resources are being utilized by the library users and what are their awareness level, usage pattern, preference of the publishers / journals etc. For this study survey method has been used using questionnaire as a data collection tool. This study has been carried out between January , 2015 to June, 2015. This is a preliminary pilot study conducted on smaller sample to ascertain the validity of the questionnaire. The simple random sampling technique has been adopted for the study. The findings of the study reveals

that the library users belonging to younger generation have adopted the Internet, online / offline electronic resources or web resources very quickly and at the same time the elderly library users are not comfortable using Internet , social media and e-resources. They rely more on the traditional printed resources. In order to make the optimum use of the e-resources available for the university library users through consortia, extensive and frequent users awareness programmes needs to be organised by the library in collaboration with INFLIBNET and other agencies.

26. Shuling, W. (2007). [26] In recent years, electronic resources have become the library's important storage of a university library, and the fund purchased electronic resources also increased quickly, year after year. In order to find out the readers' present conditions, difficulties and requirement of using e-recourses, The Library of Shaanxi University of Science and Technology, carried out sampling, questioning and investigating of all teachers and students at campus. The purpose of this paper is to present the findings of this investigation. The investigative result shows that: nearly half of the readers investigated are satisfied with e-resources of our university. At present, the main way that reader's obtained rebases or literature is from traditional library storage. This illustrated that the printing literature obtained important functions. The e-book does not substitute the traditional printed book. The construction of library storage should advocate the printed one. Readers selecting the printed and e-book occupy the greatest majority. This shows that the two type of literature are not completely substituted, only mutually supple. The way readers liked obtaining information is to skim the homepage of the library. This indicated the homepage had become the important window to give publicity and serve the outside. It also shows the use of reading on screen, non-familiarizing the structure and the retrieval method. Showing that the net condition and computer facilities are the main external factors.

27. Ibe, C.,Udensi, J. N., Madu, E. C., & Saka, K. A. (2018). [27] This research work examined the level of awareness and the extent of utilization of

electronic information resources (EIRs) in university libraries on academic performance of postgraduate students in North central states of Nigeria. Two research questions were raised and answered: What is the level of awareness of the available electronic information resources (EIRs) by postgraduate students in the university libraries in the North Central States of Nigeria? How often do postgraduate students utilize EIRs in University libraries in North central states of Nigeria? Survey research design was used with a target population of 15, 338 postgraduate students. A sample size of 556 postgraduate students was determined using a multi stage sampling technique. Four rating scale questionnaire was used as the instrument for data collection, frequency and simple percentage were used to analyse the data. It was discovered that the postgraduate students' level of awareness of EIRs was low and that the utilisation of CD-ROMs was discovered to be ''very often''. It was recommended among others that the management of university libraries should from time to time organise user awareness programmes that will enlighten the postgraduate students on the types of available electronic information resources as well as educating them on how to use them.

28. Bhukuvhani, C., Chiparausha, B., & Zuvalinyenga, D. (2012).[28] Lecturers use various electronic resources at different frequencies. The university library's information literacy skills workshops and seminars are the main sources of knowledge of accessing electronic resources. The use of electronic resources can be said to have positively affected lecturers' pedagogical practices and their work in general. The aim of this study was? to reference an investigation of 30 lecturers' use of electronic resources in an effort to uncover correlations between library information literacy training and increased use of web based resources (for example, library journal databases, web search engines, open access journals, and so on), increased use of web resources and improved pedagogy as well as increased use of web resources and higher publication rates. Results indicated lecturers attended the Electronic Information Resources Skills

Training and that they (86.7%) used at least one or more electronic information resources to find information for use for their teaching and/or research. 13.3% lecturers indicated non-usage of electronic information sources. Most of the lecturers (53.3%) indicated that they learnt about electronic resources through the workshops and seminars. The majority of the lecturers were motivated (motivate=86.7%; 66.7%=very motivated and 20%= somewhat motivated) to learn how to use electronic resources. Lecturers mostly got information for their research papers through the Internet (83.3%) and 10% through electronic resources. The use of electronic information resources by lecturers proved to have positively affected their work as evidenced by the results. However, there is need to mount more and frequent electronic information resources training workshops.

29. Ajegbomogun, F. O., & Fagbola, O. O. (2015).[29] This study investigated the extent of electronic resource access and usage for scholarly research work by post graduate students at University of agriculture in Abeokuta. The thrust of this paper is to discuss the points of accessing, frequency of use, usefulness and strategies to improve students' use of electronic resources. The study adopted descriptive survey research design. The target populations for this study are postgraduate students of Federal University of Agriculture, Abeokuta, Ogun State. The participants sampled numbered 350 postgraduate students using stratified random sampling method. Out of 350 questionnaires distributed, a total of 210 were collected representing 60% return. Based on the analysis of the data, it was found that the postgraduate students use email as a means of communication while other electronic facilities that can aid their research works were not adequately used by them. Recommendations were made for improvement. Data collected were analysed using simple percentage, frequency counts and the mean.

30. Sarafudheen, F., & Haseena, V. K. (2020).[30]The purpose of the study is to know the collection management of e resources in NITC library. Data for

this study was collected through distributing questionnaire to the research scholars and faculties of the institution who forms the sample and interview method was conducted with librarian of NITC library. The interview schedule contains details about collection management of e-resources and the questionnaires contain questions which show users attitudes towards e-resources provided by the library. The answers from the questionnaire and interview were analyzed and findings were made. The main result of the study reveals that librarian while managing e-resources faces fewer challenges like maintenance issue and does not face major challenges like budget issue or license issue which shows the proper management of e-resources. Majority of research scholars and faculties of the institution doesn't say anything about problems or barriers while using e-resources, this shows the level of user satisfaction of e-resources provided by the library.

31. Bagiati, A., Yoon, S. Y., Evangelou, D., & Ngambeki, I. (2010).[31] National debate about K-12 Science, Technology, Engineering, and Mathematics (STEM) education has given rise to questions about appropriate materials for engineering education from prekindergarten through grade 12. Introducing engineering in the early years entails recognition of the need for teachers to understand its content and poses the challenge of preparing teachers to incorporate engineering education into their practice. Teacher preparation has historically included seeking information in books, journals, and magazines, and the professional development offered by universities, school districts, and other educational entities continues to provide the majority of formal options accessed by teachers. However, the advent of the Internet has expanded the ways that teachers undertake professional development and how they prepare to present new content. An online search for open source preschool through grade 12 (P-12) engineering materials revealed a wide variety of Web sites and online documents that included curricula, lesson plans, and descriptions of activities. Narrowing the search to the P-3 level revealed that the

pedagogically and content-reliable sources available are limited in number and may be difficult to identify among the plethora of information. This study begins to describe the current landscape of open-access Internet materials in the field of early STEM with emphasis on engineering. The authors offer a guide-in-progress for selecting material for teachers and parents interested in introducing their young children to engineering. The authors also address emerging pedagogical fidelity and engineering content issues.

32. D'Antoni, S.(2009).[32]The aim of this special issue of Open Learning is to provide an introduction to the emerging Open Educational Resources (OER) movement. It is a young movement, with just a decade of development, but significant initiatives have been undertaken in a range of settings, issues have been identified that must be addressed, and ultimately there are implications for education systems and institutions, learners and educators.

33. Geith, C., & Vignare, K. (2008).[33] One of the key concepts in the right to education is access: access to the means to fully develop as human beings as well as access to the means to gain skills, knowledge and credentials. This is an important perspective through which to examine the solutions to access enabled by Open Educational Resources (OER) and online learning. The authors compare and contrast OER and online learning and their potential for addressing human rights "to" and "in" education. The authors examine OER and online learning growth and financial sustainability and explore potential scenarios to address the global education gap.

34. Appleton, L. (2006). [34]The purpose of this paper is to report upon the design, implementation and findings of a research study investigating the perceptions of electronic library resources within the UK further education sector. While such resources are widely available to the sector, very little qualitative investigation has been done as to its impact upon teaching and learning and how it is viewed by those who have access to it. The findings of the research are entirely qualitative, and are reported through a sequence

of annotated quotations, which reveal personal experiences and perceptions of using electronic library resources and the influence and impact they have had on teaching and learning activity.

35. Okerson, A. (2000).[35] This article reviews past trends regarding electronic resources and publishing on the Internet, analyzes critical issues involving electronic resources, and makes predictions for the years 2000 through 2005. Important developments are reviewed on a year-to-year basis from 1991 through 1998/99. Archiving, usage, utility, and copyright are identified as key issues, while licensing is also covered.

36. Rolfe, V. (2012).[36] Attitudes are changing in education globally to promote the open sharing of educational courses and resources. The aim of this study was to explore staff awareness and attitudes towards ''open educational resources'' (OER) as a benchmark for monitoring future progress. Faculty staff were invited to participate in semi-structured interviews that facilitated the development of a questionnaire. Staff respondents (n50) were not familiar with the term OER but had a clear notion of what it meant. They were familiar with open content repositories within the university but not externally. A culture of borrowing and sharing of resources exists between close colleagues, but not further a field, and whilst staff would obtain resources from the Internet, they were reticent to place materials there. Drivers for mobilising resources included a strong belief in open education, the ability of OER to enhance individual and institutional reputations and economic factors. Barriers to OER included confusion over copyright and lack of IT support. To conclude, there is a positive collegiate culture within the faculty, and overcoming the lack of awareness and dismantling the barriers to sharing will help advance the open educational practices, benefitting both faculty staff and the global community.

37. JOLSELT, J. (2020). [37]The study explores the relationship between computer self-efficacy and use of electronic information resources by undergraduate students of federal university of Kashere, Nigeria. The study

adopted a descriptive survey research design. The population of the study was 2752 (400 level) undergraduate students of federal university of Kashere. Proportionate random sampling method was considered suitable for the study because of the heterogeneous nature of the number of undergraduate students in the faculties being selected as some have large number of undergraduate students while others have few. The sample size for the study was 550 drawn from the population. The study proceeds in four steps. First, it examined the purpose(s) of use of e-resources by undergraduate students. Second, it determined the frequency of use of e-resources by undergraduate students. Third, it determined the level of computer self-efficacy of undergraduate students and finally it examined the relationship between computer self-efficacy and e-resources use by undergraduate students in federal university of Kashere. The study was guided by three research questions and one hypothesis. The instrument for the study was a self structured questionnaire using a Likert-type four (4) point scale ranging from Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) with 4, 3, 2, 1 point value attached to the items. The study found that the extent to which each sampled student's use of electronic information resources is often directly proportional to the level of his/her computer self-efficacy. The study also, rolls out the measures by which the computer self-efficacy of students can be boosted, in order to bring about optimum utilization of the electronic information resources on offer at the library. This include: the management of federal university should ensure that e-resources with adequate information and communication technology tools are subscribed to regularly, ensure that the teaching of computer skills to undergraduate students in the universities is promoted and undergraduate students are to engage themselves in computer skills training regularly in order to be self-efficacy in the different aspects of computer.

38. Anaraki, L. N., & Babalhavaeji, F. (2013).[38]The present paper aims to compare the awareness and ability of medical students in using the

electronic resources of the Integrated Digital Library (IDL) portal of Iran. The awareness and utilization level of students in the three universities were lower than the average and those who are not aware of the existence of the IDL portal used general search engines to meet their information needs. The respondents admitted that their lack of awareness about the IDL was their most significant problem. Among the investigated universities, students of Tehran University of Medical Science (TUMS) used the End Note, Elsevier, Thomson, Scopus and Proquest databases most. All the students expressed the effect of the IDL on the academic activities as much as 64 percent in Iran University of Medical Science (IUMS), 72 percent in Tehran University of Medical Science (TUMS) and 66 percent in Shahid Beheshti Medical University (SBMU). The mean scores for utilization of searching strategies were 2.43, 2.89 and 2.87, respectively, for IUMS, TUMS and SBMU.

39. Hilton III, J., Wiley, D., Stein, J., & Johnson, A. (2010).[39] A significant movement in education concerns the use of open educational resources. By 'open' it is generally meant that the resource is available at no cost to others for adaptation and reuse in different contexts. However, 'open' is not a simple dichotomy; rather, there is a continuum of openness. We discuss four separate aspects of reuse and demonstrate how these describe different levels of openness. We discuss how the licensing and technical aspects of open educational resources affect the relative openness of an open educational resource. Implications for those creating open educational resources are discussed.

40. Frehywot,S.,Vovides,Y.,Talib,Z.,Mikhail, N., Ross, H., Wohltjen, H., ... & Scott, J. (2013).[40] In the face of severe faculty shortages in resource-constrained countries, medical schools look to e-learning for improved access to medical education. E-learning in medical education is a means to an end, rather than the end in itself. Utilizing e-learning can result in greater educational opportunities for students while simultaneously enhancing faculty effectiveness and efficiency. However, this potential of

e-learning assumes a certain level of institutional readiness in human and infrastructural resources that is not always present in LMICs. Institutional readiness for e-learning adoption ensures the alignment of new tools to the educational and economic context. This paper summarizes the literature on e-learning in low and middle-income countries (LMIC), and presents the spectrum of tools and strategies used.

41. Momanyi, E. B., Toroitich, P., & Onderi, P. (2018).[41]The study was conducted in Maseno University Kenya. The study objectives were to examine the existing infrastructure that supports the delivery of IL program at Maseno University; to determine the extent of use and the relevance of e-resources to students need at Maseno University and to identify ways of improving utilization of e-resources in Maseno University. Descriptive research design was used in this study and the target population was 100 respondents. Research instruments included questionnaires and an interview schedule. Data analysis was done using descriptive statistics for analysis purpose. Quantitative data was presented in form of frequency distribution tables, pie charts, percentages, and graphs. The Findings indicated that the program was not effective due to the reason that the program covered only orientation and was very short, the number of students was too big for induction during orientation, the orientation schedule is too overloaded to allow time for IL Program, time allocated for e-resource training is not enough and time allocated for IL Program training is not adequate. The findings also revealed that there was underutilization of electronic information resources in Maseno university library as students lacked information literacy skills required despite going through the IL training program offered to them by librarians. The study recommended that IL program should emphasize more training on user instructions, computer information literacy, online databases and information searching and that the program be offered to students after registration not during registration. Also an effective information literacy program be integrated into education curriculum to enable students acquire

information literacy skills that will enhance their utilization of electronic information resources.

42. Nascimbeni, F., & Burgos, D. (2019).[42] The goal of this paper is to advance the understanding of the way university educators currently adopt open educational practices (OEP) by analyzing the relation between the use of open educational resources (OER) and the implementation of open teaching practices. The results are based on data collected through an online survey among 724 university educators. Depending on the actual use of OER and open teaching practices by the survey respondents, we have categorized them along a scale that goes from "novice" to "expert", and we analyzed the data to evaluate their use of OER and their adoption of open teaching practices, looking for relationships between the two phenomena. The main finding of this paper, which confirms the latest research findings from the open education community, is that a strong relationship exists between the two dimensions: The more an educator uses OER, the more he will probably adopt open teaching practices, and vice versa. These results are discussed with a view to use this virtuous circle between the use of open content and adoption of open teaching as a way to build generalized open education capacity among universities' teaching staff.

43. Hodgkinson-Williams, C., & Gray, E. (2009).[43] Information and communication technologies (ICTs) provide a range of opportunities to share educational materials and processes in ways that are not yet fully understood. In an extraordinary development, increasing numbers of traditional and distance universities are using ICTs to make a selection of their teaching resources freely available as 'open education resources' (OER). The University of Cape Town recently signed the Cape Town Open Education Declaration signalling some senior level support for the notion of OER. In anticipation of an institution-wide roll-out, lecturers and educational technologists at UCT are grappling with the issues that need to be addressed to meet this intent. This paper suggests that careful analysis of existing educational materials and processes is necessary to provide an

indication of what can be done to make them more openly available beyond the confines of an individual teaching and learning space. However, the deceptively simple term "open" hides a reef of complexity. This paper endeavours to unravel the degrees of openness with respect to key attributes of OER, namely social, technical, legal and financial openness in an attempt to make the task of identifying where changes could be made to existing teaching materials or processes a little easier for the lecturer and the educational technologist alike. While acknowledging the potential value of content, we contend, however, that it is the opening up of educational processes, which we are calling Open Pedagogy (OP) enabled by the Web 2.0 technologies that are set to play the more transformational role in the collaboration between students and lecturers.

44. Ali, N. (2005).[44] The paper seeks to examine the use of electronic information services (EIS) among the users of the Indian Institute of Technology (IIT) Library in Delhi, India. The study found that Boolean logic and truncation are the most often used search facilities by IIT users. Lack of printing facilities, terminals and trained staff are the major reasons that would discourage users from accessing the EIS. The survey also reveals that some 60 per cent of users face difficulties while browsing e-information. The paper provides suggestions for the further improvement of EIS to fulfill the information needs and requirements of users at the IIT Library, Delhi.

45. Adeniji, M. A. (2015).[45] The subject of awareness and utilization of e-resources by the academic staff of the Ibogun campus of the Olabisi Onabanjo University Ogun state Nigeria, were the main consideration of this work. The College has thirty (30) lecturers in her nominal roll from seven departments that make up the respondents for the study. E –resources that the lecturers utilized for their work was described showing the constraints that these intellectual faced in utilizing the resources. They were categorized: Recurrent power outages, limited bandwidth, insufficient funds, inability to download information, facilities and network challenges.

The resources serve as a booster to their work were used for more than one purpose either for research or teaching function in assisting the students toward their academic pursuits. The respondents would have a greater access to these e-resources if the University management should provide an enabling environment like investing its greater part of its fund to the issue of learning resources especially e- resources for a better service delivery. Individual lecturers in their desire to access the e- resources should address the constraints that hindered the effective utilization of e –resources.

46. Richter, T., & McPherson, M. (2012).[46] Education is widely seen as an important means of addressing both national and international problems, such as political or religious extremism, poverty, and hunger. However, if developing countries are to become societies that can compete properly with Western industrialized countries, not only is a fundamental shift in thinking with regard to the value of education and more/better provision of teaching required, but strong support from other countries is needed as well. This article explores questions such as whether Western policymakers can avoid a repetition of some of the failures of the past few decades in terms of providing foreign aid; how educators and providers of educational scenarios and learning contents can foster and manage the creation of a worldwide knowledge society; and in particular, if the provision of open educational resources (OER) can realistically overcome the educational gap and foster educational justice.

47. Maharana, B., Sethi, B., & Behera, S. (2010).[47]In recent years, Internet and electronic resources have become most popular sources of information for the researchers, scholars, teachers, professionals and students. The present study was designed to find out the necessity and usage of Internet and e-resources by the students undertaking the master's course in Business Administration, in Sambalpur University, Orissa, India. A structured questionnaire was monitored among 120 MBA students, out of which 91 (75.83%) responded to this survey. The present investigation gives an indication of the range of uses of internet and e-resources by MBA

students. The investigation result shows that majority of the students (1/3 of them) have a long experience of using Internet for 2-4 years and all are more or less aware of the applications of Internet technology. More than half of the students surveyed in the study strongly feel that management study will be severely affected without the use of internet and e-resources.

48. Swain, D. K. (2010).[48]This study aims to focus on the keenness of students of business schools of Orissa (India) on the use of electronic resources and attempts to evaluate the level of electronic information services offered by the primary information reserves of the respective business schools with an opinion pool of sample respondents. Moreover, it intends to elicit the barriers in use of e-information with recommendations for the improvement of services and usage of e-resources. The study finds that students express keen interest in the use of e-journals, followed by e-books, e-newspapers, e-reports, and e-articles. Least interest is shown towards the use of electronic theses and dissertations. The study reveals that the majority of students are aware of EBSCO, and Emerald Management Xtra. However, the awareness of all other databases is not quite so encouraging. Further, it is revealed that the use of printed materials is slightly more compared to that of e-resources. Use of Web OPAC is also less than expected.

49. Velmurugan, C. (2010).[49]The well augmentation and contemplation of open access and open resource applications in all fields from education to business; it is significant in the field of librarianship and elsewhere. This paper principally discuses on the importance and usefulness of the concepts i.e. open access and open resource. This paper scrutinizes institutional repositories and Open Access resources and also describing their possible role and impact on major stakeholders in the scholarly communication process. This paper also highlights what open source is, its attribute and its role in environment of academic libraries in India.

50. Velmurugan, C. (2011). In the 21st century Open access resources (OAR) is an important part of the user community by which students, researchers,

scholars, even faculties get solutions of their problems with just a click from their PCs. It covers introduction to open access resources, types of open access resources, availability of open access journals who get benefits from open access resources. This paper mainly discuses on the role and usefulness of the concepts of open access and open access resources.

51. Veena, G. (2016).[51]The main purpose of this study is to investigate the awareness and utilization of open access electronic information resources and related issues among post graduate students of Mangalore University. A questionnaire-based survey method has been used in this research. A total of 180 questionnaires distributed but 152 were returned duly filled in as a sample. The findings shows that 72(47.36%) of respondents frequently used e-books/ e-journals, 58(38.15%) of respondents acquired their open access e-resource usage skill through teachers/research supervisors, 98(64.47%) of the respondents stated that they are satisfied with open access e-resources. The result of the study shows that majority of students are aware of open access e-resources.

52. Muthuvennila, S., & Thanuskodi, S. (2018).[52]A study was conducted to investigate the accessibility and use of open access resources used in the library and Information Science PG students in Alagappa University DDE. In this paper, an attempt has been made to study the awareness of open access resources. The methodology adopted for the study surveyed in which questionnaires, interviews, and observations were used in a collection of the data. A total of 39 respondents participated in the study. It was concluded that most of the open access resources were not aware of most of the resources available hence they could not access and use them effectively. This study shows that majority of the student's impact of the open access resources in that 16 (41%) of the frequency are male while 23(59%) are female in the use of open access resources in distance education students in Alagappa University. Show that 39(100%) respondents are Awareness of open access resources available from the library. Show that the maximum learning of open access resources

16(41%) respondents information access in the home, followed by library 11(28.2%), that the maximum Level of satisfaction of open access resources 25(64.10%) respondents information access in Satisfied, that the17 (43.58%) use for the open access resources in 1 to 3 years.

53. Chauhan, S., & Kaur, S. (2009).[53] Access to scholarly literature is need of the hour to survive in today's knowledge driven economy. Higher academic institutions are the prominently responsible for generation of quality information because most of the research is being carried out in these institutions under academic domains. The generation of quality literature is based on the use of scholarly information which helps them in their research pursuits. Consequently, around the globe, most of the countries have started giving much attention towards subscription and use of electronic information, especially the subscribed literature which is being given to universities and other institutes of higher learning through various ambitious initiatives. Since libraries are dealing with management and dissemination of information, they have much important and wider role to play for the success of these national initiatives.

54. Soni, N. K., Rani, S., Kumar, A., & Shrivastava, J. (2020).[54] The study has been an attempted to find out about the usage pattern of electronic & print journals, books and other services among users, delivered by the Institute of Nuclear Medicine & Allied Sciences (INMAS) TIRC Library. A questionnaire survey was conducted in INMAS to study the pattern of usage of library services. A total number of 150 questionnaires were distributed randomly among Scientists & Service Officers, Defence Research Technical Cadre (DRTC) and Research scholars of INMAS and 121 users responded back. The outcome of the study shows that users were quite aware about the services of the library, actively participated in collection development of books and journals, more comfortable and preferring in usage of electronic information resources. With the introduction of electronic journals/resources in library, the usage is

increased manifold among users. Printed resources are also referred in good numbers by the users.

55. Sudhier, K. G., & Seethalekshmi, K. P. (2011).[55] The study aimed at finding the use of e-resources by the students and research scholars of Faculty of Arts in the university of Kerala. 127 questionnaires were distributed among the respondents from the six departments of the faculty of Arts, out of which 120 were returned. Results show that 56.67% of the respondents use internet for educational purposes and 19.16% of respondents use internet for checking e-mail. Google is the most preferred search engine for the most of the respondents. Yahoo is their second choice. The purpose for the use of e-resources revealed that 49.2% respondents use e-resources mainly for academic purposes, 27.5% respondents for seminar presentations and 11.7% use for project works. The study revealed that internet resources are the most used e-resources among the respondents from the Arts Faculty. It is also found from the analysis that most of the departments are not giving enough facility for the use of e-resources.

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Open Access E-Resources And Its Facets

Chapter-3

Open access E-resources and its Facets

3.1 Introduction

Information society becomes paperless society in the 21st century. The most significant question is how the knowledge centers can openly access the information for the growth and development of information professional communities. Generally, we are keeping the documents for the users, are two types, viz, Open access and the other one is closed access. In the open access system readers can have the documents freely as their requirements i.e. without any assistance from the library professionals. But, in the closed access system, readers can have their required documents with the help of library professionals. In the digital era, Open Access is a process by which scholarly, peer-reviewed journal articles are made freely available to anyone anywhere over the World Wide Web.

Open access is the 'free, permanent, immediate, full text, online access, for any user, web-wide, to digital scientific and scholarly material, primarily research articles published in peer-reviewed journals'. Open access provides direct links from bibliographical data of publications to the actual full text. As well as being of use and benefit to the academic community it also permits free access to research publications to any online users.

Open access resources are those that can be accessed by anyone at any time without restraint. When the resource is plentiful, relative to the demand for it, an open access system may not only be unproblematic, it may actually be the best management system since it involves so little oversight. (Velmurugan, 2011)

3.2 Definition

A meeting held at the Howard Hughes Medical Institute in Chevy Chase, Maryland in April 2003, resulted in the "Bethesda statements on Open Access publishing". It stated that are open access work meets two criteria; The Author (s) and Copyright holder (s) to all users a free, irrevocable, worldwide, perpetual right to access to, and a license to copy, use, distribute, transmit and display the work publicity and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribute of authorship, as well as the right to make small number of printed copies for their personal use.

open access means that "a reader of a scientific publication can read it over the Internet, print it out and even further distribute it for non- commercial purpose without any payments or restrictions" (Velmurugan, 2010)

Electronic resources are the electronic version of information, stored electronically and made accessible through electronic systems and computer networks, which can access from anyplace, anytime without time and geographical limit. These are available in different forms like e-books,online databases, CD-ROMs, digital libraries, online journal magazine, e-learning tutors, Internet resources, scholarly web resources etc.

IFLA defines electronic resources as "to those materials that require computer access whether through a personal computer, main frame, or handheld mobile device. They may either be accessed remotely via the internet or locally". some of the most frequently encountered types are :E-journals, E-books, Full-text(aggregated)databases, Indexing and abstracting databases, reference databases (bibliographies, dictionaries, directories, encyclopedias ,etc.),Numeric and statistical databases-images ,E-audio/visual resources .

Reitz defined electronic resource as "material consisting of data and/or computer program (s) encoded for reading and manipulation by a computer, by the use of a peripheral device directly connected to the computer, such as a CD-ROM drive, or remotely via a network, such as the Internet." According to her the category

includes bibliographic databases, software applications, institutional repositories, electronic texts, websites, collections of e-journals, e-books, etc. (G, 2016)

3.3 A Brief History of Open Access

At the end of the 20th century, university librarians around the world found themselves in the middle of a big problem now known as the "serials crisis." Simply put, the serials crisis was the result of subscription costs for publications rising much faster than inflation for years–libraries (yes, even Harvard!) simply no longer had money for all of the publications they wanted and were forced to make difficult choices between journals.

Around this time, the internet was really coming into its own. Suddenly, through the world wide web, anyone with an internet connection could publish information and get it out to the masses for peanuts. The full potential of sharing knowledge freely on the web was exemplified by the Free Software Movement, and various groups began putting 2 and 2 together.

First came the archives like arXiv.org, which encouraged scientists to self-archive their pre-publication articles into an online depository. Then, free online-distribution journals like the Journal of Medical Internet Research began popping up. In 2000, NIH released PubMed Central, an open access depository that has grown to almost 6 million articles today, and BioMed Central, an open access publisher. The support from the government gave the movement a new In 2002 and 2003, the academic community got together and drafted the Budapest Open Access Initiative and the Berlin Declaration on Open Access, which fleshed out the formal definition of open access and acted as calls to action, gathering a combined total of almost 500 institutional signatures. 2003 also saw the launch of the Public Library of Science, which produces some of the most competitive open access journals today.

Support has poured in from all fronts: academics, institutions, funding agencies, companies, and even governments. In 2005, the Wellcome Trust began

demanding that the recipients of its grants deposit a copy of their articles with PubMed Central. Today the fight towards open access has two complementary paths: the gold road, which involves getting publishers adopting open access policies, and the green road, which calls on researchers to self-archive their works in institutional depositories. (Royster, 2016)

3.4 Importance of open access resources

The open access resources are most important due to published research results and ideas are the foundation for future development in science and medicine. Open access publishing, therefore, leads to wider dissemination of information.

- Open access resources mean to change the traditional publishing model whereby publishers financial journals though readers subscriptions to a model where electronic access to journals will be free without legal, electronic and technological barriers.
- Open access works within the legal framework of copyright law.
- Open access initiative is being supported to makes the published output of their researchers available as part of their digital library.
- Open access aims to create links to other collections basically for researchers to publish their results.

Open access helps to ensure long-term access to scholarly articles. Unlike articles that are licensed in traditional article databases, libraries and others are able to generate local copies and repositories of these resources. Libraries, by working together to formulate repositories of open access literature, know how to ensure continued access to these scholarly publications into the distant future. (Muthuvennila S. , 2018)

3.5 Features of open access

- Open access literature is digital form, free of charges and free of copyright.

- They equal right to all, irrespective of color, caste, creed, sex, and religions.
- They are compatible with the guarantee of worldwide access.
- Open access is compatible with copyright, peer review, revenue, print, preservation, prestige, career advancement, indexing and supportive service associated with conventional scholarly literature.
- Open access campaign focuses on the literature that authors give to the world without expectation of payment. (Muthuvennila S. , 2018)

3.6 Vehicles of Open Access

There are two primary vehicles of open access for delivering to research article viz, open access journals and Open Access Archives.

- **Open Access Journals**

It is also referred to as "gold" open access. It is Free, immediate, permanent, full-text, online access, for any user, who has access to the Internet, may link, read, download, store, print-off, and use the content of that article.

- **Open Access Archives**

It is also referred to as "green" open access. It simply provides persistent digital repository where authors owners of the content may achieve their documents. Self archiving can be achieved in three ways viz; Putting articles on author web sites, Depositing articles in disciplinary archives, Depositing articles in institutional archives and repositories. (Velmurugan, 2011)

3.7 Need of E-Resources

E-Resources enable the librarian to provide better service to the user community. The few considerable points are mentioned bellow;

- To get access to an information source by the more than one users.
- E-Resources can be searched quickly.
- These can be found easily by the user.

- These resources can be stored in huge amount.

- Amount of time spent on the E-Resources use.

- Analyses the purpose of using e-resources by respondent g. Know different types of e-resources commonly used by respondents

- To collect, store, organize information in digital form.

- To promote efficient delivery of information economically to all the users.

- To encourage co-operative efforts to save and share the investments in research resources, computing and communication network.

  (Kenchakkanavar, 2014)

3.8 Advantages of Open Access Resources

- Easy access of institutional repositories

- Making the search easy

- Helps in long term benefits

- Strengthens the research literature

- Open access is the best option

- Immediate access to literature with penny less expenditure

- Acts as boost to the developing countries

- Encouragement by legislative initiators

- Popularity by open approach

3.9 Limitations of Open Access Resources

- Lack of financial resources to produce quality research

- Lack of knowledge in the use of computer and the internet

- Lack of information sources

- Lack of involvement in research

- Lack of encouragement from parent and professional bodies

- Lack of proper infrastructure facilities

- Lack of congenial environment
- Lack of expertise in every organization (Velmurugan, 2011)

3.10 Advantages of e- resources

E- resources have many advantages; some of these are :

• E-resources may be accessed over the Internet. The users need not physically visit the library. This is very useful for the users who reside in remote and far flung areas. The users may download the articles and save them in their PCs.

• The same resource, i.e., article or journal may be accessed by many users at the same time.

• E-resources may be accessed from anywhere, anytime as per the convenience of the users.

• The users may search a large number of resources in one go through a single search interface.

• E-Resources also provide usage statistics which help the library staff in finding out the usage of the product.

• Articles/issues of journals appear online before their print version is available.

• Hypertext format and links of e- resources lead users to related content and articles.

• Electronic resources have audio, video and animation content which is not present in print format. • The subscription of e- resources helps libraries in saving space. (Velmurugan, 2011)

3.11 Disadvantages of e- resources

• The readers need to have access to Internet in order to read electronic resources.

• If a library cancels or stops subscription to an e-journal, it is not certain that the library will get access to back issues of that journal. Whereas, library having printed material certainly has back issues of that journal in its possession. In case of e-books too, if a library stops subscription to e-books, it is denied access to the e- book. Whereas the physical copy once bought always remains in the possession of the library.

• Use of e- resources entails reading on screen which is tedious and harmful too. (Velmurugan, 2011)

3.12 Managing e-resources

The management of e- resources involves the following:

Selection

E-resources may be selected by any of the following methods:

- Serendipity (finding by chance something which is useful and beneficial) while surfing the Internet 2. Faculty recommendations
- Reviewing the electronic journals provided by other libraries
- Publisher advertisements

Acquisition

A Library acquires print resources for ownership. But for electronic resources, the libraries simply get license for access rights. Some important activities involved in acquisition of e- resources are as under:

- Determining the price
- Negotiating with the vendor
- Completing the licensing agreement
- Allocation of funds

- Placing the order

- Verifying if the title is accessible

- Communicating with the vendor if it is not accessible

- Processing the invoice for payment

Staffing

The library has to decide if acquisition functions for e-journals will be performed by the regular staff or staff with expertise in dealing with electronic format. In order to acquire and process electronic resources, the staff requires the skill of negotiating licenses, familiarity with the electronic format, etc.

Licensing

A license is usually a written contract or agreement between the library and the publisher. An agreement has various aspects like method of calculating payment, definition of users, restriction on use, archival rights, etc. Licensing agreements are generally written for the vendors' advantage, so the library staff has to be extra careful to negotiate favourable terms for the library.

Budgeting

Libraries usually have a separate budget for procuring e-resources.

Cataloguing

E-resources are catalogued and details are entered in to library's OPAC. Some libraries may decide to list them on the website and provide their links. They may not catalogue them.

Maintenance

For e-resources, maintenance is an important issue. Library has staff to maintain e- resources. The staff ensures that the subscribed e-resources are accessible on IP (Internet Protocol) ranges of the institute. Some of the e- resources are accessible through Username (UN) and Password (PW). The staff is entrusted with the responsibility of distributing UN/PW to the authorized users. In case, an

e-resource is not accessible and the staff cannot resolve the problem, the same is communicated to the publisher to resolve the problem.

Staff Training and User education

The staff has to be trained in accessing, browsing and retrieving information from e- resources. Libraries need to conduct user education programmes in order to teach the users how to use e-resources and thus promote and enhance the use of e-resources among the users. (Jose, 2014)

3.13 Categories of E-Resources

There are different types of e-resources as mentioned below:

- E-journals
- E-Books
- Electronic databases
- E-reports
- E-Theses and dissertations
- Institutional repositories

E- Journals

An e-journal has been defined as a periodical publication which is published in electronic format usually on the Internet. A periodical publication means that it has some periodicity i.e., It may be published weekly, fortnightly, monthly, quarterly or annually. The term electronic journal has been used for the following:

- An electronic version of an established print journal like Cell, New Scientist, Scientific American, etc.
- An e- only journal like Ariadne, D-Lib magazine, etc.
- An established journal could stop its print version and transfer to e- only format.
- An electronic journal can be free or fee based through annual subscription, licensing or pay per use.

Advantages of E-journals

E- journals have the following advantages :

- can be accessed from anywhere and any time;
- can be searched non sequentially using keywords;
- additional content is provided which may not be available in print;
- Storage and binding concerns are eliminated; and
- back issues can also be accessed with the current ones.

Disadvantages of E-journals

- The readers need to have access to Internet in order to read electronic resources.
- If a library cancels or stops subscription to an e-journal, it is not certain that the library will get access to back issues of that journal. Whereas, library having printed material certainly has back issues of that journal in its possession. In case of e-books too, if a library stops subscription to e-books, it is denied access to the e- book. Whereas the physical copy once bought always remains in the possession of the library.
- Use of e- resources entails reading on screen which is tedious and harmful too. (Egberongbe, 2011)

E- Books

An e- book, also known as electronic or digital book is a text and image based publication in digital form. It is produced or published to be read on computer or other digital devices. E- Books are the digital equivalent of standard printed books. E-books are available in a wide variety of formats. Some may be downloaded in full to be read offline, whereas others may only be read online while connected to the Internet.

Advantages of e-books

The advantages of e- books are listed as under:

- Can be accessed from anywhere and any time

- The readers may make notes, save and print a number of relevant pages

- The books may be searched for keywords.

- Access the video and audio content

- The problem of space and storage in libraries is reduced or eliminated

- E- books also eliminate damage, loss and security concern

- Old titles do not go out of print

- Low production, shipping and handling charges.

Disadvantages of e-books

- The libraries have to procure more number of licenses in order to provide their access to more number of users.

- E- books require power or electricity to be accessed. In case, there is power shortage, the users cannot access the book.

The publishers use DRM (Digital Rights Management) software to control access to e- books. This limits the ability of the users to share an e- book with others. (Egberongbe, 2011)

Electronic Databases

The term "database" is used to refer to a collection of records which may have numeric, textual or image based data. If it is accessible via WWW, it is known as online database. Before the advent of Internet, these online databases were available as CD-ROM databases. A journal database is a collection of journal articles arranged in individual records which can be searched. The databases can be bibliographic or full text ones.

Bibliographic databases

A bibliographic database is a database of bibliographic records; it is an organized digital collection of references to published literature. It may be general in nature or may be in a particular subject area. J Gatehttp://j- gate.informindia.co.in. is a bibliographic database which provides access to journal literature, indexed from

29513 e- journals of 9483 publishers with links to full text at publishers' sites. The database is accessible against a fee. All the electronic databases provide

citation which give the readers the basic publication information about the article or resource- such as, title, authors, date and source of publication.

The majority of the databases which provide citations also have abstracts, which are brief summaries of the article or resource. The users and researchers can learn a lot about an article just by carefully reading the citation and the abstract; this in turn will help them decide whether they want to read the full article or not. In simple words, the abstracts are very popularly used by the researchers as they offer a quick and effective means of checking relevance and comparing articles from the voluminous literature available in a particular discipline; in certain cases they may offer appropriate substitute for the whole research article.

Full text databases

The databases which provide full text of journal articles, book chapters, conference papers etc. are known as full text databases. Examples are Science Direct, JSTOR and PROQUEST. Full text access means that the users can view, save or print the full text article. The full text article can be in HTML or PDF format. The advantages of full text databases are as under:

- Save the time of user in locating full text of an article
- Meet users' expectations by offering the full text of material they see indexed in secondary journals
- Ensure users to have access to the very latest research

Contain the full volumes including back issues of a growing number of journals. (Egberongbe, 2011)

E- Reports

A report is a document which contains information in a narrative, graphic or tabular form; it is prepared on adhoc, periodic or regular basis as per requirement. A report may refer to some specific period or event or subject. It

may be communicated to the public orally or in written form. A report which is available in digital form is known as an e- report.

For example, the universities publish annual reports which give an account of their budget, expenditure, activities and achievements. These reports are also made accessible on Internet. (Egberongbe, 2011)

E-Theses and Dissertations

A thesis or dissertation is a document submitted in support of candidature for an academic degree or professional qualification. It presents work or research, undertaken by a student, and its results or findings .The users submit theses and dissertations to the universities/institutions in print. The digital form of theses and dissertations are known as e- theses and dissertations. The research scholars doing M.Phil and PhDs in Indian universities are required to submit digital or soft copies of their theses and dissertations. The libraries are at present digitizing the theses and dissertations held by them and making them accessible on Internet. The collection of digital theses and dissertations is also known as digital repository. (Egberongbe, 2011)

Institutional Repositories

An institutional repository is an online database which provides access to the digital collections of theses, dissertations, e-prints etc., of a particular institution
for online viewing. It provides associated metadata regarding the document, i.e., name of the student, university name, year of graduation, document title, abstract, keywords, etc. Institutional repositories are also known as digital repositories. The universities and research institutions set up these repositories to collect, organize and showcase the intellectual contribution of their faculty members and scientists. These institutional repositories may also provide access
to annual reports, question papers of the past years, preprints of the articles

published by the teachers and scientists of the university and institute. (Egberongbe, 2011)

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USE OF OPEN ACCESS E-RESOURCES AT NATIONAL AND INTERNATIONAL LEVEL

Chapter -4

Use of Open Access E-Resources at National and International level

4.1 Open Access E- Resources at National Level

4.1.1 Goa State Central Library

Goa State Sentral Library is the apex public library in the state of Goa. It is located in Panjim city. The library was established on 15th September 1832 by Vice Roy Dom Manuel de Portugal e castro as ' Publica Livraria'. It is the oldest public library in the country. Goa State Central Library is known as the Krishnadas Shama Goa State Central Library and the library is dedicated to Krishnadas Shama who was founder of Konkani prose and father of Konkani literature/ Konkani scholar to acknowledge his contribution to the field of literature. Presently the library has total 6 floors which is equipped with modern facilities and advanced technology to ease out the process of leading books for the readers who can choose from stunning collection of different types of books.

The library has its online public access catalogue (OPAC) facility from where users can search different collection of library by different search options like Subject search, keyword search, Author search, Title search, Advance search etc. The library has their own website from where they provide E-Resources to their users. The different types of E-Resources provided by the library it includes: e-journals, e-books, e-data base, Marathi e-books and useful links etc. (Goa State Central Library)

4.1.2 National Library of India

The Calcutta Public Library came into existence on 21st March 1836.The library was established for reference and leading, open to all, irrespective of nationalities, class, and colour on the self-financing principle. Later the calcutta Public Library wan merged with Imperial Library and combining the collection of a number of secretariat libraries, the Imperial Library was opened to the public in January in 1930. After Independence of India, the National Library came into being place of Imperial Library by the "Imperial Library that is change of Name Act" in 1948. The National Library, Kolkata is the National Library of India and National Repository. It is also legal deposit Library of India, where books published in the country are deposited under Delivery of Books Act, 1954.

Electronic Services Provided By National Library

The library provides Electronic catalogue service, Document delivery service, E-directory for e-journals, Use of internet facility is allowed to all members during the library hours. The library has online Access to the Library Catalogue; The library also has its dynamic website to make the online database accessible to the users. Users can access bibliography records through this site www.nationallibrary.gov.in 24×7 from anywhere of the world.

E-Resources Provided By The National Library

The National Library introduced online journals in April, 2010 for its users. The provider for this are the major international publishers like Oxford University Press, Cambridge University Press, Taylor & Francis, Sage, Springer, Emerald, American Chemical Society, etc.

The library also has World e-books collection. Other online reference collection which include Oxford Bibliographies Online, Oxford English Dictionary, Cambridge Companion Online Complete Collection, Cambridge Histories Online, Scopus of Elsevire and Access Science of McGraw Hill, The library also has full

text dissertation and thesis of leading academic institutions and also provides title of e-books covering all branches of knowledge.(National Library of India, 2021)

4.1.3 The Delhi Public Library

Delhi public Library (DPL) it was established in the year 1951 by the Ministry of Education and Government of India with the financial and technical assistant from UNESCO. The inauguration of Library was done by the first Prime Minister of India Pt. Jawaharlal Nehru on 27 October 1951. Presently the functioning of Delhi Public Library is done under the administrative and financial control of Ministry of culture, Government of India.

The DPL has been one of the four recipient libraries under the Delivery of Books and Newspapers Public Library Act of the parliament of India, 1954(as amended in 1956) . As per this Act, the DPL is entitled to receive one copy of each publication that is being published in India from publishers for the free of cost. The library also has WebOPAC through which users can access/ search the materials collection. (Delhi Public Library)

The library also provide high speed internet service to the members in Central Library, Sarogini Nagar, Patel karol bagh , Vinobha Puri, Janak Puri, Narela and shahadra librarirs. The library provides opportunities to those who never touch the keyboard before and for first time computer users. It provides digital lifeline to children and other who have no other option to avail computer access from elsewhere. The library provides opportunities to youth these global intellectual knowledge resources through internet services. (Chattoppadhyay, 2013)

E-Resources subscribed by the library:-

1. National Library E-Resources

2. DELNET E-Resources

Automatic access to e -resources without login required is available only in Central Library LAN.

4.2 Open Access E- Resources at International Level

4.2.1 Library of Congress

Library of Congress, it is the de facto national library of United States and largest library in the world. The library of Congress serves members, committee and staff of U. S. Congress, other government agencies, and libraries throughout the country and the world, scholars, researchers, artists and scientist who use the library resources. It is the national Center for library service to build and physically handicapped people and it offers many concert, lectures and exhibitions for the general public. Those outside the DC, area have access to the library's growing electronic resources through the Library of Congress website at http://www.loc.gov.in.

In 1994 the Library of Congress launched the National Digital Library Program (NDLP), making freely available on the internet high quality electronic versions of American history material from the library's special collections. The information accessible on the library from web sites are the library's exhibitions, bibliography databases online public access catalogue and online print and photograph catalogue, a comprehensive public legislative information system known as Congress gov, copyright information, and a Global Gateway Website for the library's international collections and collaboration digital libraries built with international partners.(Billington)

Inspired by the success of the global gateway site, in 2005 Librarian of Congress James H. Billington proposed a project called the World Digital Library. Its goal was to make available to anyone with access to the Internet digitized texts and images of "unique and rare materials from libraries and other cultural institutions

around the world." It was designed to be searchable in seven languages – Arabic, Chinese, English, French, Russian and Spanish as well as Portuguese. (Billington)

4.2.2 The British Library

The British Library is the national library of the United Kingdom and is also one of the largest library's in the world. The library collects thousands of electronic journals, books and websites and hundreds of databases. The users need to come to the library to use most of these resources. The library has its reading room from where users can use the PCs to view most of the library electronic resources. For entering the reading room of the library the users need a reader pass. A small number of resources can b accessed on personal devices of the users. Some resources are unavailable in the library Yorkshire Reading Room. If the users are looking for a specific e-book, or e-journal, then the best way is to search for the title in the library catalogue, Explore to the British Library. If one is looking for a database then user can prefer to browse, or search by title or subject, for resources available.(British Library)

The Resources Include:

- Bibliographic databases
- Indexing/abstracting databases
- Full text databases
- Journal and e-book collections
- Websites recommended by the staff.

Remote Access

A small number of Library subscribed e - resources are available to users outside the Library reading rooms. Readers can access these e - resources with the library Remote E- resources service.

CD-ROM Resources

Some of the library CD-ROM resources are only available from standalone computer terminal in one of the library's reading rooms.(British Library)

4.2.3 National Library of South Africa

The National Library of South Africa is the agency of government of South Africa which maintains the national library of published materials relating to the country. The National Library of South Africa (NLSA) is the custodian of South Africa's collective heritage materials and the national depository of published output materials in the country. The NLSA is mandated by the National Library of South Africa Act to collect and preserve published documents and make them accessible to all and ensure the knowledge is not lost to posterity. (National Library of South Africa)

A large portion of special collections are indexed online and are available via the National Library of South Africa's OPAC (Online Public Access Catalogue-http://www.legaldeposit.ac.za). Many of the manuscripts and illustrations can also b accessed via the National Register of Photos ,as well as the National Register of Manuscript .(IFLA Reference and Information Service Blog)

4.2.4 National Library Board (NLB) Singapore

The National Library, Singapore is the flagship national library of Singapore. It is the country's largest public Library. The National Library Board (NLB) offers access to a large number of electronic resources on site at their library's or from home. E-Resources available are JSTRO, Oxford Bibliography, E-journals EBSCOHOST, ERIC (Education Resources Information Centre), PROQUEST Databases. To access these databases, all you need to do is registered for the my library ID. Singaporeans, permanent residents and foreigners with FIN number can sign up as NLB members online at NLB's website. NLB has an one Search like function that allows you to search across some of their subscribed databases. (NLB E-resources,2021)

To search articles and books across multiple databases,

1. Go to http://eresources.nlb.gov.sg/main/browse

2. Remember the register

3. Then after login with your my library ID to access the resources

4. Singaporean can register for free my library ID at https://acount.nlb.gov.sg/

5. Then login

6. Enter keywords in the search box

7. Search across E-journals Or E - materials using key words or title

Generally you might see a Full Text link instead. Click on the link and it will show you what the database will link to this article. (NLB E-resources,2021)

Press Reader

NLB provides Reading International E-Newspapers and E - magazines with Press Reader. The platform also provides the audio features which allows you to listen to an article. (NLB E-resources,2021)

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DATA ANALYSIS AND INTERPRETATION

Chapter-5

Data Analysis and Interpretation

5.1 Introduction

The responses received from 50 respondents were codified and data was fed to the computer MS word and using excel spreadsheet data input was analyzed. Also Google forms were used to collect data. Techniques like frequency distribution, and figures are used to analyze the data.

5.1.1 Are you aware of open access e – resources?
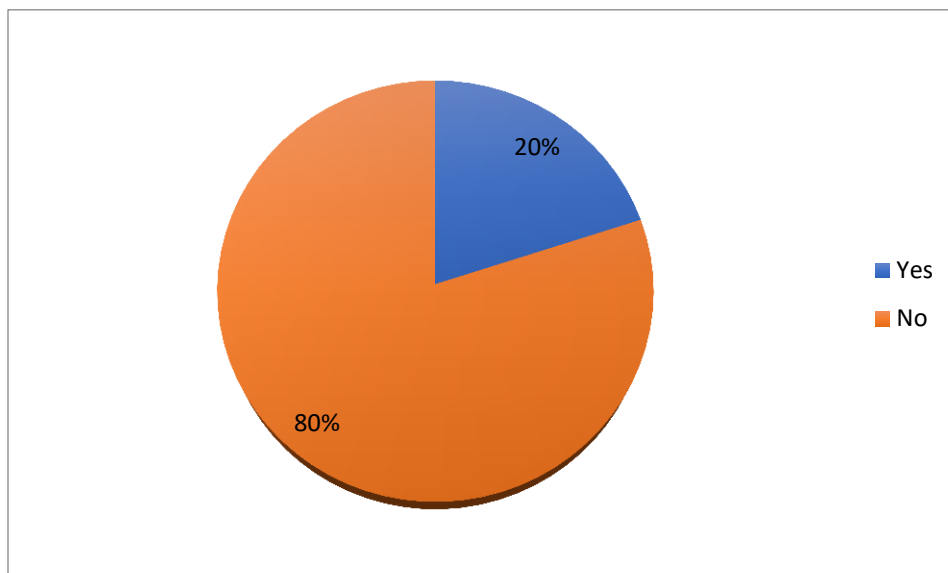
Figure 1: Aware of open access e – resources

Above pie chart shows that from the total respondent's majority 80% respondents are aware of open access E-resources and few 20% respondents are don't have awareness about E-resources.

5.1.2 Which e – resource do you mostly prefer?
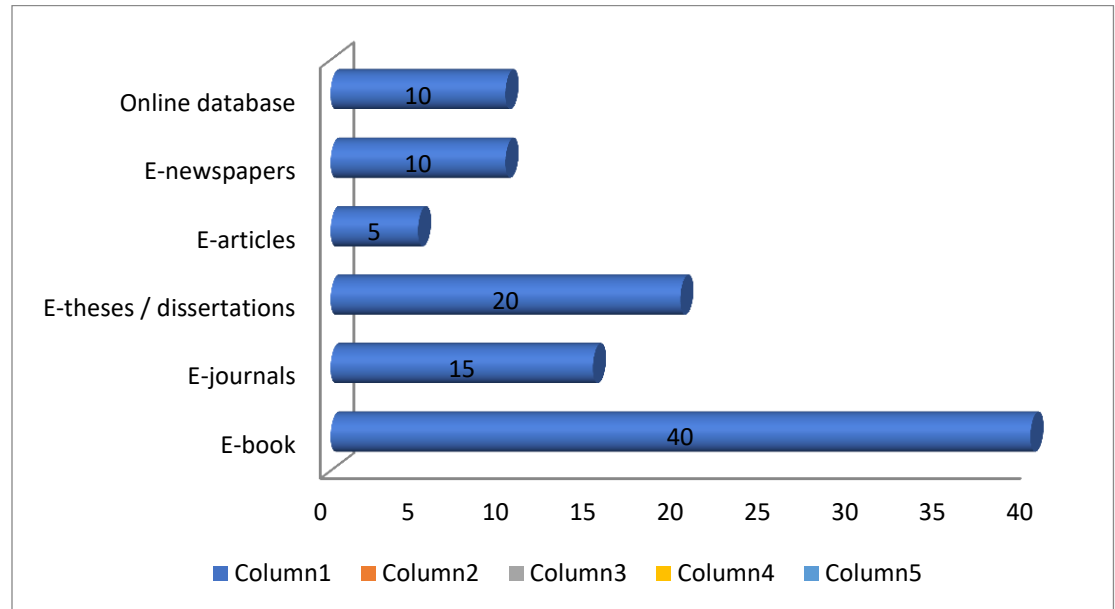
Figure 2: E – resource you mostly prefer

From the above graph it is clear that majority, 40% of respondents they mostly preferred e-books followed by 20% preferred e-thesis where as 15% respondents preferred e-journals 10% respondents preferred e-newspaper and online database each and remaining 5% respondents preferred e-article.

5.1.3 Frequency of using E-resources?
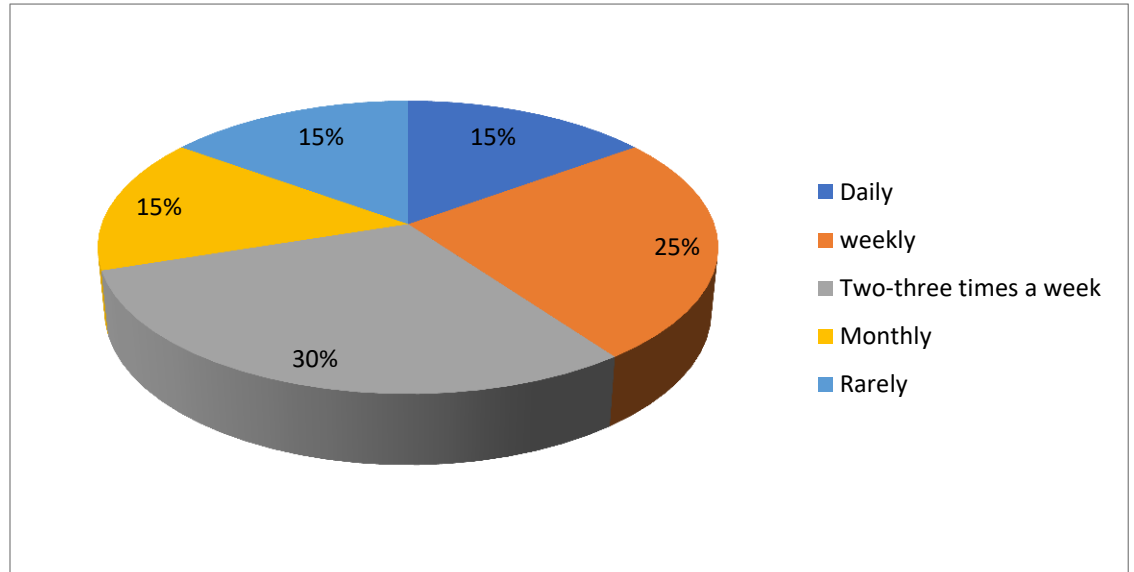
Figure 3: Frequency of using E-resources

From the above chart it is depicted that majority of respondents i.e. 30% makes use of e- resources two-three times a week, 25% respondents preferred to use E-resources on weekly basis, where as 45% (15%each) respondents preferred to use daily, monthly and rarely basis.

5.1.4 For what purpose do you mainly use electronic resources?
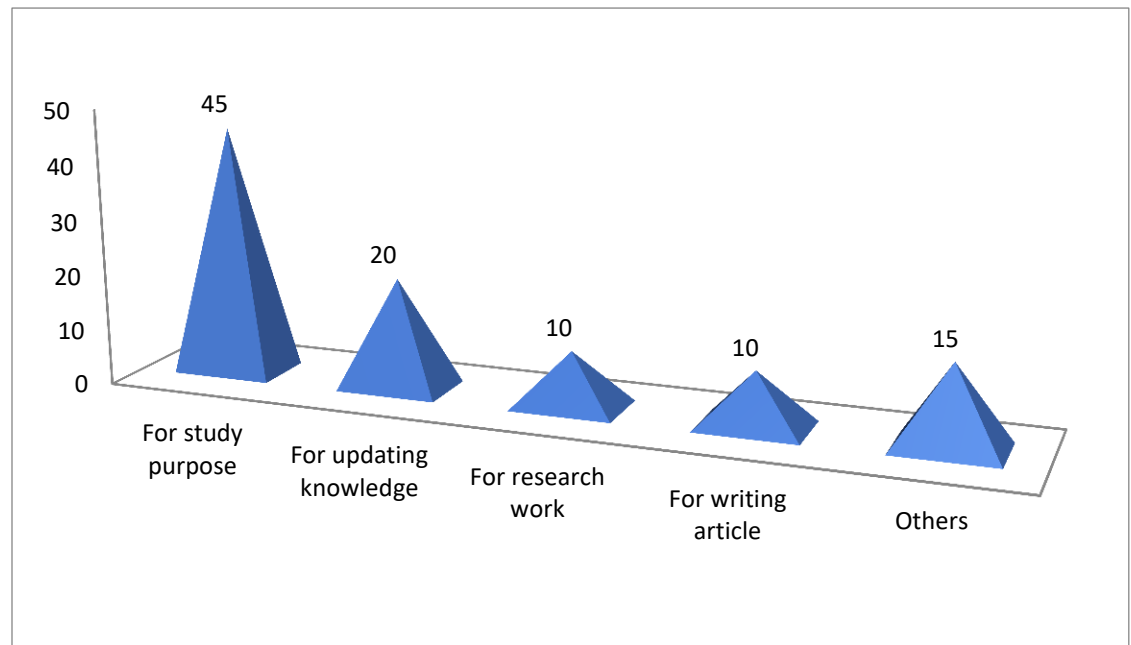
Figure 4: purpose you mainly use electronic resources

The question was asked to know the purpose of using of e resources. So from the question ask it is noted that majority of respondents that is 45% make use of e resources for study purpose. 20% of the respondents make use of e resources for updating knowledge. 10% of the respondents make use of e-resources for research work. 10% of the of the respondents makes use of e-resources for writing articles and 15% respondents make use of e resources for other purposes.

5.1.5 Which electronic gadget do you use to access the e-resources?
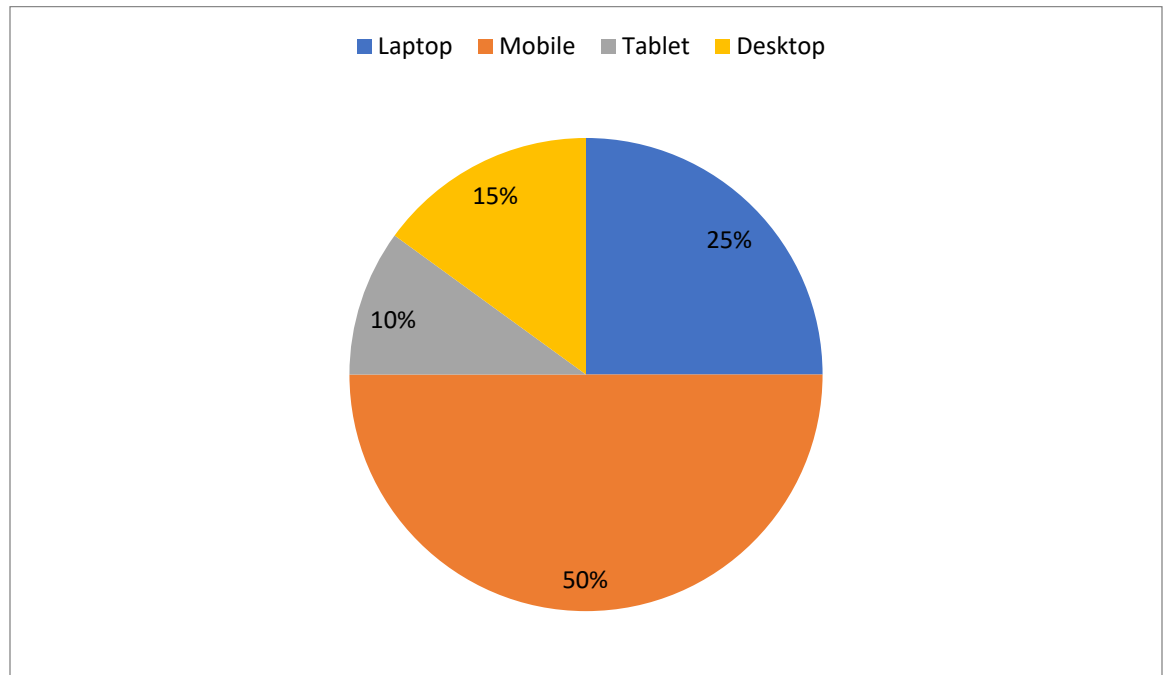
Figure 5: Electronic gadget you use to access the e-resources

According to the survey conducted, majority 50% of respondents are making use of mobile devices to access the e resources, whereas laptop second mostly preferred with 25% by the respondents followed by desktop 15% and remaining 10% respondents use tablets to access the e resources.

5.1.6 What are the benefits of using E-resources?
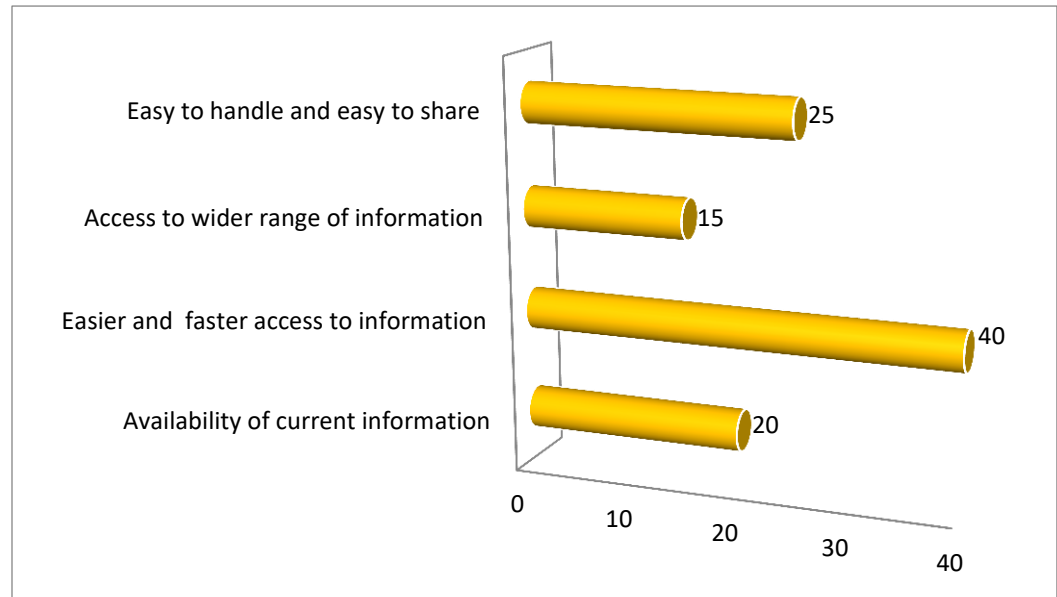
Figure 6: Benefits of using E-resources

A question was asked to know the benefits of e resources for the users, so from the responses 40% respondents they finds that with e resources it is easier and faster to access information, 25% of respondents finds that it is easy to handle and easy to share the information. 20% respondents said that there is availability of current information and 15% feels that a wider range of information can be made accessible.

5.1.7 How would you rate the information content of electronic resources?
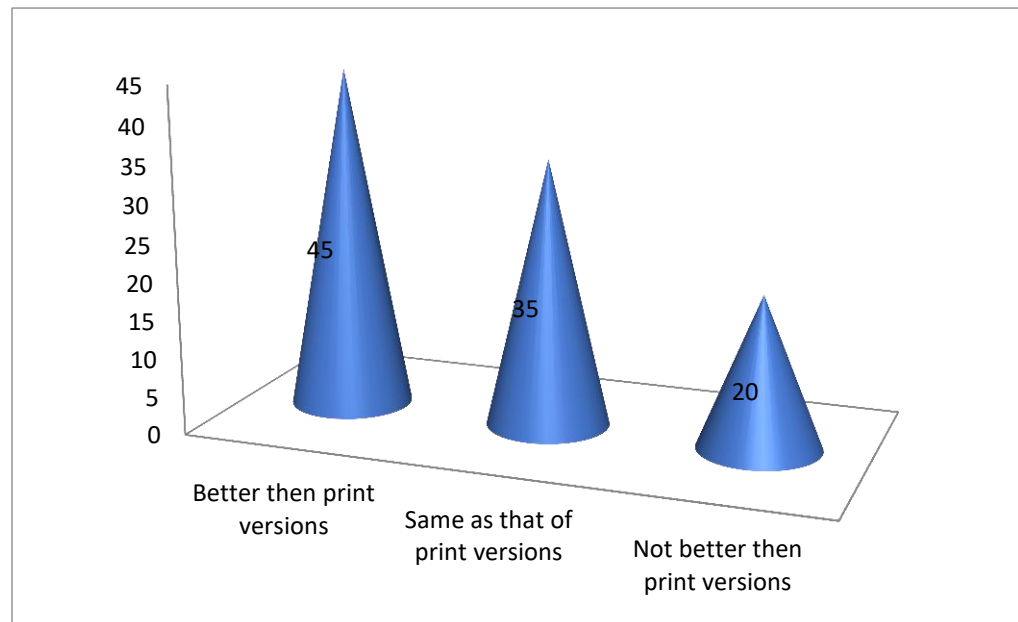
Figure 7: Rate of the information content of electronic resources

According to the survey majority 45% of the respondents are rated the information content of electronic resources better then print version followed by 35% respondents rated same as that of print version and remaining 20 %respondents rated for not better then print version.

5.1.8 Do you need training or guidance to access and use electronic information resources provided by library?
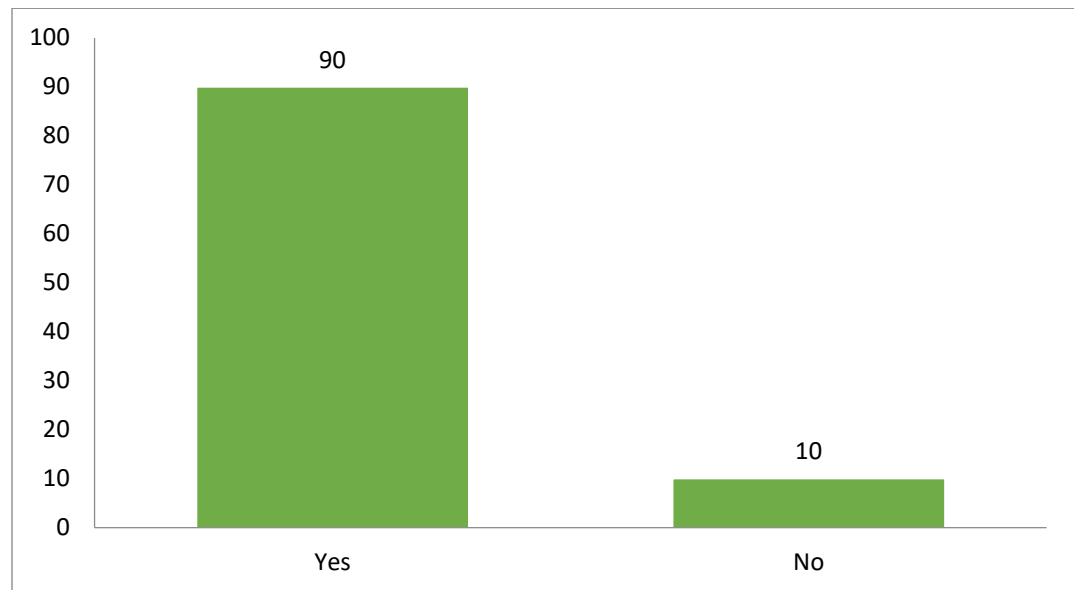
Figure 8: Need of training or guidance to access and use electronic information resources provided by library

According to the chart majority of 90% respondents need training or guidance to access and use electronic information resources provided by library. Whereas 10% respondents don't need training or guidance to access and use electronic information resources provided by library.

5.1.9 If yes, please choose the training mode you have preferred?
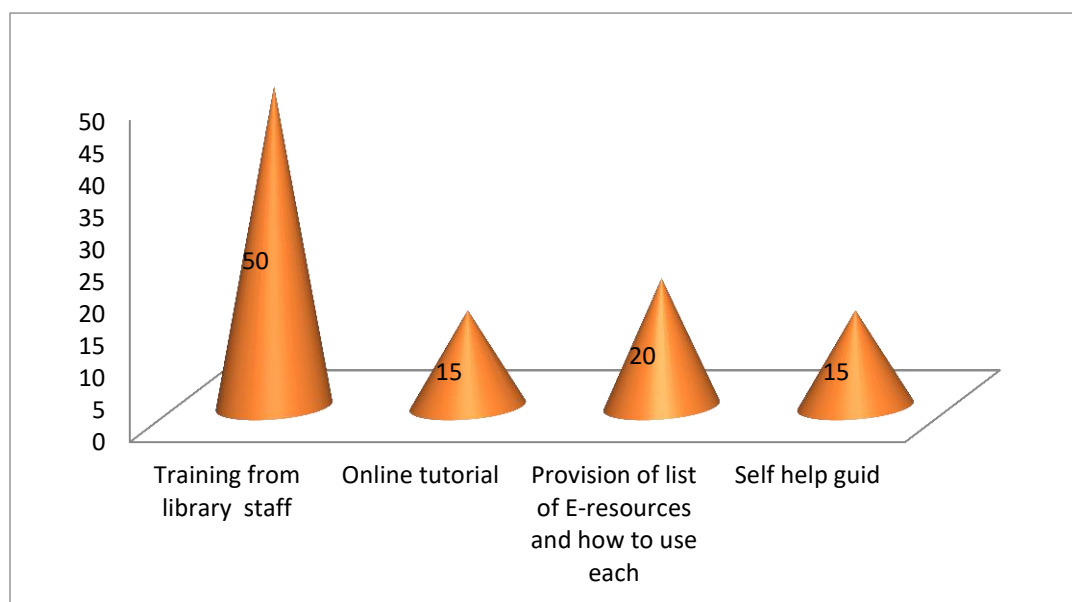
Figure 9: Training mode you have preferred

The above graph Shows that 50 % respondents they want training from library staff, where as 20% they want provision list of e -resources and how to use it and others 30 % (15% each) wants online tutorial and self help guide.

5.1.10 What are the problems you face while accessing and using E-resources?
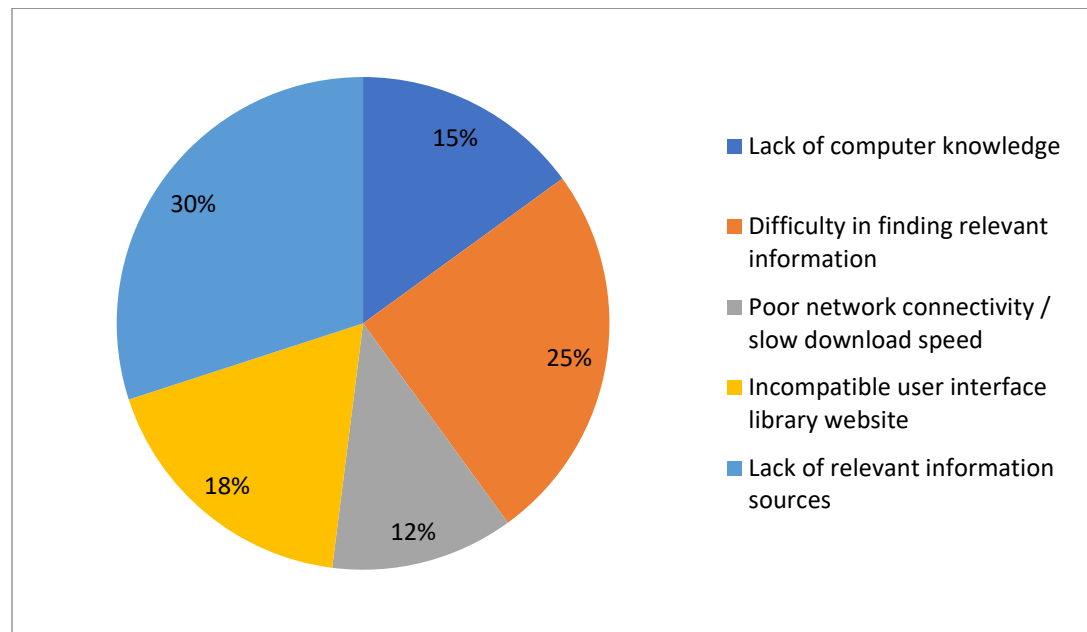

Figure 10: Problems you face while accessing and using E-resources

From the above pie chart majority 30% of respondents facing lack of relevant information sources while accessing e -resources, 25% of respondents they are getting difficult in finding relevant information, 18% respondents are facing incompatible users interface library website followed by 15% are having lack of computer knowledge and very few 12% respondents are facing poor network connectivity / slow internet connection.

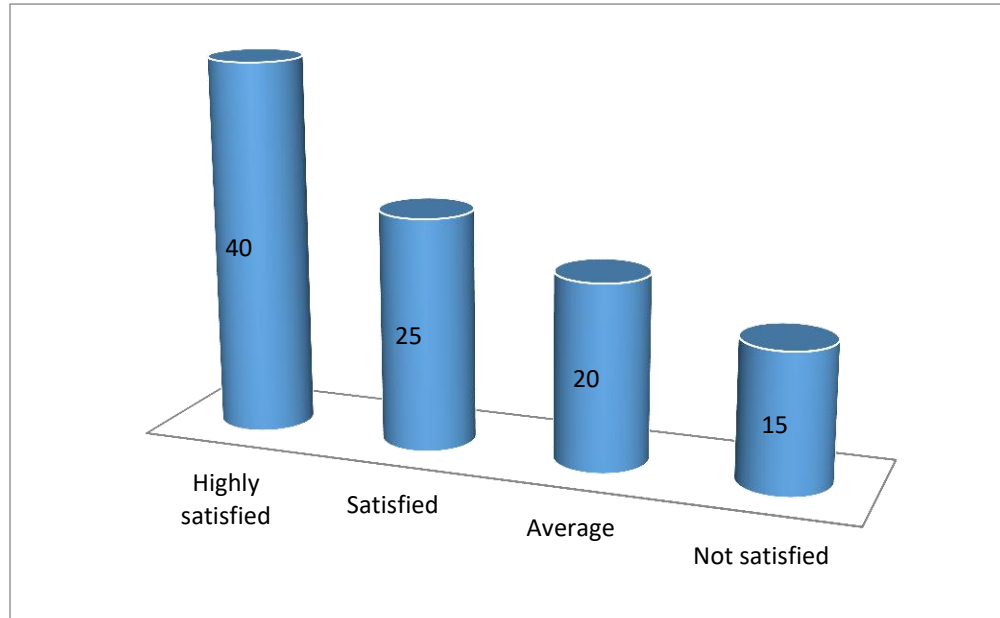**5.1.11 Satisfaction of using E-resources?**

Figure 11: Satisfaction of using E-resources

The above chart regarding using of resources to know the satisfaction level of users towards E-resources, from the above table it is shows that majority 40% from the total respondents are highly satisfied with E-resources, followed by 25% are satisfied with e- resources whereas 20% respondents had average level of satisfaction and minority 15% respondents are not satisfied.

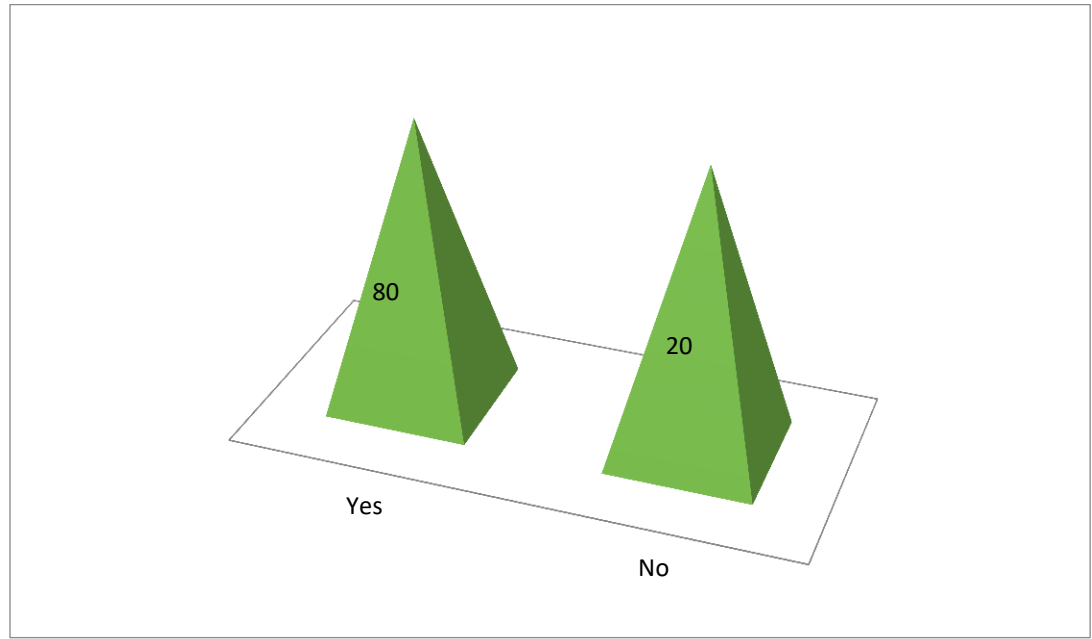**5.1.12 Is your subject area covered in the open access environment?**

Figure 12: Subject area covered in the open access environment

From the above chart it is showed that the total respondents, that is 80% felt that subject are covered in the open access environment where as 20% respondents don't cover their subject in open access environment.

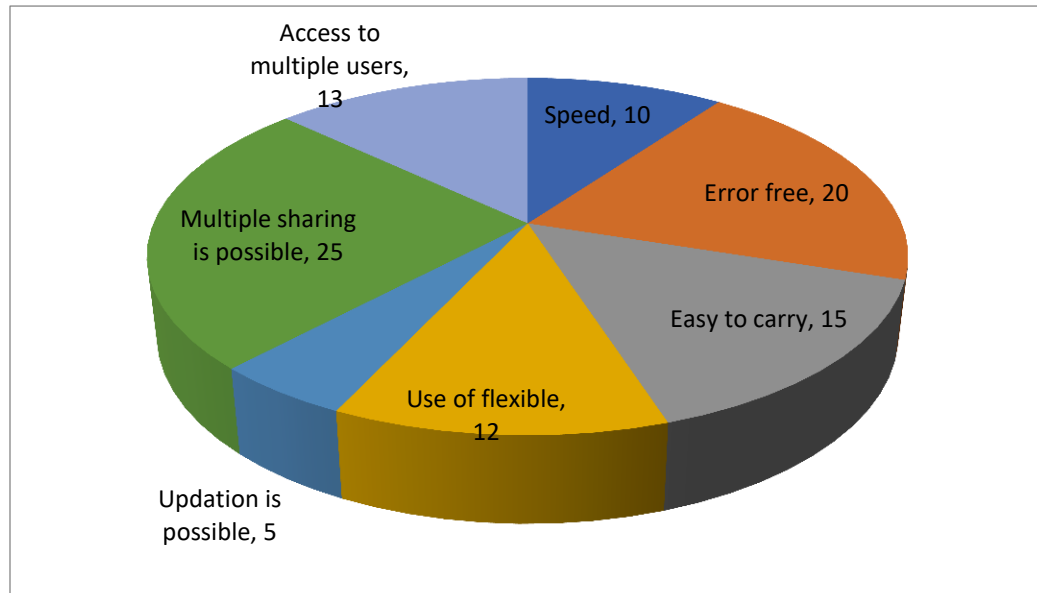**5.1.13 In your opinion, why do people prefer E-resources?**

Figure 13: Why do people prefer E-resources

In the above pie chart regarding preference to e-resources 25% respondents endorsed that because of multiple sharing, researchers prefer e-resources. Further 20% researchers use e-resources as it is free of errors. Whereas 15% respondents prefer e-resources because it is easy to carry. Further 13% respondents prefer e-resources access to multiple users. Followed by 12% respondents prefer e-resources due to flexibility in using e-resources. 10% are in the favor of speed of connectivity. And 5% respondents also stated that updation is possible. This shows that because of sharing the resources people prefer e-resources.

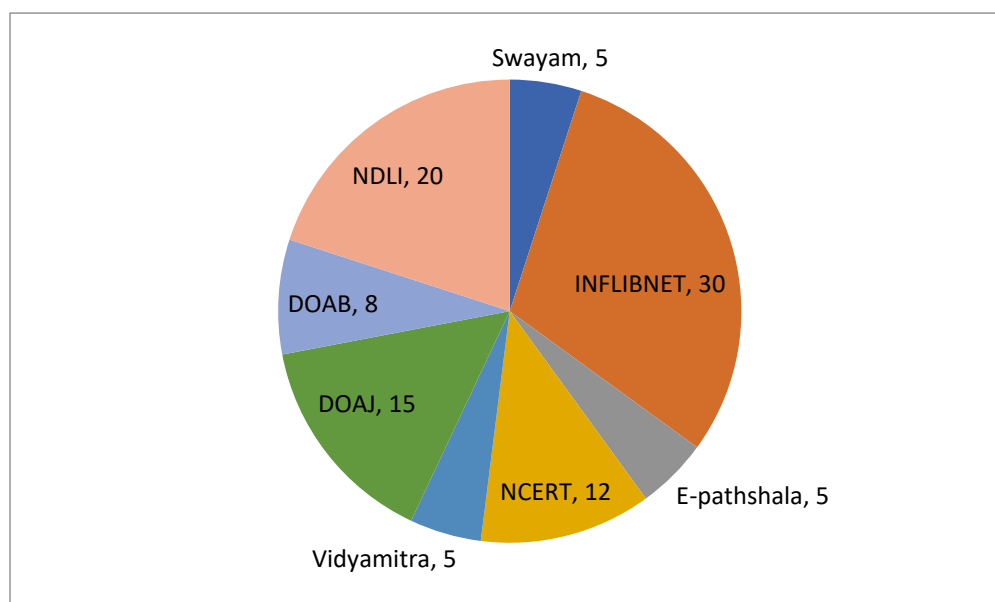**5.1.14 Tick the different open access E-resources that you use?**

Figure 14: Different open access E-resources that you use

In the above pie chart it is observed that majority of 30% of the respondents access or uses INFLIBNET, 20% of the respondents access or uses NDLI,15% of the respondents uses DOAJ, followed by 12% of the respondents access NCERT, whereas 8% users uses DOAB and lastly 15% (5% each) of the respondents preferred Swayam, E-Pathshala and Vidyamitra.

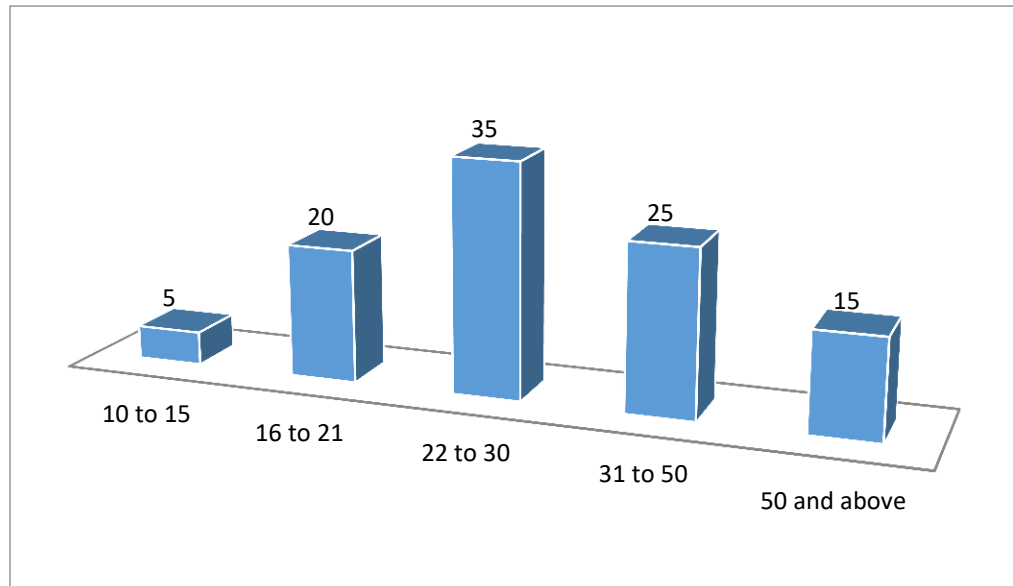**5.1.15 In your opinion which age group prefer open access?**

Figure 15: which age group prefer open access

An opinion was asked to the respondents that which of the age group do they preferred open access, from the above graph majority of the 35% users thinks that the age group between 22-30 prefers open access. 25% of the respondents thinks the age groups between 31-50 preferred open access, followed by 20% of the respondents thinks the age group between 16-21 preferred open access, whereas 15% of the respondents thinks the age group between 50 and above 21 preferred open access and very few of the 5% thinks the age group between 10-15 preferred open access.

FINDINGS, SUGGESTIONS AND CONCLUSION

Chapter – 6

Findings, Suggestions and Conclusion

6.1 Introduction

The present dissertation is an attempt to analyze the open access e-resources available for academic pursuit. The study tries to find out the major advantages and its long terms benefits to the student community and research community. The dissertations aim to ascertain the different pros and cons of open access e-resources. This chapter discusses the observation, suggestions, findings and conclusions on the basis of data presented. It also deals with the limitation and the future research on the topic.

6.2 Findings

- The study found that the majority 80% respondents are aware of open access E-resources and few 20% respondents are don't have awareness about E-resources.

- The study observed that the majority 40% of respondents they mostly preferred e-books followed by 20% preferred e-thesis where as 15% respondents preferred e-journals 10% respondents preferred e-newspaper and online database each and remaining 5% respondents preferred e-article.

- The study depicted that majority of respondents i.e. 30% makes use of e-resources two-three times a week, 25% respondents preferred to use E-resources on weekly basis, where as 45% (15%each) respondents preferred to use daily, monthly and rarely basis.

- The study revealed that the 45% of the respondents make use of e resources for study purpose. 20% of the respondents make use of e

resources for updating knowledge. 10% of the respondents make use of e-resources for research work. 10% of the of the respondents makes use of e-resources for writing articles and 15% respondents make use of e resources for other purposes.

- The study also found that the 50% of respondents are making use of mobile devices to access the e resources, whereas laptop second mostly preferred with 25% by the respondents followed by desktop 15% and remaining 10% respondents use tablets to access the e resources.

- The study shows that the 40% respondents they finds that with e resources it is easier and faster to access information, 25% of respondents finds that it is easy to handle and easy to share the information. 20% respondents said that there is availability of current information and 15% feels that a wider range of information can be made accessible.

- The study revealed that majority 45% of the respondents are rated the information content of electronic resources better then print version followed by 35% respondents rated same as that of print version and remaining 20 %respondents rated for not better then print version.

- The study found that majority of 90% respondents need training or guidance to access and use electronic information resources provided by library. Whereas 10% respondents don't need training or guidance to access and use electronic information resources provided by library.

- Further the study highlights that 50 % respondents they want training from library staff, where as 20% they want provision list of e -resources and how to use it and others 30 % (15%each) wants online tutorial and self help guide.

- The study observed that the majority 30% of respondents facing lack of relevant information sources while accessing e -resources, 25% of respondents they are getting difficult in finding relevant information, 18% respondents are facing incompatible users interface library website followed by 15% are having lack of computer knowledge and very few

12% respondents are facing poor network connectivity / slow internet connection.

- The study shows that the majority 40% from the total respondents are highly satisfied with E-resources, followed by 25% are satisfied with e-resources whereas 20% respondents had average level of satisfaction and minority 15% respondents are not satisfied.

- The study revealed that 80% felt that subject are covered in the open access environment where as 20% respondents don't cover their subject in open access environment.

- The study depicted that the 25% respondents endorsed that because of multiple sharing, researchers prefer e-resources. Further 20% researchers use e-resources as it is free of errors. Whereas 15% respondents prefer e-resources because it is easy to carry. Further 13% respondents prefer e-resources access to multiple users. Followed by 12% respondents prefer e-resources due to flexibility in using e-resources. 10% are in the favor of speed of connectivity. And 5% respondents also stated that updation is possible. This shows that because of sharing the resources people prefer e-resources.

- The study found that majority of 30% of the respondents access or uses INFLIBNET, 20% of the respondents access or uses NDLI,15% of the respondents uses DOAJ, followed by 12% of the respondents access NCERT, whereas 8% users uses DOAB and lastly 15% (5% each) of the respondents preferred Swayam, E-Pathshala and Vidyamitra.

- And lastly the study also found that the majority of the 35% users think that the age group between 22-30 prefers open access. 25% of the respondents thinks the age groups between 31-50 preferred open access, followed by 20% of the respondents thinks the age group between 16-21 preferred open access, whereas 15% of the respondents thinks the age group between 50 and above 21 preferred open access and very few of the 5% thinks the age group between 10-15 preferred open access.

6.3 Suggestions

- The study suggests that more awareness about e-resources and how it is useful/ beneficial should be provided by the libraries and institutions to its users.

- The Study revealed that although the PG students use the E-resources to update their knowledge mostly but they are lacking proper instant communication, quick access and database search. So they should be encourage for the use of electronic information resources and how it could be make fruitful in different purposes.

- It is also suggests that dedicated website of the library must be updated regularly of the data available under E-resources.

- The access of the library resources must be available on web based catalogue which will reach out all the readers of the world.

- The study found that necessary infrastructure like high speed internet connectivity and hardware is required so that e-resources will be optimally used.

- Mostly the users prefer e-resources so libraries and institutions can subscribe to more and more e-resources collection based on the user's interest, and usage of the document.

- It also suggest that new technologies like controlled vocabulary and advanced search strategies which can make electronic search process much faster and easier it should be brought to notice among the electronic resources users.

- A continues and periodical orientation should be conducted by libraries to inform the readers of latest acquired E-resources.

- The study also suggests that the digital library services are much easier and time saving than the manual library services.

- It is learned that the maximum users make use of internet facilities daily for their assignments and project purpose.

6.4 Conclusion

E-resources it is the important source of information for the people in today's world and it has changed the way for searching and communicating information to the users. The study reveals that most of the respondents are aware of the E-resources as mostly all uses E-resources. The main purpose of using E-resources is for updating the knowledge and for students, it is mainly for study purposes. There are also some problems with regarding to E-resources like poor network connectivity, speed etc. Most of the time it is difficult to find relevant information from large collection as it is vast but now a days most of the people prefer E-resources because of their different kinds of benefits such as it is free to access, speedy, error free, search by keyword or using different searching tools like (Boolean search, proximity and phrase searching) etc. and every user wants any information at the click of the mouse so E-resources help in that by providing information easily.

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