"DIGITAL RESOURCES AND ITS BENEFITS TO COLLEGE LIBRARY USERS FOR ACADEMIC PURSUIT: A STUDY"

Dissertation Submitted in Partial Fulfillment of the Requirements of the

Goa University for the Degree of Master of Library and Information Science

BY

Shweta M. Sawant Dessai

Enrolment Number

22P034015

Under the Supervision of

DR. CARLOS M. FERNANDES

Presented for Viva-Voce on 28/4/2023

D.D. Kosambi School of Social Sciences and Behavioural Studies

Library and Information Science Programme

Goa University, Taleigao Plateau, Goa

2022-2023

"DIGITAL RESOURCES AND ITS BENEFITS TO COLLEGE

LIBRARY USERS FOR ACADEMIC PURSUIT: A STUDY"

Dissertation Submitted in Partial Fulfillment of the Requirements of the

Goa University for the Degree of Master of Library and Information Science

BY

Shweta M. Sawant Dessai

Enrolment Number

22P034015

Under the Supervision of

DR. CARLOS M. FERNANDES

D.D. Kosambi School of Social SciencesandBehaviouralStudies

Library and Information Science Programme

Goa University, Taleigao Plateau, Goa

2022-2023

CERTIFICATE

This is to certify that dissertation entitled "Digital Resources and its Benefits to College Library Users for Academic Pursuit: A Study" is a record of work submitted by **Miss Shweta Madhukar Sawant Dessai** is a partial fulfillment of the requirement of the degree of Master of Library and Informaton Science of Goa University is her own work carried out under the guidance and worthy of examination.

<div align="right">

DR. Carlos M. Fernandes

Assistant Professor

(Programme Director)

Library and Information ScienceProgramme,

Goa University

</div>

DECLARATION

I State that the present dissertation entitled "Digital Resources and its Benefits to College Library Users for Academic Pursuit: A Study" is my original contribution and the same has not been submitted on any occasion for any other degree or diploma of this University or other University/Institute. To the best of my knowledge, the present study is the first comprehensive work of its kind from the area mentioned. The literature related to the problem investigated has been cited

Date: 28/04/2023

Place: Taleigao, Plateau

(Shweta M. Sawant Dessai)

Library and Information Science Programme,

Goa University

ACKNOWLEDGEMENT

TABLE OF CONTENT

LIST OF TABLES

SR.NO.	TITLE	PAGE NO
Table 1	Digital resources equipped by library	62-63
Table 2	Awareness about the latest digital resources subscribed by library	64
Table 3	Awareness of latest digital resources	65
Table 4	Number of computers provide library	66
Table 5	Remote access to subscribed digital resources	67
Table 6	Remote access provided by libraries	68
Table 7	Rate of success of finding relevant information	69
Table 8	Requirements of college library users in terms of digital resources	70
Table 9	Artificial intelligence tools to meet the requirements of college library users	71
Table 10	Equipment of good digital infrastructure facilities	72
Table 11	barriers/obstacles blockading the digital infrastructure facilities	73-74
Table 12	Mode of access of digital resources	75
Table 13	Time spent in accessing digital resources	76
Table 14	Means used for locating relevant information on digital resources	77
Table 15	Perception about digital resources	78
Table 16	Most preferred digital resources	79

LIST OF FIGURES

CHAPTER I

INTRODUCTION

1.1 Introduction

The development of digital resources has significantly changed the status of all academic libraries around the world.(Swain & Panda, 2009)[1] It has played an increasingly significant role in libraries collection building (Muthu & Sivaraman, 2015)[2] digital resources are now become an important component of many library collections due to the rising popularity of digital libraries. They are becoming increasingly significant for the academic community due to the development of new techniques and technologies. (Hoq & Haque, 2018)[3]

Digital resources can be referred to as any content that has been produced digitally or converted from an analogue (paper) form to a digital one and that can be viewed on smart phones, personal computers or tablet with the help of internet. They come in a variety of formats, including e-books, digital libraries, e-journals, magazines, tutorials for learning online, e-discussions, e-news, data archives, and e-mail, online chatting, and they provide collections of data, images, and other multimedia products in numerical and graphical mode. (Mahadevaiah, 2019)[4]

Nowadays, academic libraries rely almost exclusively on electronic resources. No college library can operate efficiently without e-resources. (Patel & Verma, 2018)[5] For the academic community to get the knowledge in the proper form, digital resources are becoming increasingly crucial Resources and are more easily accessible in an digital world when they are in an digital format. The rapid development of electronic databases and contemporary e-book technologies has fundamentally altered the field of informatics. Users' attitudes towards information are gradually changing away from printed materials towards electronic resources. (Swain & Panda, 2009)[6]

Over the past few years, digital resources have quickly established themselves as essential tools in academic libraries. Recent purchases of journals, magazines, and other secondary materials are heavily weighted towards digital. Print publication today are very expensive and space intensive, but digital collection save space and are relatively simple to manage. (Kumari, 2015)[7]

The digital resources offered by the library are very important in enabling the user to quickly and easily access the needed information. (satyabhama , 2020)[8] Digital resources are the main element and they have become a standard component of most academic library resources today. Internet and its most used component, World Wide Web (www) has turned into the biggest source of information with the widest coverage and the fastest access. It is the most powerful tool for global communication and exchange of information. The dependency of scholars in the academic centers on the digital resources has increased to a large extent. An information literature researcher find it convenient to make use of digital resources for his/her research work. (Bhardwaj & Swadesh, 2015)[9]

Modern libraries are moving ahead to keep up with the most recent e-publications because they recognize the growing relevance of digital resources, Digital resources are what give the modern library's collection life and meet the diverse demands of students, faculty, and researchers with the least amount of risk and effort. Additionally, the interactive and multimedia components given by the digital medium can provide a much greater range of learning experiences than those afforded by text on paper, thereby increasing the learning opportunities provided to students. (Swain & Panda, 2009)[10]

1.2 Objective of the study

1.   To acquaint with the latest digital resources available for college fraternity.

2.   To know the infrastructure facility required for optimum use.

3.   To understand the requirement of college users for academic excellence.

1.3 Scope of the study

The scope of the study was to know the different digital resources required for academic study. It will also highlight the technological requirement to provide digital resources to its clientele (Reader).

1.4 Hypothesis

1. The digital resource available in the colleges is not known to users.
2. The technological infrastructure is not up-to-date.
3. There is a lack of knowledge about digital resources available in college library users.

1.5 Limitation of the study

This study was limited to the State of Goa and its academic college libraries only.

1.6 Research methodology

1. The Researcher has browsed all the digital resources available through web portals related to the topic.

2. The Researcher will discuss a topic with the experts, library professionals, students and IT professionals to get primary data.

3. Further the Researcher has design questionnaires and will circulate among all stake holders to collect in-depth information about the topic.

4. Further the researcher has use suitable statistical techniques such as graph, charts, illustration to get and precise and clear conclusion.

1.7 Population of the study

The study was limited to all the academic college libraries functioning in South Goa District of Goa State.

1.8 Organization of the study

Chapter I: Introduction

Chapter II: Review of Literature

Chapter III: Digital content and its characteristics

Chapter IV: Digital content at National and International Level in college libraries

Chapter V: Data analysis and Interpretation

Chapter VI: Observation, Findings and Suggestion.

1.9 Conclusion

Digital resources play a key role in libraries. Academic libraries are the repository were various resources are stored. So the student as well as faculty members can utilize this resources and take full benefit of it. College libraries should subscribe to more digital resources and try to convert print material into digital so the users can browse resources wherever and whenever they required. Digital resources keep the user updated and help the user to retrieve the document faster. So the college libraries should think of going digital laying their step into the word of digitization. To meet the needs of the students and faculty members.

1.10 References

1. Swain, D. K., & Panda, K. C. (2009). Use of electronic resources in_business school libraries of an Indian state A study of librarians' opinion. *The Electronic Library, 27*(1), 74-85. Retrieved from https://www.researchgate.net/publication/220677217_Use_of_electronic_resources_in_b usiness_school_libraries_of_an_Indian_state_A_study_of_librarians%27_opinion

2. Muthu, M., & Sivaraman, P. (2015). *E-Resources, Types, Needs and their Benefits for Users in Modern Era.* New Delhi: SHREE PUBLISHERS & DISTRIBUTORS. Retrieved from https://www.researchgate.net/profile/Senthur-Velmurugan/publication/337242703_Information_Resource_Management_Print_Final/li nks/5dcce8634585156b35106f20/

3. Hoq, K. G., & Haque, M. A. (2018, August). Student perception of electronic resources use in Rajshahi University Library: A case study. *International Journal of Library and Information Science, 10*(7), 78-84. Retrieved from https://academicjournals.org/journal/IJLIS/article-full-text/3083DC658409

4. Mahadevaiah, K. (2019, june). E-resources & Services and Its Importance for Users of Academic Library. *Journal of Emerging Technologies and Innovative Research (JETIR), 6*(6), 10-17. Retrieved from https://www.jetir.org

5. Patel, P., & Verma, N. (2018, December). USE OF ELECTRONIC RESOURCES BY THE FACULTY MEMBERS OF INDORE PROFESSIONAL STUDIES ACADEMY. *Kelpro Bulletin, 22*(2), 43-54. Retrieved from http//http://dspace.cusat.ac.in/jspui/bitstream/123456789/13317/1/Use%20of%20electron ic%20resources.pdf

6. Swain, D. K., & Panda, K. C. (2009). Use of electronic resources in_business school libraries of an Indian state A study of librarians' opinion. *The Electronic Library, 27*(1), 74-85. Retrieved from https://www.researchgate.net/publication/220677217_Use_of_electronic_resources_in_b usiness_school_libraries_of_an_Indian_state_A_study_of_librarians%27_opinion

7. Kumari, P. (2015, June). Procurement, Management and Use of E- resources in Current Library Trends: Common Issues. *International Journal of Digital Library Services, 5*(2), 150-159. Retrieved from https//www.ijodls.in

8. satyabhama , v. (2020). electronic resources : advantages and disadvantages for academic library user. *International Journal of Applied Research, 6*(10), 1097-1100. Retrieved from https//www.allresearchjournal.com

9. Bhardwaj, M., & Swadesh, S. (2015, December). Electronic Resources for University Library and Its Advantages. *International Journal of Research in Library Science, 1*(2), 1-11. Retrieved from https://www.ijrls.in/wp-content/uploads/2015/12/Electronic-Resources-for-University-Library-and-Its-Advantages.pdf

10. Swain, D. K., & Panda, K. C. (2009). Use of electronic resources in_business school libraries of an Indian state A study of librarians' opinion. *The Electronic Library, 27*(1), 74-85. Retrieved from https://www.researchgate.net/publication/220677217_Use_of_electronic_resources_in_business_school_libraries_of_an_Indian_state_A_study_of_librarians%27_opinion

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

The "literature" in a literature review, however, refers to all prior research and scholarly work on a certain issue, regardless of the discipline you are studying, the "review" is your interpretation of what the literature says. A literature review is a summary of the body of knowledge about your study issue. The research question and primary research are both based on this synthesis, a literature review is more than an annotated bibliography, even though it will cite sources and should analyse their reliability. Regardless of whether or not they support the claims you will ultimately be aiming for, your literature evaluation needs to examine all the main sources on an issue. Combines the findings of numerous sources to describe the entire understanding of the subject.

(Latheef & Thiruvengadamani, 2017)[1]Digital resources i.e. online resources play a crucial role in the research department of the Arts & Science colleges. This study ascertains the utilization and amenity of digital resources in the Muslim Management Arts and science college libraries of Tamil Nadu. In order to recognize the kinds of resources accessible, types of users, usage awareness, and ICT infrastructure of the libraries, namely examine a systematic questionnaire have been designed and submitted to the Islamic Management Arts & Science Colleges. Among these carefully chosen colleges were taken into consideration for examination. The study reveals that majority of researcher and faculty members use digital resources. The study also shows that it is necessary to upgrade the technology in the concerned college computer labs and virtual libraries. Finally the study concludes that Users are generally very satisfied with the digital resources.

(Kalita , 2019)[2] The current educational system is transforming from a traditional towards digital atmosphere. The supremacy of ICT has set a significant effect on the college libraries as well. The NE Region of India consistently lags behind in the development index, which may be result of its, topographical, socioeconomic and demographical circumstances. Therefore, there is constant push to get over these obstacles in the educational sector. In raising quality and growth of students the educational resources present with the academic institutions play a vital role. Accessible in the college libraries of the Baksa district of Assam. It also try to identify through their findings the accessibility and usage of such resources by library users.

(Sagar & Ghogare , 2020)[3] In this era of information and technology. Digital resources play crucial role in promoting research in all academic branches. User can utilize digital resources anytime and anywhere. In order to provide a conductive environment for the usage of digital resources timeliness is required. The library professionals play vital role in utilizing digital resources. They conscious about the value of digital resources. The college libraries execute best practices for efficient use of digital resources utilized by the researcher, faculty and students. This study highlights 'best practices towards utilization of digital resources in college libraries'.

(Bhardwaj & Sharma, 2015)[4] We are in the digital age and academic libraries frequently have access to digital resources. Due to the internet in particular the use of the World Wide Web is quickly replacing the user of external storage media like floppy discs and CD-ROMs as a result of information reassessment there is a global expansion of digital libraries. The user demand for digital resources is growing each day in accordance with their academic requirement the focus of this summary is on resources obtained on the internet. This review is just for sources that offer information that is not accessible through conventional media and that is related with renowned intellectual or organization. This study

talk about types, advantages, benefits of digital resources and uses the majority of digital resources and provides few recommendation for advancement of digital resources services for the future requirement

(Muthu & Sivaraman, 2015)[5] The development of digital resources during these current years has provided libraries strong new resources to support learning and research. Due to availability of both types of journals in libraries. It is now vital to assess effectiveness of digital resources. End number of digital resources has setup their independent websites across the World Wide Web and Major adjustments must be made to the current scholarly free online digital resource system. this paper mainly focuses on definition, barriers in utilization, features, objectives, forms requirement, reasons, strength and weakness, advantages, disadvantages, benefits and problems of digital resources, its policy evaluation process, vendor support and technical considerations, suggestions etc.

(Chandel & Hingwasia, 2014)[6] The main purpose of this paper is to scrutinize the utilization of digital resources by users in academic libraries. The reason behind designing the questionnaire was to check activity of users in utilization of digital resources and for the data collection. The result reveals that the internet had been used by some users for checking e-mails and others of them use for educational purpose. 50% of users use digital resources for academic purpose. 30% for seminars and for project work 10%. Most department lack suitable facilities for users to promote digital resources

.

(Ranganadham , 2017)[7]A number of new terminologies, including paperless society, digital resources, portals/gateways, and global digital library, have emerged as a result of the rapid development of information and communication technology. This article scrutinizes utilization of digital resources of SreeVidyaniketan engineering College Rangampeta, Tirupati. This survey's primary goal is to Examine to what extent the teachers, students, and researchers are rely on digital resources, how those resources were thought to affect their

academic competence and difficulties encountered by them while utilizing digital resources.

(Singh & Kumar , 2022)[8] We live in the Internet Age, it is now typical to discover electronic information resources at university libraries. Because the internet, particularly the World Wide Web, is quickly replacing the use of external storage media like floppy discs and CD-ROMs. Quality of information has changed and digital libraries are growing all across the world. The study's focus is on internet-based resources because users' need for digital resources is expanding daily in accordance with their academic needs. Further, this evaluation is only applicable to websites linked to credible academic institutions or groups that provide information not found in mainstream media. Some articles discuss the advantages of utilizing digital resources as fully they can and provide some recommendations for improving their services in light of projected future demands.as

(Newmon & Sengar, 2016)[9] This study aims to determine the knowledge of usage of digital resources. Also to ascertain the obstacles encountered by students of engineering college while accessing and utilizing digital resources. So the question is how the issues can be solved, as well as the consequences of the absence of access to digital resource. Now a day's accessibility of digital resources at a college library is now fairly frequent. But matter of debate is their appropriate and best use. The current study scrutinizes the availability of several digital resource databases in CIT engineering college library. The preferences and significance of digital resources between the teachers and the students emphasises of the study.

(Mulla, 2011)[10] The libraries are switching over to digital resources as a result of technological advancements because they are more convenient and less expensive. For distance learners these resources are beneficial. The study highlights the usage of digital resources by faculty members of HKBK College of

engineering. This further includes various types of digital resources utilized by faculty members the reason behind the utilization of digital resources, obstacles faced by faculty members while accessing digital resources. It also made some recommendations for better use of digital resources by faculty members. Such as regarding the usage of digital resources training programs organised for faculty members, for the well-being of faculty members more computers should be installed. There should be increment in the funds to obtain digital resources.

(Renukadevi, M., & Manickam, 2020)[11] The survey was created in response to a desire among faculty members at engineering colleges in the Thanjavur district to track how they used the library in terms of both printed materials and online resources, with the goal of identifying issues and enhancing library services. The best way to determine how well faculty members are utilizing digital resources is through research, but libraries may be effective in their service offerings.

(Majumdar & Bose Majumdar, 2014)[12]The study's primary goal is to examine and assess how Assam engineering college libraries use digital resources. It addresses the many categories of academic users such as faculty, students and research scholars. It seeks to take into account a variety of usage characteristics including effects, goals, significance, issues, approval and fulfillment with digital resources. A standardised questionnaire was used to conduct the survey, and interviews were then done when and where it was deemed essential. The study reveals various features of digital resources utilized by the engineering academics of Assam it also finds that engineering college library users are utilizing various types of digital resources. This enhances their academic and professional knowledge. The utilization of digital resources was also a part of the teaching approach and this methodology had a favorable impact on student's abilities. This study also examine some problem in utilizing digital resources, with the use of digital resources majority of users are satisfied. It scrutinizes how users of engineering college libraries in Assam were using digital resources. The study's positive findings are believed to give meaning to existing research, serve as a

suitable foundation for future study, and enhance its usefulness for engineering academics.

(Sharma & Sharma , 2018)[13] It is becoming fairly usual for engineering college libraries to have access to digital resources today. However, it is also important to be concerned about and investigate their optimal and correct use. This document provides an outline of the three main types of digital resources: online databases, CD-ROM databases, and electronic journals. A quick concept on this, this paper's goal is to shed light on the use of digital resources in a chosen engineering college library in state of U.P. The condition of the digital resources in the libraries of engineering colleges is attempted to be ascertained. The primary study's investigation demonstrates that there aren't enough online resources to satisfy users' needs.

(Thangiah & A. , 2012)[14] Indian Council of Medical Research (ICMR) offers different types of digital resources like e- books, e-journals, e-databases. It has been utilized by library users mostly for research work. The users benefited from these resources. The study also scrutinizes the effect of digital resources such as accessibility of digital resources, recurrent utilization of digital resources and their intended use of digital resources. Users are making excellent use of digital resources and conducting study in the fields of medicine and allied research. The digital resources play a vital role in the research institutions and help to grow latest technology in the field of medical science.

(Thanuskodi, 2011)[15] A new challenge has been presented to libraries by information technology (IT) the impact of technology on library services has been significant. IT is used in libraries to improve services and meet the demands of a variety of users. Books, periodicals, and magazines have all been replaced by electronic versions in libraries, which have become digital and virtual. As a result, information is being spread more widely now. Digital resources are readily available in remote locations. Digital resources handle information overload and

storage issues. Digitalization of print sources is currently underway. So there is need to study utilization of digital resources and to find the factor that has become an obstacle in their use. The current study scrutinizes utilization of digital resources at Dr. T.P.M. library, Madurai Kamaraj University. The study approves that the participants were aware of digital resources, including different kinds, e-databases, and e-journals. The study advised Madurai Kamaraj University's Dr. T.P.M. Library to upgrade its access options with fast internet speeds and sign up for more digital resources.

(Naik & Kumar, 2018)[16] In order to examine faculty knowledge perspectives and attitudes about digital resources, the researcher in this work studied the first-grade college libraries in the Kolar District of Karnataka. Understanding the availability of various sorts of resources in libraries was the study's main goal. Users of the chosen college libraries were given a well-designed questionnaire to fill out in order to assess their precedence's for and significance of using digital resources, as well as to recommend strategies for enhancing the growth of the digital resources collection. Three first-grade collages have been taken by the researcher. To make suggestions for ways to strengthen the development of the e-resources collection, I study the popularity and significance of e-resources. Three colleges in first grade have been taken by the investigator. An online questionnaire was used to gather the data. Inferred from this is that there is a high awareness but poor utilization. As a result, this study suggests enhancing the library's usage of electronic resources and raising patron awareness of how to use its services.

(Sharma C. , 2009)[17] Today, it's usual for university libraries to have access to electronic resources. However, there is debate on how best to use them. The current study investigates the availability of different e-resource databases in the Guru Gobind Singh Indraprastha University Library. The study also emphasises importance and preferences of digital resources within teachers and researchers. And the perceived effect of digital resources on their academic productivity and the obstacles faced by them while accessing digital resources. This survey was

conducted to evaluate the benefits of digital resources over conventional sources of information.

(Siwach & Malik , 2019)[18] The study examines the utilization of digital resources by the science faculty and research scholars in five university of north India. The survey method of comprehensive questionnaire was used for data collection. The result obtained from the study shows that the utilization of e- journals is maximum as compare to other digital resources. More vantage is given to search engine which is used for research and other purpose in discovering various information. There is less utilization of advance search techniques like Boolean, proximity, wildcard and truncation. Science direct, Francis and Wiley, springer link, Blackwell this are highly used among other resources. Training program for utilization of digital resources was attended by only one fourth users. The study also recommendsconducting more training programs and creating awareness of digital resources for their better use.

(S. & Patil, 2009)[19] The current paper provides an explanation of how faculty members and research scholars at Gulbarga University in Gulbarga utilize digital resources. A questionnaire is used to gather information about information requirements of researchers and faculty in different PG department in Gulbarga University. The study has found that the digital resources obtained in the Gulbarga university library are quite beneficial in meeting their informational wants. Training for the faculty members and research scholar is necessary to utilize the digital resources. Furthermore, it is necessary to include maximum number of journal in the UGC-Infonet consortium. Lastly faculty members and research scholars ought to consult more e-journals to receive the most recent knowledge.

(Selvaganapathi & Surianarayanan, 2013)[20] The primary goal of the study was to scrutinize the acknowledgement of digital resources by faculty members of St. Xavier catholic college of engineering chunkankadai and a certain usage,

contentment of users and obstacles encountered in the utilization of digital resources. The questionnaire method was utilized to access correct information from the faculty the current research reveals that the analysis of the 90 samples collected from the faculties of St. Xavier catholic college of engineering chunkankadai India. Further this research assesses how the faculties utilized digital resources to enhance ability and productivity in academic.

(Hossaini, 2017)[21] The emergence of information technology has made significant and enduring effect in every area of library services. Because of this there has been a quick transformation in the library environment. Giving rise to a new generation of libraries with an importance on digital resources. In addition, as the growth of digital resources rises the librarian and employee are also involve in digital resources, their means, availability, value, selection, arrangement etc. an effort has been made in this paper to illustrate current situation of digital resources in some academic library in Dhaka city. The study also demonstrates the advantages of utilizing digital resources, perceived influence of digital resources on patrons of academic library. Today the whole library system and services have been changed due to digital resources. Where a decade before libraries and information centers were the primary locations where people went to find information online was primarily focused on scholarly technical bibliographic databases now it is more widespread anyone might be sat at computer which is more common in office and the house.

(Patel, 2017)[22] Digital resources have recently become the most preferred information sources for both library patron and library professionals. The current study was design to ascertain the requirement and use of digital resources by the users of Sardar Vallabhbhai Patel institute of technology in vasad, Gujarat. The main objective of the study is to know the reasons and frequency of utilizing digital resources, the opinion of SIVT-Vasad library users concerning training program for utilizing digital resources, to ascertain contentment level of students and faculty members, to recommend actions for great use of digital resources. The

methodology used in this study is a survey. Information is gathered using observation techniques, questionnaire and interview for the purpose of data analysis and interpretation, responses from 100 students and 50 faculty members were collected. Result reveals that the most of the students and the faculty members are familiar with the digital resources. All the faculty members and vast majority of student's utilize internet and e- journals for academic reasons. A great number of students and faculty members agree that digital resources can be useful replacement for traditional resources. Further study also discloses that faculty members and students also faced barriers in utilizing digital resources like formation unessential information and inadequate subject coverage. Additionally some suggestions also have been provided to enhance the utilization of digital resource.

(Rahman & Khare, 2020)[23] The current study evaluate how faculty members, researchers and UG & PG students of the central library of north Bengal University used digital resources. Ninety respondent's responses out of one hundred were chosen as sample for survey. The study shows that 41.11% users of north Bengal University used the digital resources. The main motive of utilizing digital resources is to teach i.e. 94.44%, the most often utilizing digital resources in bibliographic databases (80%), the study also reveals that the client inability of remote access is main problem to use digital resources (82.22%). Some suggestions are given on the basis of result to expedite and improve the efficient utilization of digital resources.

(Naik, Narasappa&Naik, 2019)[24] This study examines the availability and utilization of digital resources between college libraries in Bangalore, Karnataka, India. In India majority of institutions started digital information resources in library services. Primary information was gathered from four selected college libraries using a systematic questionnaire procedure. Secondary information were gathered from varied national and international journals, several university libraries, books magazines, newspapers, reports, etc. additionally, internet

services and websites of the institution were also utilized for the secondary data gathering purpose. The outcomes reveals that varied digital resources, e-newspapers, e- books, e- journals, online databases, full text databases, CD-ROM, contemplate as the most significant digital resources by the interviewer and 52.41% 0f the respondents are most pleased with e- thesis and dissertations.

(Singh V. , 2013)[25] The purpose of this study is to describe the utilization of digital resources by the faculty members and research scholars of jamiamillia Islamic university of computer science and mathematics. The article addresses the concise overview of digital resource how faculty members and research scholars utilize digital resources among them. The paper focuses on the difficulties experienced while using digital resources. Followed by the study's findings, which indicates that 40(100%) responder (research scholars and faculty members) were utilizing digital resources. They were often using internet, e- databases, and e-journals while only small number of them was utilizing e-books to avail the information. Further study recommends that as per the users demand library should subscribe to more databases for the maximum utilization of digital resources. Library should conduct orientation program, regular seminars and workshops, library should subscribe to more e-journals, and provision to increase speed of internet for quick access. Finally study concludes that by acquiring digital resources by library saves the time of the patrons as well as staff members.

(Kenchakkanavar, 2014)[26] The study highlights on the numerous features of digital resources. Applying the stored knowledge is now easier, faster and pleasant because of digital technology. The data gathered over time has to be used for further research improvement and whole advancement of the society. Digital resources are easily accessible in remote places. Digital resources eliminate storage issues and manage the information overload. There is digitization of print sources. For academic community digital information resources are more and more significant. The emergence of technology has transformed libraries to increase new stock to its collection. Digital resources stand out among them as

being more prevalent. This study shows an overview of various resources, list a few benefits and drawbacks and provide link of few websites.

(Hoq & Haque, 2018)[27] The increasing use of digital resources both inside and outside the libraries has become a prominent matter of debate across the globe. Information aspirant especially students and teachers are becoming important patron of using digital resources against this background, this study examines the pattern of digital resources consumption by undergraduate and post graduate students of Rajshahi university Bangladesh's one of the largest and oldest universities. The questionnaire method was used for survey. The paper identifies some important findings on the utilization pattern of digital resources by the students. Further study suggest for expanding the use of digital resources in the near future. Like the Rajshahi University authority need to increase funding for enhancing the digital resource collection of Rajshahi University library. In addition, to provide better services to patron measures should be taken to improve expertise of library staff. Further actions like awareness should be created within the users about significance of digital resources. Training/workshops should be conducted faculty wise between students for the proper utilization of digital resources, for the extensive use of digital library Wi-Fi access should be under the campus, power supply should be uninterrupted, for the better use of digital library stuff teacher should encourage students.

(Kaur & Kathuria, 2016)[28] The expansion of e-learning across the globe has been fulfilled by the accessibility of digital information resources and the availability of various information and communication technology (ICT) tools. The current study highlights on the utilization and awareness of varied digital resources accessible in Punjab Agriculture University library. The utilization of consortia and electronic databases are also examined. The result of the study disclose that the digital resources have become an essential part of the information for varied characteristics like easy download and quick searching ability. Even

though the digital resources have made research easier respondent still choose information that is both in print and in digital format.

(Harley, et al., 2006)[29] Several university digitization efforts have taken "a build it and they will come" stance which has prevented thorough research on the need for these resources. Those who finance and establish digital resources have recognize the general deficiency of knowledge about the level and value of their use in education settings as processing solicitude. The aim of our study was to plan the world of digital resources that are group of users who are undergraduate instructors in the humanities and social science and to scrutinize how use and users can advantage the incorporation of these resources into instructing undergraduates. Why study users? There are several justifications given for attempting and carrying out user studies. They may include doing usability testing, product design to monitor websites and assisting in the facilitation of investment and policy decisions. For our determinations there were three interconnected reasons for carrying out the current research. 1) Directing questions of strategic designing and investments in digital resource facilities and use 2) Recognizing the special requirement of the humanities and social sciences, particularly in relation to the liberal education feature in digital age. 3) Allocating useful techniques for comprehending variety of applications and users covering vast ranges of educational digital resources initiatives.

(Lingaiah & Murugan, 2015)[30] Digital resource is defined as a resources that needs computer access or any electronic product that furnish a cluster of data, whether it be text referring to full text databases, e-journals, image clustering, other multimedia products and numerical or time based. This study investigates utilization of digital resources such as e-books, e-journals, e-thesis, e-paper, e-archives etc. by students of KG Reddy College of engineering, chilkur, Andhra Pradesh library patrons. The current study's main objectives are to ascertain how frequently digital resources are used, recognising different digital resources format checking the students level of satisfaction, recommending ideas for the

enhancement of academic libraries. The study reveals that several UG students (47.55%) are utilizing digital resources through IEEE and DELNET majority of students accessing the subject related (49.24%) and most has very good level (47.24%) of utilizing digital resources.

(Dongardive, 2015)[31] This study intends to investigate how teaching faculties use digital information resources. In the year 2014 the college of dry land agriculture and natural sources at 'Mekelle University', Ethiopia conducted the survey between academic community in addition to observational studies and informal interviews. The questionnaire were dispatch to teaching faculties to understand how they intricate the varied features of digital information source use like purpose and frequency of digital information source , frequently utilize, technique of learning, advantages, challenges faced in the utilization and satisfaction level of faculties in using Digital information sources. Recommendations have been provided to boost the existing digital information sources and services and to increase the utilization of digital information sources in the college of dry agriculture and natural resources academic community.

(Munusamy, 2017)[32] The study intends to describe the utilization of digital resources and services provided at the social science library of Jimma University, Jimma. The paper highlight to investigate the utilization of those resources by the students of information science and how often they are utilizing resources, From which sources they access information, they were also asked which type of journal format they prefer digital or print. Further to collect the data from the undergraduate students of information science the questionnaire method is used and findings reveals that the consumption of e-journal is rising which is attributable to information science students being more aware of digital resources and services. Due to convenient access they are using these resources in hostels and departments more frequently than the library because they are accessible at many locations throughout the campus. Hence there library visit has decreased.

(Swain & Panda, 2009)[33] This paper goal is to examine the explosive increase of digital resources during the past ten years. To organise and access the wealth of digital resources standards and plan pursued as well as to guarantee an unrestricted flow of information to the users community this study aims to assess the quantity of digital resources used in the academic environment of Business school libraries in Orissa. The study also aims to determine the extent to which electronic information services (EIS) are provided to patrons of business school libraries in the state with a view of the librarian of the particular business schools. The study also intends to focus on the issue and limitations faced by the information professionals in using digital resources and providing electronic information service with some helpful advice and preventative precaution for ensuring bottle- neck. Finally the study conclude that as compare to internet based digital resources CD-ROM databases are utilized more effectively. The most popular web search engine such as Google and yahoo are used often than the other search engine they are used less frequently. Only few Business school libraries in the state have access to certain important internet databases.

(Sharma N. , 2018)[34] Due to the development of information and communication technology resources such as e-books, e-journals, e-databases, e-reference sources, e-bulletin, e-reports etc. are finding their route into higher education system. An academic library is an essential component of higher education system and it is crucial for academic libraries to obtain pertinent information resources and make them easily accessible for potential library user group. The current study scrutinizes the utilization of digital resources by the faculty members and students of swami Shraddhanand College, university of Delhi. The primary objective of the study was to ascertain how academicians weigh up digital resources against print resources, how they view the benefits of using digital resources and how they encounter obstacles while accessing them. In this regard only 180 out of the 200 questionnaires that were given to the faculty members and student of social sciences (political science, history, geography & economics)

were replied. The data that was gathered was inspect to produce some fascinating findings. Further the study suggest that for better use of the digital resources the library expert user training must be conducted. It will instruct user how to use digital resources, orientation programs should be organised for the student to advise them about advance research a method and utilization of control vocabulary to make the process of doing online searches considerably simple, the library management must consequently conduct user study programs.

(Moustapha, 2021)[35] The study examines how patrons of the Nigerian kwara state university library used digital resources. The study used cross sectional survey research design. The questionnaire method was used for data collection. For the purpose of study questions descriptive statistics were used to analyse the data. The result demonstrated that the ability of every sort of electronic resources specified in the survey, with electronic book receiving the most answers. The study further reveals that there are no appreciable differences in how frequently users use digital resources. The study suggests among others that while electronic books are already available in the university library. The management of library should increase access to other types, particularly CD-ROMs and DVDs supplying more of them.

(Isibika & Kavishe , 2018)[36] The main purpose of this study is to find the use of subscribed digital resources at Mzumbe university library. The study involves academic staff, undergraduate (third year) student and post graduate student of M.U. from the various mixed method survey study reveals that not much of the respondent have knowledge about the subscribed digital resources of library. Erratic network connectivity and inadequate search abilities are the main obstacles that led to underutilization of digital resources. Further the study suggested that the M.U. library should provide library users thorough training of information searching techniques to maximize the use of subscribed digital resources. It is also suggested that to draw in additional user's library should promote its subscribed digital resources. The study concludes that the use of

subscribed digital resources by library users in M.U. has never been subject of an investigation. Despite the fact that many papers have been written about them. This study focuses specially on subscribed resources and study's findings may be beneficial to M.U. library and other university libraries in Africa.

(Dukic & Striskovic, 2015)[37] Digital resources are increasingly playing a crucial role in student's education. The primary reason behind this is that they are easily obtained and comfortably access over the internet. Higher education institutions must comprehend how student use internet to find information and how they observe digital resources in order to successfully meet a requirement of their task of providing students with appropriate and current or modern knowledge and expertise. The impact of four background variable (gender, level of study, enrollment status & field of study) was scrutinized on study of data from 900 students at one Croatian university. According to findings student's primary use Wikipedia and similar online resources, as well as university websites including university library websites. The level and field of study are strong medium of distinction in the frequency of specific internet sources. Four factor emerged from factor analysis: the productivity to use the benefits of using, motivation and reason for using and requirement for using electronic resources. These factors describe the prime setup by which student awareness of digital resources can be categorized. The study result further specifies that student prefer digital resources slightly more than printed resources. Despite the fact they highly value the advantages of using electronic format furthermore. It has been disclosed that student believed that they are well provided and possess capability (skill) for successful utilization of digital resources. Factor such as gender and field of study differentiation have been largely confirmed but not to the level of study and enrollment status. This study expands on previous research findings by focusing on difference between certain groups of students, particularly at talent level.

(Kaur & Verma, 2009)[38]This paper has made an effort to examine the important topics of digital resources, its effect on the collection of print and digital journals,

its knowledge among the users and different places where the users are accessing these resources. This survey was conducted at Thapar University Patiala in the academic year 2006-07. Further according to survey study reveals that the users utilize digital resources to a great extent, because the awareness of digital resources encourages them and the places where they mostly access information are computer center and hostels. The effect of digital resources was notice from the reduction of printed journals as compare to the increment in digital journals. The utilization of digital journal has increased many times within short time digital resources has replaced printed journals.

(Thanuskodi S. , 2012)[39] The purpose of this study is to investigate the utilization of digital resources by the postgraduate students and research scholars of faculty of Arts in Annamalai University. From the survey study reveals that most of the users have knowledge about available digital resources. The result of the study says that the respondent that access digital version were 47.78% whereas users that utilize the printed journals are 32.78% and the respondent that use both digital and printed version are 19.44% most of the users i.e. 76.66% utilize the digital resources for writing papers. The detailed examination or study found that many user search digital resources through availability of linking facility on the library website.

(Satpathy & Rout, 2010)[40] The main purpose of this paper is to appraise the utilization of digital resources by the faculty members of C.V. Raman College of engineering (CVRCE) Bhubaneswar with a view to scrutinize or make reveal faculty members to digital resources. Inspite of this the purpose of study is to focus on the obstacles faced by the users and to offer some solutions for its development through the survey. The author tries to find the utilization of digital resources by the faculty members of CVRCE. Different type of statistical methods has been used to examine data. The study confirmed that faculty members have knowledge about the digital resources and various types of digital resources e-databases, e-journals and it recommend improving the accessing facility of high

internet speed and subscription to more digital resources by the central library of CVRCE.

(Qadri, Airen, & Oluwafemi, 2014)[41] The extent to which digital resources are accessible and used by university libraries may affect the information services offered to students. The study's primary goal was to look into how readily available and how often undergraduate in a few private university in ogun state Nigeria used digital resources. This study is conducted in Babcock and Redeemers University. A descriptive survey design was used with the help of questionnaire method for data collection. The result reveals that other digital resources were not easily accessible, internet was accessible in Babcock (83.5%) and redeemer (92.8%) for assignment, research and projects, the majority of respondents at Babcock (64.0%) and redeemer (89.19%) used the internet. The main issues the respondents faced included poor internet connectivity, a lack of pertinent digital resources in several disciplines, irregular power supply and lack of technical knowledge for undergraduate students at both universities. The internet and e-journals are significant knowledge source. Additionally accessibility and utilization of digital resources have unquestionably made a significant contribution to the students need for knowledge in order to complete classwork assignment and research.

(Akuffo & Budu, 2020)[42] Digital resources are essential for increasing student's research and learning activities, the majority of digital resources studies have been conducted in universities however, there is a scarcity of digital resources research in postgraduate theological university especially in Ghana. Therefore this study looked into the level of student utilization of digital resources at the akrofi-cristaller institute of theology mission and culture   The most important objectives of the study were to determine categories of digital resources obtain for the utilization, to ascertain the area of awareness of digital resources, to investigate how to access and utilize digital resources, to discover the reasons of

utilizing digital resources and pin print the advantages and drawbacks of utilizing digital resources. The survey reveals that high awareness levels, appropriate computer skills, ability to derive various benefits, utilization of digital resources for academic purpose and poor search ability of majority of respondent due to lack of training, access issue, search and retrieval issue and staff issues were obstacles of using digital resources. Finally study concludes that in order to ensure that students use digital resources for research and study, the study informs university officials and libraries. Further it suggest that the students should receive regular and compulsory information literacy training, the institutes library staff must give students individualized search assistance and that students should have access to the institutes digital resources subscriptions while they are off campus.

(Naik & Kumar, 2017)[43] In order to study the faculty's knowledge perceptions and attitudes towards the term digital resources, a survey was conducted at Bangalore's first grade college libraries. For the study seven first grade college libraries were selected and the questionnaire was given to the selected college library users to scrutinize their preference and significance of digital resources. The result of the survey reveals that the awareness and utilization of digital resources between the faculty members is maximum. Further study suggest that the training program should be organised for teaching faculty of social science in utilizing digital resources, internet speed should be high for using digital resources. To fulfill the needs of the user maximum number of digital resources should be given to the libraries.

(Jayapragash , et al., 2006)[44] This paper scrutinizes the digital resources obtained in the Bharathidasan university library, how faculty members are well known about the digital resources, difficulties faced by them while using digital resources and the utilization of most preferred digital resources. The user's need for the data transformation from traditional to digital environment due to information technology (IT). In today's time in order to deliver useful and

pertinent information to the user's libraries must also adopt the newest technologies. It is mandatory for the libraries to established digital content based collection to fulfill the needs of the users however, it is also very crucial in this regard to examine and access the way in which users are using digital resources further, the study reveals that most of the faculty members are often utilize digital resources and they are using it for teaching purpose and the problem they encountered while accessing digital resources is slow speed of internet and it also ascertain that majority of the faculty members are well pleased in obtaining the UGC-INFONET digital resources.

(Qaiser , Tariq, & Ahamd, 2021)[45] Technology is the most crucial factor in higher education without it good quality learning process is not possible. Moving from paper to digital format provides user various types of access and utilization options. Other types of problem come into picture include price, life, validity, credibility of digital content. The hurdles and issues that the researcher faced when attempting to access digital information resources are thoroughly described in this research paper. Further study reveals that the various issues and problems faced by users while obtaining online library databases and other electronic resources like limited access to digital resources, insufficient user knowledge, unreliability of information, ineffective database layout, managing information, poor downloading speed of internet and data security. This study has given contribution to identification getting known to the obstacle while utilizing and obtaining online digital library resources by researcher of Pakistan Higher education institute.

2.2 References

1. Latheef, A. N., & Thiruvengadamani, T. K. (2017). digital resources Usage In The Arts And Science College Libraries Of Tamil Nadu: With Special Reference To Islamic Management colleges.*International Conference on Future Libraries: From Promises to Practices 2017*, (pp. 247-251). Bengaluru. Retrieved from Https://Www.Researchgate.Net/Publication/357824391_Digital_Resources_Usage_In_The_Arts_And_Science_College_Libraries_Of_Tamil_Nadu_With_Special_Reference_To_Islamic_Management_Colleges

2. Kalita , R. (2019, July). The Availability and Uses of E-Resources in the College Libraries of Baksa District of Assam: Current Status and Prospects. *International Journal of Innovative Technology and Exploring Engineering (IJITEE), 8*(9S3), 108-112. doi:10.35940/ijitee.I3022.0789S319

3. Sagar , G. D., & Ghogare , G. S. (2020, March). Best practices towards use of E-Resources in college libraries. *Studies in Indian Place Names (UGC Care Journal), 40*(49), 226-230. Retrieved from https://www.researchgate.net/publication/340087597_Best_practices_towards_use_of_E-Resources_in_college_libraries?_sg=8Kb1nnOhRPBoh4eyAMT8hOIiay96s9tYRd5FVQOa_ehmBY_3CMgkTJLMlNItqdG_mkP6JkfPDyMd1rE

4. Bhardwaj, M., & Sharma, S. (2015, December). Electronic Resources for University Library and Its Advantages. *International Journal of Research in Library Science, 1*(2), 1-11. Retrieved from https://www.ijrls.in/wp-content/uploads/2015/12/Electronic-Resources-for-University-Library-and-Its-Advantages.pdf

5. Muthu, M., &Sivaraman, P. (2015). E-Resources, Types, Needs and their Benefits for Users in Modern Era. New Delhi: Shree Publishers and Distributors. Retrieved from https://www.researchgate.net/profile/Senthur-

6. Chandel, S. S., & Hingwasia, S. (2014). *E-Resources and its Explosition: A Study with Special Reference to Academic Libraries* (Vol. 1). New Delhi: ESS ESS Publications.

7. Ranganadham , S. (2017, june). Use of Electronic Resources of Sree Vidyanikethan Engineering College, A. Rangampeta, Tirupathi: A Survey. *International Journal of Library and Information Studies, 7*(2), 97-106. Retrieved from https://www.ijlis.org/articles/use-of-electronic-resources-of-sree-vidyanikethan-engineering-college-a-rangampeta-tirupathi-a-survey.pdf

8. Singh, D., & Kumar , R. (2022, August). Electronic Resources at Technical University Libraries: A Study. *International Journal for Multidisciplinary Research (IJFMR), 4*(4), 223-233. Retrieved from https://www.ijfmr.com/research-paper.php?id=646

9. Newmon, M., & Sengar, V. (2016, April). Digital Library And E-Resources Uses and Problem In Engineering College Of Rajasthan. *International Research Journal of Engineering and Technology (IRJET) , 3*(4), 1087-1090. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/54561268/IRJET-V3I4217-libre.pdf?1506594228=&response-content-disposition=inline%3B+filename%3DDigital_Library_And_E_Resources_Uses_and.pdf

&Expires=1680168543&Signature=HEkCLxBlAdPnsSDOCwzuG0f0afcEx4iNiuHzSbz
Ayhx9KRLS

10. Mulla, K. R. (2011, May). Use of Electronic Resources by Faculty Members in HKBK College of Engineering: A Survey. *Library Philosophy and Practice 2011*. Retrieved from https://www.researchgate.net/publication/215709296_Use_of_Electronic_Resources_by_ Faculty_Members_in_HKBK_College_of_Engineering_A_Survey?_sg=g27-Dj9z5s1cL5-5vMaBN1siXpLkoMBzJ1ytHIAVfaKI18aLM4YyCxIPwa8cl0Z8dYUomo-p7HiDe9w

11. Renukadevi, M., M., S., & Manickam, D. (2020, October). Use of digital resources by the users of Engineering College Libraries in Thanjavur District. GEDRAG & ORGANISATIE REVIEW, 33(4), 81-90. Retrieved from https://www.researchgate.net/publication/346167659_Use_of_digital_resources_by_the_ users

12. Majumdar, A. j., & Bose Majumdar, S. (2014, September). Access of Electronic Resources in Engineering College Libraries of Assam: An Empirical Analysis. *9th Convention PLANNER-2014*, (pp. 165-173). Assam. Retrieved from https://www.researchgate.net/publication/308075818_Access_of_Electronic_Resources_i n_Engineering_College_Libraries_of_Assam_An_Empirical_Analysis

13. Sharma , P., & Sharma , A. K. (2018). E-resources and their use in Private Engineering College Libraries. *International Journal of Library Information Network and Knowledge, 3*(1), 146-154. Retrieved from www.slp.org.in

14. Thangiah, R., & A. , L. M. (2012, June). Impact of Electronic Resources in ICMR Institutions of Tamilnadu. *Journal of Advances in Library and Information Science, 1*(2), 60-64. Retrieved from https://www.researchgate.net/publication/322437840_Impact_of_Electronic_Resources_i n_ICMR_Institutions_of_Tamilnadu?_sg=yyK-q1MCA5KULeT2CX2cf1U3n7wQZLNzdy1eXNpp2YKFIFcocp9R2yJ0fmbwwuN6mez sUHMExtJEB-M

15. Thanuskodi, S. (2011, November). Usage of Electronic Resources at Dr T.P.M. Library, Madurai Kamaraj University: A Case Study. *DESIDOC Journal of Library & Information Technology, 31*(6), 437-445. Retrieved from https://www.researchgate.net/publication/329911334_Usage_of_Electronic_Resources_at _Dr_TPM_Library_Madurai_Kamaraj_University_A_Case_Study

16. Naik , L., & Kumar, K. S. (2018, september). Use of Electronic Information Resources at Selected First Grade College Libraries in Kolar District Karnataka: An Analytical Study. *PEARL - A Journal of Library and Information Science, 12*(3), 222-227. doi:10.5958/0975-6922.2018.00028.1

17. Sharma, C. (2009). Use and Impact of E-Resources at Guru Gobind Singh Indraprastha University (India): A Case Study. *E-JASL:Electronic Journal of Academic and Special Librarianship, 10*(1), 1-11. Retrieved from https://digitalcommons.unl.edu/ejasljournal/123

18. Siwach , A. K., & Malik , S. K. (2019, May). Use Of Electronic Resources By Science Faculty And Researchers In Selected North Indian Universities. *Library Philosophy and Practice*. Retrieved from https://www.researchgate.net/publication/333104148_Use_of_Electronic_Resources_by_Science_Faculty_and_Researchers_in_Selected_North_Indian_Universities

19. S., P., & Patil, D. B. (2009, June). Use Of Electronic Resources In University Libraries Of Karnataka: A Case Study Of Gulbarga University Library. *Indian Journal of Information Sources and Services, 3*(1), 13-21. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/40524415/IJISS_Vol.3_No.1-libre.pdf?1448944901=&response-content-disposition=inline%3B+filename%3DA_Bibliometric_Analysis_of_the_Journal_o.pdf&Expires=1680433071&Signature=dNn-2q7~jDAatxEBmFHlq34P8koHbML2jnxWlbB~RGZYS

20. Selvaganapathi, N., & Surianarayanan, S. (2013, june). Use and Impact of Electronic Resources among the Faculty Members of St. Xavier's catholic College of Engineering, Chunkankadai. *Journal of Advances in Library and Information Science, 2*(2), 55-59. Retrieved from https://jalis.in/pdf/pdf2-2/Selvaganapathy.pdf

21. Hossaini, S. B. (2017, May). Use and Impact of Electronic Resources: A Study on Two Selected Academic Libraries. *International Journal of Law, Humanities & Social Science, 1*(1), 23-59. Retrieved from https://www.ijlhss.com/wp-content/uploads/2017/05/IJLHSS-05-17-04.pdf

22. Patel, U. A. (2017, June). Usage of Electronic Resources by the Users of SVIT LIBRARY-Vasad, Gujarat, India: A study. *Indian Journal of Library Science and Information Technology, 2*(1), 11-15. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/54662909/Use_of_Electronic_Resources-libre.pdf?1507530164=&response-content-disposition=inline%3B+filename%3DUsage_of_Electronic_Resources_by_the_Use.pdf&Expires=1680437429&Signature=dPGOu--SalIEALi1ZEz8ZglTMzq8e405Ow

23. Rahman, R. M., & Khare, V. P. (2020, September). Utilization Of Electronic Resources By the Library Users Of Central Library Of North Bengal University, Siliguri: A Case Study. *Library Philosophy and Practice*, 98-107. Retrieved from https://www.proquest.com/openview/deeb8e014c7604e4ea51527ac811c6c8/1?pq-origsite=gscholar&cbl=54903

24. Naik , L., Narasappa, K. C., & Naik, G. R. (2019, March). Use of Electronic Information Resources at College libraries in Bangalore, India: A Study of College Learners. *Library Philosophy and Practice*, 1-13. Retrieved from https://core.ac.uk/download/pdf/228203576.pdf

25. Singh, V. (2013, January). Use of E-Reources by the Faculty and Research Scholars of Department of Computer and Mathematics of Jamia Millia Islmic University Delhi: A Study. *Indian Journals.com Library Progress (International), 33*(2), 235-250. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:bpaslp&volume=33&issue=2&article=004

26. Kenchakkanavar, A. Y. (2014, October). TYPES OF E-RESOURCES AND ITS UTILITIES IN LIBRARY. *International Journal of Information Sources and Services, 1*(2), 97-104. Retrieved from https://uomustansiriyah.edu.iq/media/lectures/8/8_2020_11_17!11_04_27_PM.pdf

27. Hoq, K. G., & Haque, M. A. (2018, August). Student perception of electronic resources use in Rajshahi University Library: A case study. *Internatiaonal Journal of Library and Information Science, 10*(7), 78-84. doi:10.5897/IJLIS

28. Kaur, K., & Kathuria, K. (2016, November). Awareness and Use of E-resources: A Case Study of Mohinder Singh Randhawa Punjab Agricultural University Library, Ludhiana. *DESIDOC Journal of Library & Information Technology, 36*(6), 396-404. doi:10.14429/djlit.36.6.9640

29. Harley, D., Henke, J., Lawrence , S., Miller, I., Perciali, I., & Nasatir, D. (2006, April 5). Use and Users of Digital Resources: A Focus on Undergraduate Education in the Humanities and Social Sciences. doi:10.6084/M9.FIGSHARE.3427445.V1

30. Lingaiah, V., & Murugan, K. (2015). AN ANALYTICAL STUDY ON USE OF ELECTRONIC RESOURCES BY STUDENTS AT KG REDDY COLLEGE OF ENGINEERING ANDRA PRADESH LIBRARY. *National Conference on "Future Libraries: Issues and Challenges*, (pp. 1-10). Gandhigram. Retrieved from https://www.researchgate.net/publication/318700832_AN_ANALYTICAL_STUDY_ON _USE_OF_ELECTRONIC_RESOURCES_BY_STUDENTS_AT_KG_REDDY_COLL EGE_OF_ENGINEERING_ANDRA_PRADESH_LIBRARY

31. Dongardive, P. (2015, March). Use of electronic information resources at College of Dry Land Agriculture and Natural Resources, Mekelle University, Ethiopia. *International Journal of Library and Information Science, 7*(3), 55-68. doi:10.5897/IJLIS

32. Munusamy, N. (2017, october). Use and impact of electronic resources by information science students at Jimma University, Jimma, Ethiopia. *Collection Building, 36*(4), 163-171. doi:10.1108/CB-12-2016-0036

33. Swain, D. K., & Panda, K. C. (2009, Frebruary). Use of electronic resources in business school libraries of an Indian state: A study of librarians' opinion. *The Electronic Library, 27*(1), 74-85. doi:10.1108/02640470910934605

34. Sharma, N. (2018, September). Use of e-resources by the faculty members and students: a study of Swami Shraddhanand College, University of Delhi, Delhi. *The Journal of Indian Library Association (JILA), 54*(3), 163-172. Retrieved from https://www.ilaindia.net/jila/index.php/jila/article/view/268

35. Moustapha, A. A. (2021, March). Utlization of Electronic Resources by Library Users in Kwara State University, Nigeria. *International Journal of Scientific & Engineering Research , 12*(3), 1-28. doi:10.1429/ijser.2021.03.04

36. Isibika, I. S., & Kavishe , G. F. (2018, March). Utilisation of subscribedelectronic resources by libraryusers in Mzumbe universitylibrary, Tanzania. *Global Knowledge, Memory and Communication, 67*(1/2), 109-125. doi:10.1108/GKMC-09-2017-0075

37. Dukic, D., & Striskovic, J. (2015, July). croatian university students use and perception of electronic resources. *Library and Information Science Research, 37*(3), 244-253. doi:10.1016/j.lisr.2015.04.004

38. Kaur, B., & Verma, R. (2009, March). Use of Electronic Information Resources: A Case Study of Thapar University. *DESIDOC Journal of Library & Information Technology, 29*(2), 67-73. doi:10.14429/djlit.29.243

39. Thanuskodi, S. (2012). Use of E-resources by the Students and Researchers of Faculty of Arts, Annamalai University. *International Journal of Library Science, 1*(1), 1-7. doi:10.5923/j.library.20120101.01

40. Satpathy, S., & Rout, B. (2010, July). Use of E-Resources by the Faculty Members with special Reference to CVRCE, Bhubaneswar. *DESIDOC Journal of Library & Information Technology, 30*(4), 11-16. doi:10.14429/djlit.30.455

41. Qadri, G. O., Airen, E. A., & Oluwafemi, A. I. (2014, september). A study of the availability and utilisation of library electronic resources by undergraduate students in private Universities in Ogun state, Nigeria. *International Journal of Library and Information Science, 6*(2), 28-34. doi:10.5897/IJLIS.2013.0423

42. Akuffo, M. N., & Budu, S. (2020, May). Use of electronic resources by students in a premier postgraduate theological university in Ghana. *South African Journal of Information Management, 21*(1), 1-9. doi:10.4102/sajim.v21i1.1026

43. Naik, L., & Kumar, S. K. (2017, September). USE OF E-RESOURCES BY THE FACULTY: A SURVEY OF FIRST GRADE COLLEGE LIBRARIES IN BANGALURE. *International Journal of Library Science and Information Management (IJLSIM), 3*(3), 110-116. Retrieved from https://www.researchgate.net/profile/Lokesha-Naik/publication/331929631_Use_of_E-Resources_by_the_Faculty_A_Survey_of_First_Grade_College_Libraries_in_Bangalure_-Mr_Lokeshanaik_Dr_S_Kishore_Kumar/links/5c937da7299bf111693bfab6/Use-of-E-Resources-by-the-Fa

44. Jayapragash, B., Ragavan, S., Prabu, R., & Sivakumaren, K. S. (2011). Usage of Electronic Resources at Bharthidasan University Library: A Study. *Pearl: A Journal of Library and Information Science, 5*(2), 17-22. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:pjolis&volume=5&issue=2&article=003#aff001

45. Qaiser , I., Tariq, M., & Ahamd, Z. (2021, January). Student's Challenges in Access to Digital Resources in Higher Education Institutes. *Library Philosophy and Practice (e-journal)*, 1-17. Retrieved from https://www.researchgate.net/profile/Qaiser-Iqbal-7/publication/352282584_Student's_Challenges_in_Access_to_Digital_Resources_in_Higher_Education_Institutes_of_Pakistan/links/60c1b7074585157774c2609c/Students-Challenges-in-Access-to-Digital-Resources-in-H

CHAPTER III

DIGITAL CONTENT AND ITS CHARACTERISTICS

3.1 Introduction

Digital resources, or e-resources as they are more generally referred to, have steadily risen to the top of library collections all around the world. (Hoq & Haque, 2018)[1] The availability of digital resources in libraries is important for enabling users to quickly and easily obtain information they need.(satyabhama, 2020)[2] Digital resources currently make up the majority of many library collections due to the growing popularity of digital libraries. Electronic information sources are becoming increasingly significant for the academic community due to the development of new techniques and technologies, thus it is crucial for the development of libraries in the 21st century to be aware of these resources. (Hoq & Haque, 2018)[3] For users to find up-to-date information in their individual interest areas, digital resources are proving to be a benefit. Academic and research communities now have a great need for digital resources than they had in the past years. Today, research is undertaken at a rapid pace in many different areas and a tons of new material is being produced, making it exceedingly challenging for the research community to keep up. However, digital resources have provided the best solution by quickly providing the most recent information. (Singh, 2014)[4]

Libraries currently actively acquire, arrange, display and distribute e-books, e-journals, e-newspaper, e-theses and dissertations. This is also because people's information seeking habits have changed. New generation users prefer internet resources because they demand access to all information at their fingertip. (Electronic resources)[5]

3.2 Definitions of Digital Resources

➢ According to IFLA/FAIFE (2007) "these are computer controlled materials, including material that needed the use of a computer peripheral (a CD-ROM player) coupled to a computer; the objects may or may not be utilized in interactive mode."

➢ According to Wikipedia Digital resources means "information (usually a file) that can be stored as electrical impulses, typically on a computer; information accessible via online."

➢ According to library and information technology glossary "term used to refer to all information material that a library offers over a computer network." (Anamika, 2019)[6]

➢ According to AACR2, 2005 update an electronic resource is "material (data and/or program(s)) encoded for manipulation by computerized device. This material may require the use of a peripheral directly connected to a computerized devices (e.g. CD-ROM drive) or a connection to a computer network (e.g. the Internet)." This definition does not include electronic resources that do not require the use of a computer for example, music compact discs and video disks.(Kenchakkanavar, 2014)[7]

➢ Jeevan, 2011 states that "as any piece of work that has been encoded and made accessible via computer. It consist of both online and digital data in tangible format (e.g., CD ROM)"

➢ According to sukula "the term digital resources refers to digital information sources that can be accessed both on and off campus, via the internet. The user can obtain the information they desire when necessary. (Velumurugan, 2013)[8]

3.3 Characteristics of Digital Resources

- Digital resources make it possible for users to engage in online conversation and idea sharing.
- Digital resources automatically produce alerting and other supplementary services.
- Digital resources can be subscribed through consortia, publisher or aggregator.
- Digital resources can be readily downloaded, copied, browsed, searched, access and customized to meet ones need.
- Digital resources can be carried anywhere on portable device because of its portability.
- Digital resources provide streamline access for people with physical disabilities.
- Digital resources do not need to be physically processed.
- Digital resources do not need to be maintained by libraries or content providers.
- It does not infringe the users' privacy (Singh & Sinha , 2017)[9]

3.4 Need of Digital Resources

- E-Resources can be carried anywhere on a portable computer.
- E-Resources provide the facility to hold and turn pages effortlessly.
- E-Resources allow for the adjustment of font size appropriately.
- When purchasing e-Resources, overhead costs like shipping, postal, and handling are completely eliminated.
- Digital resource can alleviate the library's space problem
- They reduce the need for personnel for shelving and corrections
- Digital resources are more interactive than print media.
- Digital resources provide the ability to download immediately
- Through Digital resource user could be able to obtain the most recent information,
- Visually impaired users can listen to audible e-resources.
  E-Books cannot be lost by the user.(Kenchakkanavar, 2014)[10]

3.5 Models of Digital Resources

3.5.1 The RAT Model

The RAT model is a means of analysing technology and how it has affected or not educational practises. The letter "R" stands for replacement, and in this form of instruction, technology is only substituting one instructional instrument for another without altering in any way how instruction is carried out or how students are taught. The letter "A" stands for amplification, which describes situations in which traditional classroom teaching methods are used but technology is also used to extend the reach or efficiency of the lesson. When specific components of education are reinvented using technology in fresh and creative ways that is what the "T" stands for: transformation.

3.5.2 SAMR

The four stages of technological implementation are examined by the SAMR model, which stands for substitution, augmentation, modification, and redefinition. Teachers typically have a propensity to concentrate on the first two layers, essentially adapting traditional teaching methods to electronic formats. For example, they might record a lecture and post it online or upload PDF versions of previously printed materials. The second and third stages include modifying instruction more fundamentally through the use of technology.

3.5.3 The TPACK Framework

Knowledge of technology, pedagogy, and content is referred to as TPACK. The framework looks at how three grouped areas—content knowledge (CK), pedagogy (PK), and technology (TK)—interact with one another and the manner in which they overlap. Whilst the two models are frequently contrasted, TPACK is a less linear approach to considering how to use technology into teaching. SAMR is a model that is more commonly used.

3.5.4 Digital Blooms

In the 1950s, Benjamin Bloom and his colleagues developed Bloom's Taxonomy, a framework for classifying educational objectives that is sometimes represented as a pyramid, with each level needing higher degrees of thought to obtain mastery. Active verbs eventually supplanted the initial nouns employed by Bloom and colleagues. Recall now sits at the bottom of the pyramid, and it rises to the levels of application, analysis, evaluation, and creation. Further modernised with technology, the new framework.

3.5.5 Design thinking

Design thinking, made popular by computer companies, combines technical and artistic approaches to other industries, like education. With the help of this framework, teachers and students may pinpoint problems, gather data, come up with solutions, polish those ideas, and test those solutions. Planning for teams, schools, departments, classes, or even individual courses can all benefit from using this paradigm.

3.5.6 Pedagogy

Nothing truly compares to peer learning, as any educator would attest. Peeragogy, sometimes known as Paragogy, is a body of best practices for peer-to-peer learning that aims to assist educators in overcoming some of the barriers to efficient peer learning, such as peers who don't provide valuable and/or supportive feedback. (7 Digital Learning Theories and Models)[11]

3.6 Types of Digital Resources

3.6.1 E-BOOK

An e-book, also known as electronic book, is a book that has been published digitally and is viewable on a computer screen or other flat-panel of electronic device. It can contain text, images, or both, E-books can be produced by optimising a printer's source files for quick download and on-screen viewing, or they can be taken from a database or a collection of text files that weren't made just for print.

A collection of electronic books is typically organised in an electronic database that includes excellent searching both within and across titles, sophisticated search capabilities, and bookmarking features in HTML or PDF format online, users can see the complete texts of electronic books. Using a PC or an e-book reader.

It is a piece of non-editable text that has been transformed to a digital format, it aren't editable, unlike other types of literature that can be read on a tablet. This is being done for the author's security and protection.

3.6.2 E-Journal

Any journal or serial publication that is available in electronic format is known as an e-journal. Because the term "e-journal" is so unclear, hence many other terms, including "Virtual Journal," "The Paperless Journal," "E-series," "E-Publishing," "Web Journals," "Online Journal," and "Electronic Periodicals," have been used in place of it. E-journals can alternatively be described as publications where the material is viewed on the end user's computer, tablet, and mobile rather than being printed on paper. E-journals are also be referred to as periodical publications. A periodical publication is one that is released on a regular basis, such as weekly, monthly, quarterly, or yearly.

An electronic journal, which is published on a regular basis in electronic form by automation, offers research papers, reviews, and scholarly communication. E- Journals can be accessed for free or paid using a yearly subscription license or pay per use. The user has 24/7 access to their electronic journal.

E-journals first debuted in the 1970s, but they only really became well-known in the 1990s. Moreover, new methods of access were also being created by the year 2000, when E-journals had become a standard component of the cataloguing procedure. The largest and fastest-growing sector of libraries is now made up entirely of e-journals, which are widely available. The E-journal would appear to be the solution to many of the issues with the conventional print format. By removing the drawn-out production and distribution procedure involved with paper journals, e-journals provide for immediate access to content. More quickly than their print counterparts, e-journals can be consulted, particularly when searching backwards. E-journals have an impact on information searching, information retrieval, information management, and information communication.

3.6.3 E-Thesis and Dissertation

A thesis in digital format that is typically accessed online is referred to as e-thesis or electronic thesis and dissertations. It is a piece of writing that is given to support a candidate's application for an academic degree or professional certification. It provide student produced work or study together with findings or conclusions. Researchers pursuing Doctoral and Master Degree in Indian universities need to submit digital or soft version of their dissertation and thesis. It offers a modern means of expression for ideas that is inexpensive, compact, simple to use and highly durable. The libraries are currently digitizing their thesis and dissertation so they can be accessed online. Digital repository is another name for the collection of electronic thesis and dissertation.

Nowadays, e-thesis and dissertation are highly helpful tools for gathering substantial data on certain topic. For users mostly researcher this service is tremendously helpful. It lessens the duplication of research efforts and aids users in choosing research area. (Pawar & Moghe, 2014)[12]

3.6.4 E-Databases

An electronic database (e-database) is a well organised collection of extensive data of a specific subject or different subject areas. Which may contains text numbers or images. It is also referred to as online databases. This online databases were accessible via CD-ROM before the internet was invented. The data of the e-databases can be accessed and fetch digitally. It includes newspaper articles, journal articles, conference proceedings and book review. E-databases are typically updated on daily, weekly, monthly, quarterly, half yearly or annually. The databases can be of two type full text or bibliographic databases.

Full text databases include the entire content of an article, along with citation information, illustration, text, diagrams, tables and charts. The ability to view, save, or print the whole text of an article is referred to as full text access. Full text article is available in both HTML and PDF formats. Ex. JSTOR, Science Direct

Bibliographic database contain citations that provide readers the fundamental publication detail of an article or resources, such as the title, author, date of publication and page no. most of the databases that offers citations also contain abstract, which are succinct descriptions of the article.

3.6.5 E-Report

A report is a document that includes data in the narrative, a graphic or a table form. Depending on the situation, it may be prepared occasionally, or on a regular basis. A report may discuss on a particular time period, event or topic. It may be disseminated to the public either verbally or in writing. These reports have been scanned and made into searchable PDF files. They are categorized based on subject areas and stored on a server. A report which is accessible digitally is referred to as an e-report.

3.6.6 E-Newspaper

An electronic newspaper is a newspaper that is publish online, either independently or as an online version of printed publication. It is also known as electronic ink, e-ink or electrophoretic display that stimulates the appearance of ink on paper. It is self-sufficient, reusable and refreshable. Each day the editorial board of the respective companies regularly update the electronic news publications which may include text, audio, and video news. In the past today news might have appeared in the following day, but at this time technology has transformed the entire globe and e-news for everyone with computer and internet to access paper is quite practical. Every significant piece of news may be submitted by the editor into the digital paper allowing the user to read and download whenever they want. It is substitute for traditional printed newspaper. It is available in all languages.

For newspaper, going online opens up number of options, including the ability to present breaking news, cut expenses build strong brand awareness and develop close bonds with advertisers. Additionally, according to a number of studies, internet news is interactive easy to access, offers the ability to break news outside of the newsroom, is quick and open, and contain sophisticated information in terms of volume and variety (E-resources and its types)[13]

3.6.7 E-Zine

A shortened form of electronic magazines is an e-zine, also known as webzine, online magazines and digital magazines, are defined as magazines and/or publications published in electronic form. This digital magazines may be published on the internet through bulletin board and other forms of public computer network. The user can access publications through the internet at any time and from any location.

An online magazines and e-newspapers both have some similarities, the way in which they approach editorial control typically set them apart. The editors or editorial boards of magazines often analyse submissions and carry out a quality control function to make

sure that all content satisfies the standards of the publishers and the readership. Large print publishers now charge fee through various online services that provide reproduction of their print magazine titles.

3.6.8 WEB OPAC (Web-Based Online Public Access Catalogue)

A web-based online library resource catalogue is called a web OPAC. It is the primary tool used by libraries for extracting information from its archives. Integrated with a library management system. Through web OPAC users can access and search the collection of libraries from a remote location over the network. Web OPACs are autonomous online catalogues that could be accessed by anyone in the world from a server.

3.6.9 E-Map

E-maps are computer generated mind maps that can express complex knowledge in an organised easy to understand visual style. E-mapping is a strong e learning and organizational approach that may visually display primary concepts, subtopics, concepts, pictures and interrelationship between them. An e-map is a web based graphic organizer that can quickly construct compact representations of concepts, complicated relationships, knowledge and information.

3.6.10 E-Audio Book

An e-Audiobook is a digital book that can be listen on computer, mobile device or tablet. In other words it is a downloadable audiobook. E-audiobook are inexpensive and quickly duplicated in a variety of contexts such as cassette, CD-ROM, the internet. E-audio book are instructional materials that blind students can utilize in any circumstances and at any time, without being bound to a specific location or requiring the assistance of others.

3.6.11 E-Reference Tool

Electronic reference tools also called as electronic reference materials they are informational sources in the form of online dictionaries, encyclopedias, chronologies, almanacs, atlases, thesauri, directories, handbook, and guides. This sources offer trustworthy and precise, quick facts, definitions and background data on any subject

3.6.12 Video Streaming

Video streaming is the continuous transfer of video files from server to client. User can watch video files using video streaming without needing to download them first. Videos that are streamed may be TV shows, movies, you tube videos, or live streamed content. With their ability to broadcast media to users, services like Netflix and Hulu have been quite successful. In video streams, data is transmitted in compressed format and delivered over the internet and is instantly viewed by the viewer. The media is transmitted in a continuous data stream and is played as it comes in, a player is required by the user which is a specific application that decompresses and delivers audio and visual data to speakers and the display media players include for instance, windows media player 12 for windows 10. (satyabhama, 2020)[14]

3.7 Advantages of Digital Resources

- Over the internet, user can access digital resources from anywhere in the world. User do not need to go to a library in person. For users who live in isolated and distant locations, this is incredibly helpful, it also saves the time of user.
- User can access digital resources 24/7.
- The physical storage space needed for digital resources is substantially smaller than that needed for print resources.
- Several user can access digital resources concurrently.
- Digital resources are inexpensive. By adding new features it is possible to reduce cost associated with printing, distributing and other expenses.

- Data can be quickly updated, saved, forwarded and modified on digital media at frequent intervals, hence they are upgraded then print version.
- It don't take much time for distribution and publicationsprocess.
- Digital Resources offer sophisticated search features, It also provides user friendly interface which makes searching easier.
- Digital resources disregard difficulties with missing issues.
- Due to the digital environment, libraries can collaborate with one another and utilize each other's resources.
- Digital resources obtain necessary information quickly and efficiently.
- Digital resources direct the user to related content using hypertext format and links.
- Digital resources include audio, video and animated content that is not available in print material.
- Digital resources also offer usage statistics that assist library personnel in determining how often a particular product is used. (Dukare, 2020)[15]
- Before the printed version is published, articles and issues of journals emerge online**.** (Bhardwaj & Sharma , 2015)[16]

3.8 Disadvantages of Digital resources

- The cost of technological infrastructure of digital resources is very high.
- Digital resources needed specialized equipment or a personal computer to access.
- Many digital resources are often created to work with certain software that may not be readily available. It may be impacted by hardware and software issues because they rely on other devices.
- The digital resource reader's digital document is useless if the hardware, internet connection or battery power is not easily available.
  Digital resources are more susceptible to harm than traditional book because they reliant on hardware and software.

- Many prospective users of digital resource technology have severe concern about the glare from screens and eyestrain. Reading from a digital resource, reader raises serious concern about potential eye damage. Computer screens and other electronic devices display resolution is much inferior to a printing press's output in terms of print quality.

- There are still many publications that can only be obtained as traditional print books, that are not yet available in electronic book format

- The cost of digital resource reading device is undoubtedly higher than that of printed books.

- Digital resources have a shaky life expectancy compared to most digital storage methods, paper is far more durable.

- Lack of privacy and security, such as email hacking and network disruption, etc.

- Lack of qualified personnel for system administration.

- Lack of computer monitor.

- Regulation of copyright and infringement laws.

- It's not guaranteed that a library will have access to the journal's back issues if it cancels or discontinues its subscription of the e-journal. Whereas, back issues of that publication are undoubtedly available in libraries that have printed material

- Digital resources cannot be used without a license from the publisher granted to the library.

- Digital resources can be quickly copied and forwarded to a different individual, librarians need to be aware of IPR (Intellectual Property Right) (Kumari, 2015)[17]

3.9 Conclusion

Digital resources are very essential information source that help the users to easily locate their desire relevant information. Now a days the collection of digital material is constantly growing in libraries. They are becoming more and more active in developing and obtaining digital resources because of their unique characteristics. Libraries are now subscribing to more number of digital resources such as e-books, e-journals, e-databases

in order to satisfy the growing demands of the users in the digital world. Digital resources are beneficial to users as well as libraries because it saves the space of the library and time of the users. With the help of digital resources libraries can provide thorough and specialized information to their users. The users are now more in favour of digital resources due to their desire benefits. Digital resources are useful to libraries as well as other member of society who are looking for a range of information from across the world.

3.10 References

1. Hoq, M. G., & Haque, M. A. (2018, August 31). Student perception of electronic resources use in Rajshahi University Library: A case study. academic journal, 10(07), 78-84. Retrieved from https://academicjournals.org/journal/IJLIS/article-full-text/3083DC658409

2. satyabhama , v. (2020). electronic resources : advantages and disadvantages for academic library user. *International Journal of Applied Research, 6*(10), 1097-1100. Retrieved from https//www.allresearchjournal.com

3. Hoq, M. G., & Haque, M. A. (2018, August 31). Student perception of electronic resources use in Rajshahi University Library: A case study. academic journal, 10(07), 78-84. Retrieved from https://academicjournals.org/journal/IJLIS/article-full-text/3083DC658409

4. Singh, V. (2014, January 23). Use of E-resources by the faculty members and research scholars of department of computer science and mathematics of jamia milli islamia university, Delhi: a study. *Library Progress (International), 33*(2), 235-250. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:bpaslp&volume=33&issue=2&article=004

5. Electronic Resources. (n.d.). *Module 2 information sources*, 134-153. Retrieved from https://nios.ac.in/media/documents/SrSecLibrary/LCh-008.pdf

6. Anamika. (2019, March). E-resources: Types and Utility in Libraries. *Pune Research Times, An International Journal of Contemporary Studies, 4*(1), 1-5. Retrieved from http://www.puneresesrch.com/times

7. Kenchakkanavar, A. Y. (2014, October). Types of E-resources and its Utilities in Library. *International Journal of Information Sources and Services, 1*(2), 97-104. Retrieved from https://uomustansiriyah.edu.iq/media/lectures/8/8_2020_11_17!11_04_27_PM.pdf

8. Velumurugan, S. V. (2013). E-Resources. *e-library Science Research Journal, 1*(12), 1-4. Retrieved from https//www.researchgate.net/publication/337242694

9. Singh, G. A., & Sinha , M. K. (2017). Use of electronic resources among research scholars and faculty members of university of Allahabad, Uttar Pradesh, India: A survey. *Library Progress International, 37*(2), 182- 201. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:bpaslp&volume=37&issue=2&article=005

10. Kenchakkanavar, A. Y. (2014, October). Types of E-resources and its Utilities in Library. *International Journal of Information Sources and Services, 1*(2), 97-

104. Retrieved from
https://uomustansiriyah.edu.iq/media/lectures/8/8_2020_11_17!11_04_27_PM.
pdf

11. 7 Digital Learning Theories and Models. (n.d.). tech & learning. Retrieved from
https://www.techlearning.com/tl-advisor-blog/7-digital-learning-theories-and-
models-you-should-know

12. Pawar, R. R., & Moghe, G. S. (2014). Need of E-Resources in Academic
Libraries. *Knowledge Management Challenges for Library and Information
Professionals*, (pp. 1-7). Kirloskarwadi, Sangl. Retrieved from
https://www.researchgate.net/publication/303972137_Need_of_E-
Resources_in_Academic_Libraries

13. *E-resources and its types.* (n.d.).

14. satyabhama, v. (2020, September 21). Electronic resources: Advantages and
disadvantages for academic library users. *International Journal of Applied
Reasearch, 6*(10), 1097-1100. Retrieved from www.allresearchjournal.com

15. Dukare, D. A. (2020, June). Concept and types of digital resources, What are
the benefits of consortia approach in collection development? *IP Indian Journal
of Library Science and Information Technolog, 5*(1), 46-49.
doi:10.18231/j.ijlsit.2020.010

16. Bhardwaj, M., & Swadesh, S. (2015, December). Electronic Resources for
University Library and Its Advantages. *International Journal of Research in
Library Science, 1*(2), 1-11. Retrieved from https://www.ijrls.in/wp-
content/uploads/2015/12/Electronic-Resources-for-University-Library-and-Its-
Advantages.pdf

17. Kumari, P. (2015, June). Procurement, Management and Use of E-resources in
Current Library Trends: Common Issue. *International Journal of Digital
Library Services, 5*(2), 150-159. Retrieved from https//www,ijodls.in

CHAPTER IV

DIGITAL CONTENT IN LIBRARIES AT NATIONAL AND INTERNATIONAL LEVEL

4.1 NATIONAL LEVEL

4.1.1 National library of India

The National Library of India is located in Kolkata. In terms of volume, it is India's largest library. The Ministry of Culture of the Indian government is in charge of its administration. The National Library's predecessor was the Calcutta Public Library. It was established in the first part of the 19th century and opened its doors to the public on March 21, 1836. The Imperial Library was finally amalgamated with the Calcutta Public Library, The Imperial Library's name was changed to National Library after India attained independence in 1947. After combining the resources of many administrative libraries, it was made available to the general public on 1st February 1953, on the same day Maulana Abdul Kalam Azad inaugurated the National Library with B. S. Kesavan being appointed as the first librarian.

The national library is one of the four authorised libraries eligible to receive copies of all publications released across the country. According to the Distribution of Books and Newspapers (Public Libraries Act, 1954), Regardless of where they were published or what language they were written in, the library acts as a permanent archive for all books and printed materials produced in India or written by foreign writers.

The National Library has enabled remote access to its subscribed E-Resources using Access Control Software.

 National library has subscribed resources which comprises of Oxford bibliographies online, oxford English dictionary, oxford journals, Cambridge books online, University Publishing Online, Cambridge journal, Cambridge companion online, shakesphere survey online, sage online journal, literature online a comprehensive primary and critical text

database, ebrary online books, house of common parliamentary papers, house of lords parliamentary papers, periodicals archive online, early English book online, LISA: library and information science abstract, Proquest historical newspapers, Ulrichsweb, bowkers books in print, Taylor and Francis journal, Taylor and Francis e-books, south Asia archive, Eighteen century collection online, Emerald group publishing ltd, springer, McGraw Hill's Access Medicine (databases), McGraw Hill's Access science(databases), McGraw Hill's Access engineering(databases), Natural science collection (databases), Technology collection (databases), Science Direct, JSTOR.

There are end numbers of online journals, and 11343 e-books in different languages like Arabic, Bengali, Chines, Czech, Dutch, English, Farsi, French, German, Gujarati, Hindi, Italian, Japanese, Kannada, Latin, Malayalam, Marathi, Mizo, Odia, Paite, Pali, Panjabi, Persian, Russian, Sanskrit, Spanish, Tamil, Telugu, Turkish, Urdu.

There are also educational e-resources available for children. Which include different e-books, dictionaries, encyclopedia, e-book literature in Indian languages like Bengali literature, Tamil literature and Online Study Materials, Course Books and other Open Access Learning Objects. (National Library of India)

4.1.2 Anna Central Library

The Anna Centenary Library, usually referred to as ACL, is a reputable state library. The library is totally under the administration of the Tamil Nadu government and is situated in Kottupuram, Chennai. On the occasion of the 102nd birth anniversary of Dr. C N Annadurai, the than chief minister of Tamil nadu widely known as 'ANNA,' the library was inaugurated on 15th September 2010. This library is known as the 'Anna Centenary Library' because of his passion for books and libraries. The foundation stone was placed on August 16, 2008, and the project was completed quickly and proclaimed available to the public on September 20, 2010.

This centrally located library has a built-up size of 3.75 lakh square feet, which includes the ground floor and eight stories. In order to meet the information demands of the general people, academic community, and business community, currently houses five

lakh volumes covering a wide range of subjects. The library offers sections for Braille, own books reading, children, periodicals and newspapers, Tamil books, English literature, and digital resources. The library also features a conference room that can accommodate 150 people.

The library contains 3000+ springer e-books of four different subject such as Business and Management, Computer Science, Law and Criminology, Social Sciences

Databases contain INSPIRE (High Energy Physical Literature Database) open access, and CiteseerX (Computer and Information Science literature) open access

Library also has open access e-journals based on various disciplines such as science, social science, physics and computer science, mathematics, chemistry, agri and aquaculture, biochemistry, biomedical sciences, bioinformatics and system biology, business and management, chemical engineering, food and nutrition, general science, genetics and molecular biology, geology and earth science, immunology and microbiology, materials science, medical science, Neuroscience and psychology, nursing and healthcare, pharmaceutical sciences, social and political science, veterinary science.

The library has subscribe to DELNET digital library resources. The library also has web OPAC. (Anna Central Library)

4.1.3 Goa State Central Library

Goa State Central Library is the main public library in the state of Goa and all district, taluka, town, village libraries are under the central library. It is situated at SaskrutiBhavanpatopanajim. It was established on 15th September 1832 by Vice Roy Dom Manuel de Portugal e Castro as 'PublicaLivraria. In 1834, In the year 2012 Goa State Central Library was renamed as KrishnadasShama Goa State Central Library. It is dedicated to Krishnadas, a 16th-century Konkani scholar, and the father of Konkani literature in recognition of his contribution to literature. The six-story library was founded in 1832 and is the country's oldest public library. It covers a built up area of 12,100 sqmts. The Library has housed approximately 2.5 lakh books in languages such

as English, Hindi, Marathi, Konkani, and Portuguese. The library is regarded as Asia's largest storehouse of Portuguese language books.

The library provides modern amenities such as a self-check-in/check-out kiosk and a book drop box that uses RFID technology to make lending books easier for readers, who can choose from a stunning collection of over a quarter-million books.

The e-resource collection of library includes various types of e-books, e-journals, e-databases, Marathi e-books, and useful links etc. The library has also subscribed to DELNET e-resources, it has OPAC (Online Public Access Catalogue) through which user can access to various collection of library.

The library has collaborated with the world e-book library, world digital library, and National digital library. (Goa State Central Library)

4.1.4 National Digital Library of India (NDLI)

The National Digital Library of India (NDLI) is a virtual library of learning resources that offers a variety of services to the learning community in addition to search and browse functionality. The National Mission on Education through Information and Communication Technology (NMEICT), an initiative of the Indian Ministry of Education, sponsors and mentors it. In order to enable targeted searching, filtered and federated search are utilised. This helps students locate the appropriate resource quickly and easily. NDLI offers services tailored to the needs of different user groups, such as exam preparation for high school, college, and career applicants. Additionally, services are offered for general learners and researchers. NDLI is made to handle the 10 most common Indian languages which is built to contain material in any language. All academic levels, including researchers and lifelong learners, all academic subjects, all widely used access devices, and students with disabilities are all supported by its design. It is made to make it easier for researchers to conduct interconnected investigation from various sources and for people to learn from best practices from around the world and plan accordingly. Indian Institute of Technology Kharagpur built, ran, and maintained it.

There are all together 94,051,509 resources available in NDLI. Resources, ranging from elementary to post-graduate levels which can be accessed in three different languages i.e. English, Hindi, and Bengali (Bangla). This Resources are divided into four different groups which are 1) test preparation which include CBSE examination repository, IIT JEE and NEET, Joint Admission Test of Masters, Graduate aptitude test in engineering, National Eligibility Test (UGC NET), Career Development and Recruitment. 2) Study at home which consist of School, Engineering, Science, Humanities, Literature, Law and Management 3) COVID-19 Research Repository this include scholarly publications related to COVID-19, Data Sets, Documents and Videos, Journals and Conferences, ideas and Funding, Challenges and Startup 4) Featured collection consist of Birth Centenary of Satyaji Ray, on this day, Person of the week Nikola tesla, Topic of the week seven Wonders of the Word, Talks and Webinars. This diverse resources are available in Books, Audio books, Video lectures, Notes Question papers etc. (National Digital Library of India)

4.1.5 Central Library of IIT Kharagpur

The IIT Kharagpur Central Library was established in 1951 in small room of old building and transferred to its current location in 1956 from a small room in the Institute's first building (Shahid Bhavan). Its size and substance have since expanded, giving it its current form. The library is doing its best to keep up with the rapid changes in information searchers' behaviour brought on by the advancements in computers, microelectronics, and communication technologies. The Institute's academic programmes have depended on its library for the last six decades. IIT Kharagpur's Central Library is undoubtedly one of the best and largest technical libraries in Asia, and this is not hyperbole. It has also received a wiey award for Digital Formed Academic Library. It has been meeting the demands of our undergraduate, graduate, postdoctoral, and research scholar students as well as the teachers and staff from the many departments, centres, schools, and research facilities.

The library is well-stocked with modern equipment and materials, including CDROMs, DVD-ROMs, online databases, micro documents, video cassettes, books, periodicals, patents, standards, theses, and reports, conference proceedings. In order to offer various digital mode Library services, it has also constructed a fully functional digital library outfitted with the required modem equipment. The Central Library's Digital Library division has created an institutional digital repository utilising the free and open-source DSpaceprogramme, preserving the institute's intellectual output for campus-wide access and digital preservation for future generations.

Library digital resources collection consist of 1,35000+ e-books, it provide access to 26000+ online full text databases, online access of institutes Ph.D. theses, it also provide access to "Turnitin" a tool of anti-plagiarism "Grammarly, "Bloomberg". The libraries open access content includes open access books, open access journals, NPTEL video lecture, LibriVox free audio books, open access GSI repository, and MIT open courseware. It also include online courses like SWAYAM online courses, GIAN courses, NPTEL cources, IIM online Banglore courses

The online services such as the "Online Database Services" enables users to access the electronic resources that Central Library IIT Kharagpur has subscribed to. Online document delivery service, and remote access of library subscribed e-resources service is also provided by the library. (Central Library IIT Kharagpur)

4.2 INTERNATIONAL LEVEL

4.2.1 Library of Congress

The world's largest library, the Library of Congress, serves as the de facto national library of the United States. It was established on April 24, 1800. The library is the main research arm of the U.S. congress and the home of the U.S. copyright office. The library of congress provides services to the employees, committees and members of the U.S. congress as well as to other governmental organisations, locals and international libraries, and the scholars, researchers, artists nd scientists who utilize its materials, it serves as the nation's hub for libraries that provide services to the physically and visually impaired, and it also hosts numerous public performances, lectures and exhibitions.

"American Memory" was the library's first digital preservation project Launched in 1990. Initially, it had intended to select 160 million items from its holdings to make digitally accessible on CDs and LaserDiscs. After realizing that this strategy would be excessively costly and ineffective, Moreover, as the Internet expanded, the library made the decision to switch to making digitized content accessible online. With the National Digital Library Programme (NDLP), which was established in October 1994, this effort became official. The NDLP had successfully digitalized over 5 million items by 1999. The library still uses the name "American Memory" for its website, which is available to the public and currently hosts over 7 petabytes of material and 15 million digital artefacts.

Library digital collection consist of general collections, international collections ,special format collection, which includes Rare book, print and photographs,   maps, audio recording, film, videos other collections include research on web, quick links, library research bibliographic databases, copyright information and many more, it also consist of library of congress online access catalogue.

Services provided by library of congress is The National Library Service (NLS) is a free braille and talking book library service for those with temporary or permanent low vision, blindness., ask librarian, interlibrary loan, Duplication services, linked data services etc.(Library of Congress, Britannica)

4.2.2 The British Library

The British Library, one of the biggest libraries in the world, is the national library of the United Kingdom situated in London. It was established by the British Library Act of 1972 and became operational on July 1, 1973. The Library receives copies of all books published in the United Kingdom and Ireland as a legal deposit library, including a sizable share of foreign publications sold in the UK. The Department for Digital, Culture, Media, and Sport is a non-departmental public organization that sponsors the Library. The British Library is a significant research library, housing materials in a wide range of languages and print and digital formats, including books, manuscripts, journals, newspapers, magazines, sound and music recordings, films, play scripts, patents, databases, maps, stamps, prints, and drawings. Approximately 14 million books and sizable holdings of manuscripts and objects as far back as 2000 BC can be found in the Library's collections. Previously The British Library used to limit entrance to its reading room to those who need access to extensive and specialised collections that they could not locate elsewhere. By the end of the 20th century, however, the library had adopted a more hospitable attitude, partly because of technical advancements that allowed patrons to conduct research and study material over the internet, and partly because of its increased facilities. Its current public service mission is divided into six parts. (New word encyclopedia and Wikipedia)

The Library has subscriptions to numerous databases and other digital resources. Some of them are openly accessible. The libraries digital collection consist of digitized manuscripts, sound online which includes recording from library's collection, spoken word etc, EThOS which contain doctoral theses, business and management which contains research reports, articles, papers of publishers, social welfare provides access to the extensive print and digital collections of research and data on the development, application, and assessment of public policy, this collection also comprise of in library access British newspaper archive and digital resources, featured collection of library include treasures in full, catalogue of illuminated manuscripts, early photographical illustrated books etc, and collection of maps of different countries

Some of the online library services include British Library on Demand service which supply's British library documents on demand, digitalization services include ordering images, high quality printing, specialist scanning services etc, and Images Online which include the British Library's image collection which is available in many languages from around the world and hosts some of the country's best historical collections. This library gives you immediate access to thousands of the best pictures from the British Library's extensive collections. (British library)

4.2.3 National Library of Australia

The National Library of Australia (NLA), formerly the Commonwealth National Library and Commonwealth Parliament Library, is the largest reference library in Australia situated in Parkes Canberra. It is tasked with upholding the National Library Act of 1960's provisions to maintain and develop a national collection of library material, including a comprehensive collection of library material relating to Australia and the Australian people.

The National Library of Australia (NLA) is also the host and administrator of the well-known Trove cultural heritage discovery service, which offers access to the Australian Web Archive and National e-deposit (NED), a sizable collection of digitised newspapers, government documents, manuscripts, and photographs, as well as born-digital content.

NLA collection includes Maps, Manuscripts, Pictures, it also provides Blogs, Podcast, Videos, Talks and Lectures, oral history and folklore. Library digital resources can be accessed only with the national library card.

The Library From its collection through the digitised items of more than 174,000 and Delivers these via the Internet directly. The Library, a pioneer in digital preservation methods.

In order to facilitate users' access to and discovery of information resources at the national level, the National Library of Australia plays a leadership role in the

development and management of collaborative online services with the Australian library community

Australian National Bibliographic Database (ANBD): is accessible for free via the Libraries Australia subscription-based service, which is also run by the NLA. In addition to being utilised for cataloguing and interlibrary loans, it is also used for reference.

Cataloguing-in-Publication (CIP) details, ISSNs and ISMNs for Australian publishers.

PANDORA:the Australian Web Archive. A collection of Australian online publications that was initially started by the National Library of Australia in 1996 and is currently being developed in partnership with nine other Australian libraries and cultural collecting groups.

Trove: an online database aggregator for libraries

National Library of Australia Catalogue: Publically accessible materials in the National Library of Australia's collection are listed in a catalogue that is kept up to date. (National Library of Australia)

4.2.4 World Digital Library

The World Digital Library an international digital library was launched in 2009. Administered by the United States Library of Congress and UNESCO and 158 libraries, museums, archives, and other partners in 60 countries. According to the WDL's mission statement, its goals are to advance global and intercultural understanding, increase the volume and diversity of cultural content available online, offer resources to educators, scholars, and general audiences, and help partner institutions develop the skills necessary to close the digital divide both within and between nations. It seeks to increase the availability of non-English and non-Western content on the Internet and support academic research.

The archive can be searched by location, time period, topic, or source type. The primary search topics include computer science and information, philosophy and psychology, religion, social sciences, language, natural sciences and mathematics, technology, fine and decorative arts, literature and rhetoric, history, and geography. The majority of the sources in the collection date from 1800 to 2000 and were created in Asia and Europe, while the collection spans the globe and some objects date back to 1 BCE or earlier. The site has a significant collection of newspapers and images, as well as books, maps, notebooks, voice recordings, and film. Each object is accompanied by an annotation that explains its relevance and historical context. The WDL Reader enables users to view each item with zooming, gallery view, full screen, full text search, and download options.

Thousands of books, documents, and images from all countries and cultures are made available on the Internet for free and in multilingual format by the WDL. (World Digital Library)

4.2.5 National Library of Singapore

The National Library of Singapore is the country's premier national library. It is a division of the National Library Board (NLB) and is situated on an 11,304 square meter location in the Downtown Core on Victoria Street. It is the biggest public library in the nation.

The libraries digital collection include e-books such as Asabi e-books, Gale's eBook, HyRead Chinese eBooks, iRead eBook etc. e-databases such as Asian studies full text journal,Bloom's Literature, EBSCOhost academic search complete, EBSCOhost business source complete, ProQuest etc. e-journals such as Factiva (offsite remote), Factiva (onsite), JSTOR, Chinese online journal database etc. e-magazines such as press reader, HyRead Chinese e-magazines, etc. e-learning and e-newspaper are also included in collection.

Online service provided by nlbs consist of reference and research services, archival and research services, loan and reservations, FAQs, lost and found, and many more. You can check the services by visiting https://www.nlb.gov.sg/main/services (National library online)

4.3 References

1. National Digital Library of India. (n.d.). Retrieved from National Digital Library of India: https://ndl.iitkgp.ac.in/

2. *Anna Central Library*. (n.d.). Retrieved from Anna Central Library: http://www.annacentenarylibrary.org/

3. *Goa State Central Library*. (n.d.). Retrieved from Goa State Central Library: https://centrallibrary.goa.gov.in/home

4. *National Digital Library of India*. (n.d.). Retrieved from National Digital Library of India: https://ndl.iitkgp.ac.in/

5. *Central Library of IIT Kharagpur*. (n.d.). Retrieved from Central Library of IIT Kharagpur: https://library.iitkgp.ac.in/

6. *Library of Congress*. (n.d.). Retrieved from Library of Congress: https://www.loc.gov/

7. *Library of Congress-Encyclopedia Britannica*. (n.d.). Retrieved from Library of Congress-Encyclopedia Britannica: https://www.britannica.com/topic/Library-of-Congress

8. *British Library*. (n.d.). Retrieved from British Library: https://www.bl.uk/

9. *New World Encyclopedia and Wikipedia*. (n.d.). Retrieved from New World Encyclopedia and Wikipedia: https://www.newworldencyclopedia.org/entry/British_Library

10. *National Library of Australia*. (n.d.). Retrieved from National Library of Australia: https://www.nla.gov.au/

11. *World Digital Library*. (n.d.). Retrieved from World Digital Library: https://www.loc.gov/collections/world-digital-library/about-this-collection/

12. *World Digital Library*. (n.d.). Retrieved from World Digital Library: https://ucddigitalliteracy.com/2020/04/27/world-digital-library-home/

13. *National Library of Singapore (online)*. (n.d.). Retrieved from National Library of Singapore (online): https://www.nlb.gov.sg/main/visit-us/our-libraries-and-locations/libraries/national-library-singapore/collections/Collections/national-library-online

CHAPTER V

DATA ANALYSIS AND INTERPRETATION

5.1 Introduction

The following analysis has been done based on the data provided by the students at different academic colleges of south Goa with the help of online questionnaire method. The data was collected from the 7 different colleges namely.

➢ Carmel college of Arts, Science and Commerce

➢ Government college of Arts, Science and commerce, Quepem

➢ Cuncolim education Society's College of Arts and Commerce

➢ ParvatibaiChowgule college of Arts and Science

➢ VVM's Shree Damodar college of Commerce and Economics

➢ Ponda Education society Ravi Naik college of Arts and Science

➢ Shri. Mallikarjun and Shri. Chetan Manju Desai College

And the data analysis is based on the responses of the above colleges. The collected data has been presented in a tabular and graphical form.

5.2 User Analysis

5.2.1 Digital resources equipped by library

1. What type of digital resources your library equipped with?

TITLE	RESPONCES	PERCENTAGE
E-books	46	90.2%
E-journals	35	68.6%
E-databases	27	52.9%
Plagiarism detection tool	9	17.6%
Grammerly	13	25.5%

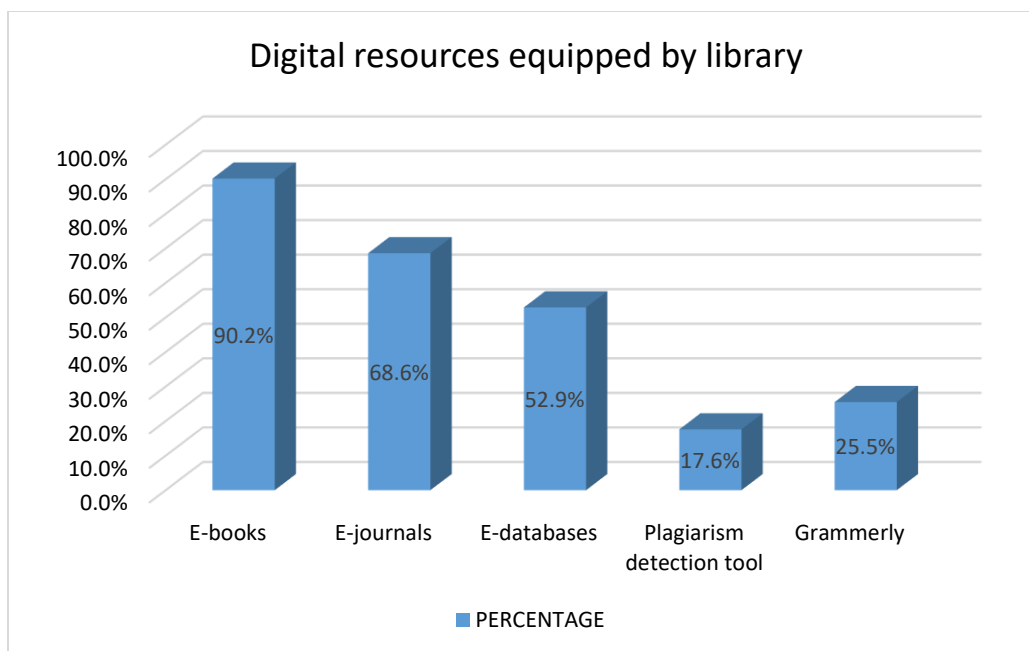**Table 1:Digital resources equipped by library**

Figure 1: Digital resources equipped by library

The above bar diagram shows that majority of the respondents i.e. 90.2% states that their library is equipped with e-books whereas 68.6% of the respondents are going with the e-journals further 52.9% respondents are with e-databases, 25.5% of the respondents with Grammarly and remaining 17.6% of the respondents are with plagiarism detection tools

5.2.2 Awareness about the latest digital resources subscribed by library

2. How you aware about the latest digital resources subscribed by library

Title	Responses	percentage
Orientation Programme	8	15.7%
Library Website	20	39.2%
Seminar Workshop	6	11.8%
Library Staff	11	21.6%
Others	6	11.8%

Table 2:Awareness about the latest digital resources subscribed by library

Figure 2: Awareness about the latest digital resources subscribed by library

The above pie chart depicts that 39.2% of the respondents were aware about the latest subscribed digital resources of the library through library website further 21.6% of the respondents were aware through the library staff whereas 15.7% of the respondent were aware through the orientation programme whereas 11.8% of respondents get awareness from seminar/workshop and rest 11.8% of the respondent were aware through the other sources.

5.2.3 Awareness of latest digital resources

3. Which are the other digital resources you are aware about rather than e-book, e-journal, ETD, e-databases?

Titles	Responses	Percentage
E-maps	24	47.1%
E-reference tools	22	43.1%
Streaming videos	17	33.3%
Plagiarism detection tool	19	37.3%
Other	8	15.7%

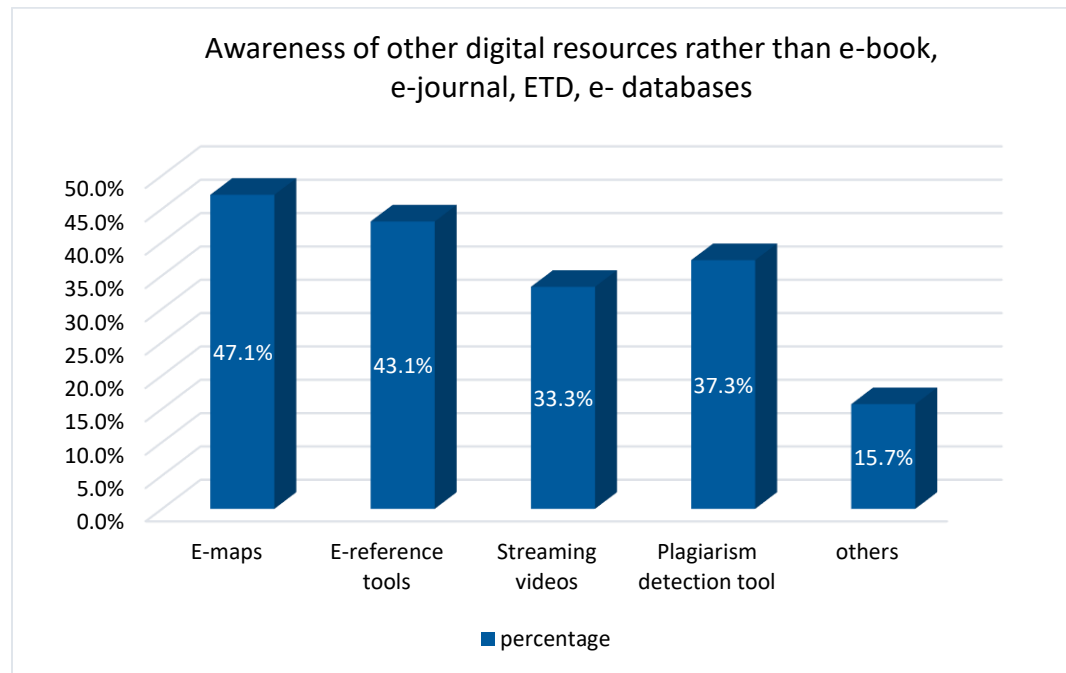**Table 3:Awareness of latest digital resources**

Figure 3: Awareness of latest digital resources

The above chart signifies that 47.1% of respondents are aware of e-maps, digital resources apart from e-books, ETD, e-journals, e-databases, further 43.1% were aware of e-reference tools, whereas 37.3% of respondents were aware of the plagiarism detection tools further 33.3% are aware of the streaming videos and remaining 15.7% are aware of the other resources than this.

5.2.4 Number of computers provide library

4. Number of computers provide by your library to browse digital resources?

Numbers	responses	percentage
Less than 5	21	41.2%
5-10	19	37.3%
10-15	9	17.6%
15 and above	2	3.9%

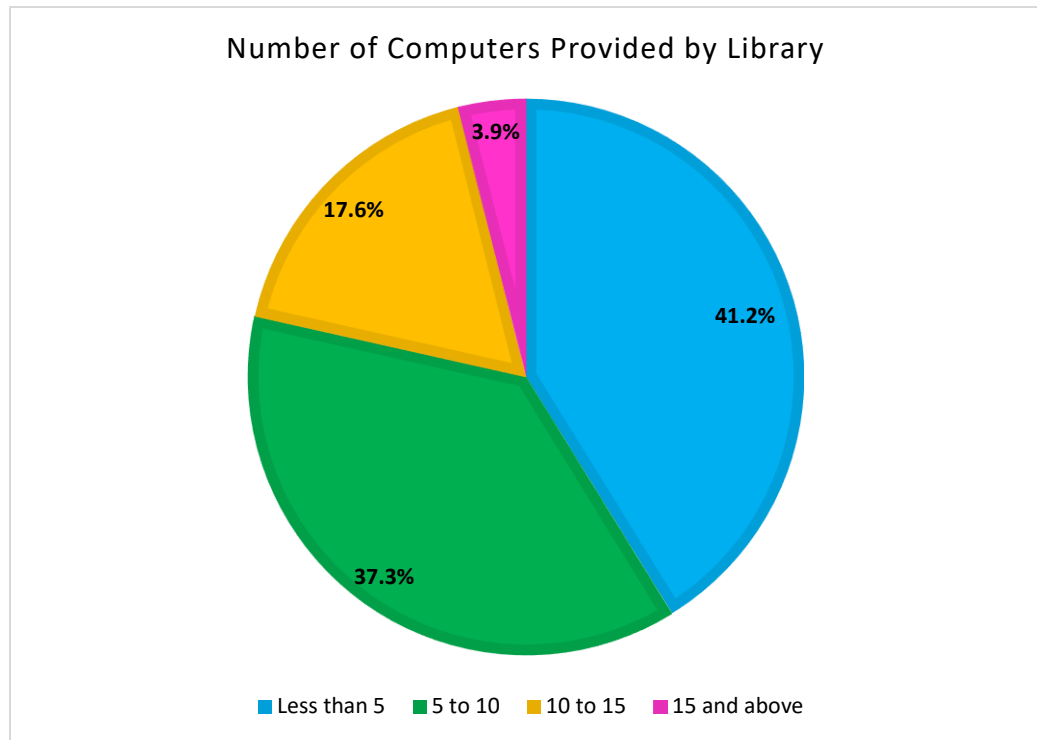**Table 4:Number of computers provide library**

Figure 4: Number of computers provide library

The above pie chart depict that 41.2% of the respondents states that their libraries provide less than 5 computers, further 37.3% respondents says that their libraries only have 5-10 computers where as 17.6% of respondents has provided 10-15 computers by their libraries and remaining 3.9% respondents libraries have 15 and above computers.

66

5.2.5Remote access to subscribed digital resources

5. Does your library provide remote access to subscribed digital resources?

titles	responses	percentage
Yes	37	72.5%
No	14	27.5%

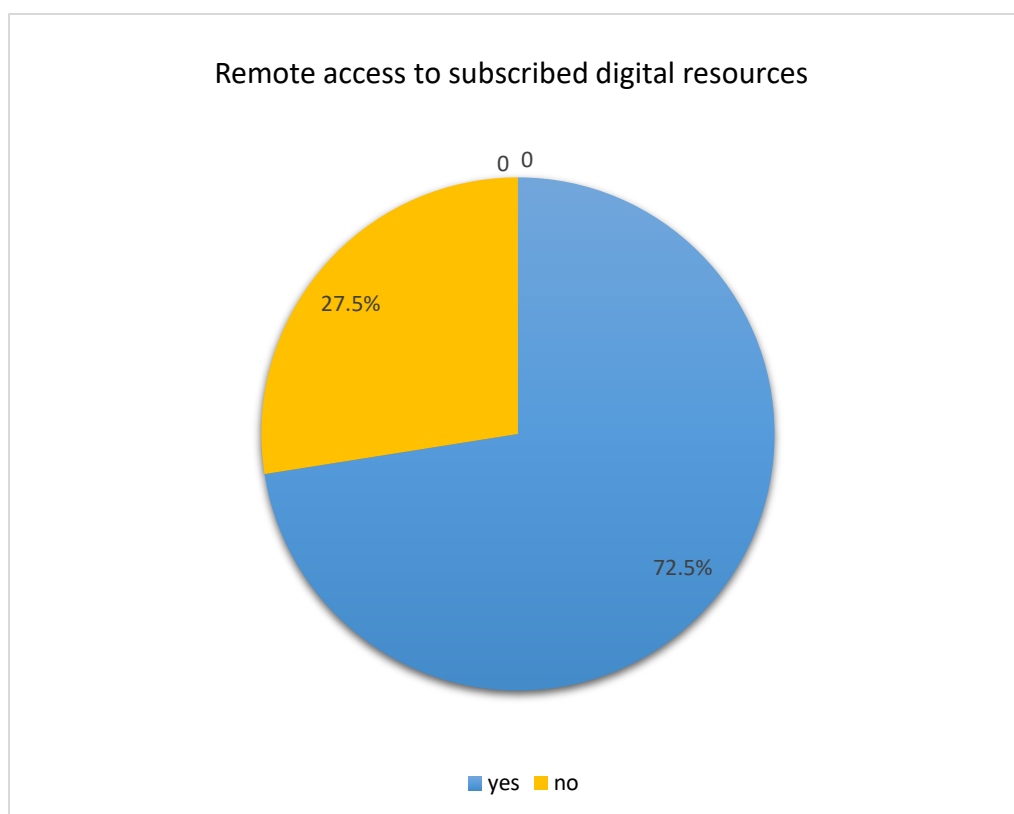**Table 5: Remote access to subscribed digital resources**

Figure 5: Remote access to subscribed digital resources

The above pie chart denotes that from the total respondents majority i.e. 72.5% of the respondents libraries provide remote access to subscribed digital resources and remaining 27.5% of the respondent libraries doesn't provide remote access to subscribed digital resources.

5.2.6 Remote access provided by libraries

6. If yes than how do they provide it?

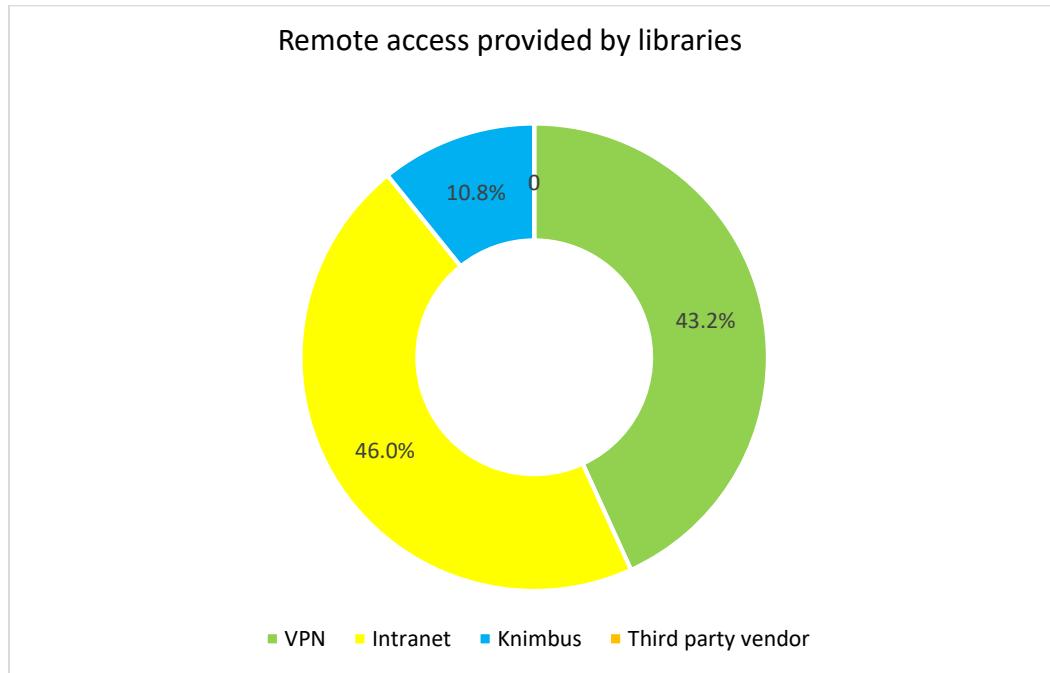| Title	Responses	Percentage
VPN	16	43.2%
Intranet	17	46%
Knimbus	04	10.8%
Third party vendor	00	--

Table 6:Remote access provided by libraries

Figure 6: Remote access provided by libraries

When a question was asked to the majority respondents 37 (72.5%) if their answer is yes than how their libraries provide remote access, out of which 17 (46%) respondents claim that their libraries provide access through intranet further 16 (43.2%) respondents states that their libraries provide it through VPN and remaining 4 (10.8%) says that their libraries provide it through Knimbus as shown in the above chart.

7. Specify your rate of success of finding relevant information from digital resources?

Titles	Responses	percentage
More than 75%	6	11.8%
Up to 75%	16	31.4%
Up to 60%	18	35.3%
Up to 50%	9	17.6%
Less than 50%	2	3.9%

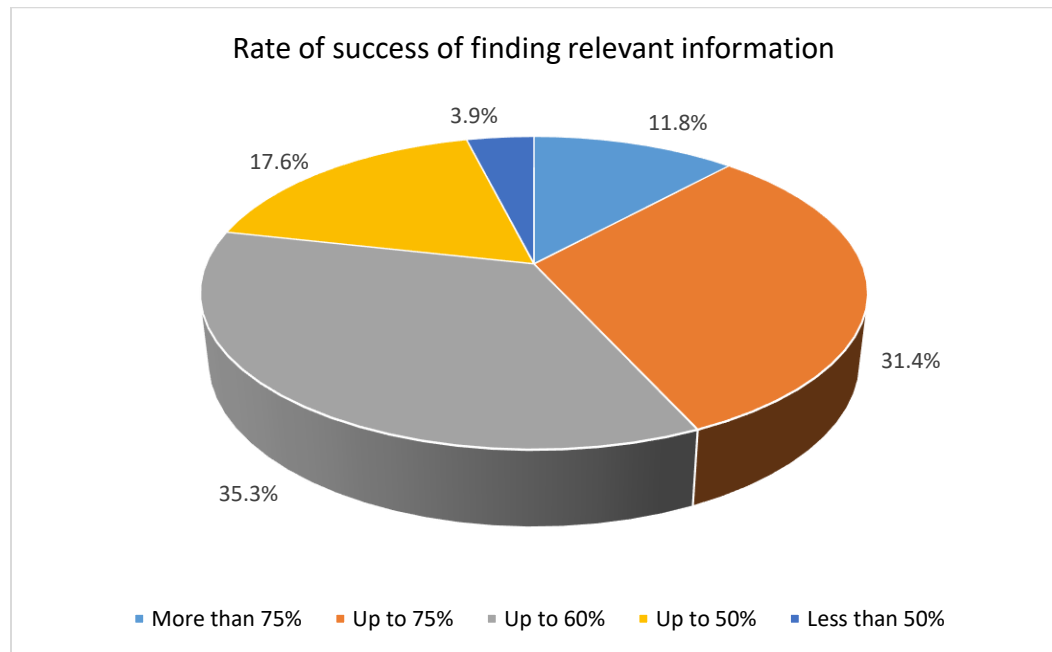**Table7:Rate of success of finding relevant information**

Figure 7: Rate of success of finding relevant information

The above pie chart illustrate that 35.3% respondents success rate of finding relevant information is up to 60% where as 31.4% respondents successful in finding up to 75% further 17.6% find it up to 50%, 11.8% respondent find relevant information more than 75% and remaining 3.9% get success in finding less than 50%.

5.2.8 Requirements of college library users in terms of digital resources

8. What are the requirements of college library users in terms of digital resources?

Title	Responses	Percentage
Training programme should be conducted to provide digital literacy	31	60.8%
Require fast internet speed for quick searching	29	56.9%
Require computer system to browse digital resources	20	39.2%
Knowledge of artificial intelligence	17	33.3%

Table 8:Requirements of college library users in terms of digital resources
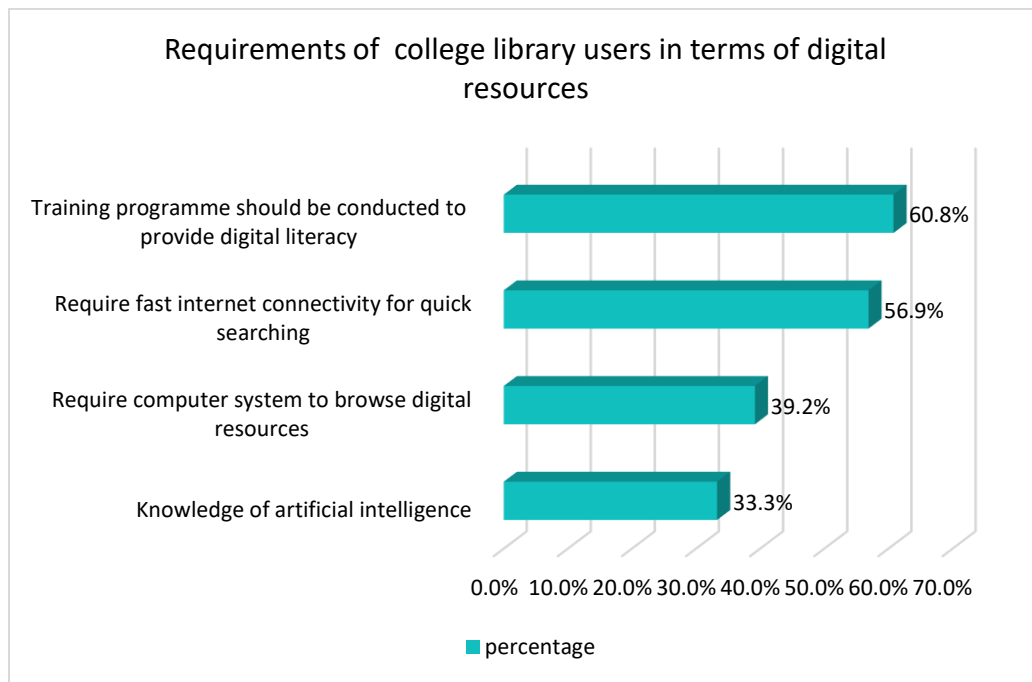

Figure 8: Requirements of college library users in terms of digital resources

The question when asked about the requirements of college library users in terms of digital resources, majority i.e. is 60.8% of the respondents expresses that they require fast internet connectivity for quick searching, further 56.9% require training programme to provide digital literacy, where as 39.2% of the respondents required computer system to browse digital resources and remaining 33.3% need knowledge of artificial intelligence as shown in the above bar diagram.

5.2.9 Artificial intelligence tools to meet the requirements of college library users

9. According to you which are the artificial intelligence tools that help to meet the requirements of college library users in terms of digital resources?

Title	Responses	Percentage
Chat GPT	25	49%
Chat GPT 4	8	15.7%
Speech recognition tools	18	35.3%
other	16	31.4%

Table 9:Artificial intelligence tools to meet the requirements of college library users
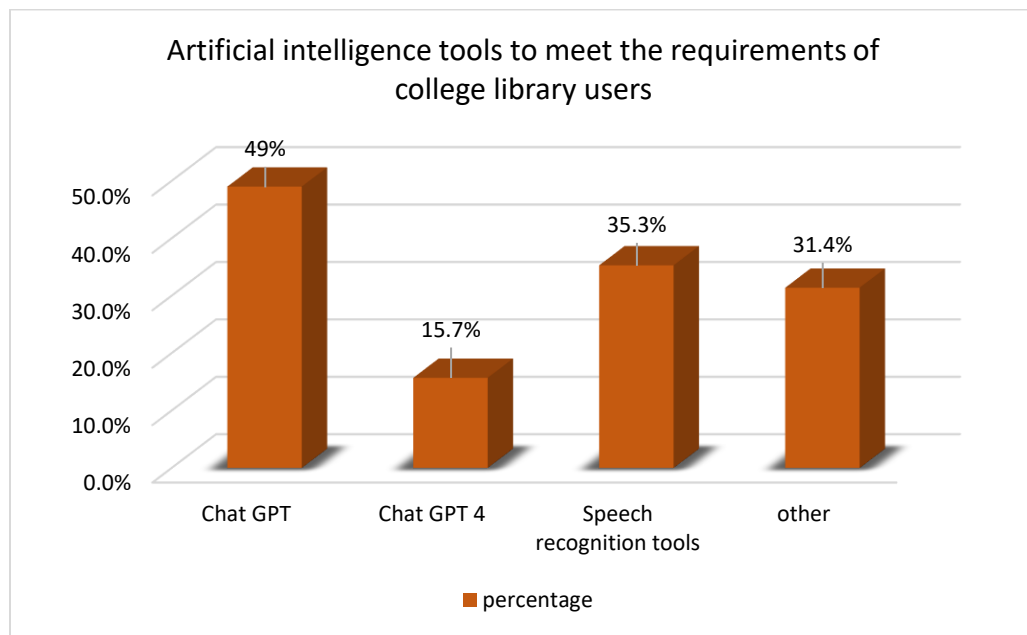

Figure 9: Artificial intelligence tools to meet the requirements of college library users

As per above bar diagram 49% respondent require chat GPT (artificial intelligence tool) to meet their requirements, 35.3% respondent require speech recognition tools where as 31.4% respondents need other A.I. tools and rest 15.7% require chat GPT4 to meet the needs of the users.

5.2.10 Equipment of good digital infrastructure facilities

10. Does your library equipped with good digital infrastructure facilities?

Title	Responses	percentage
Yes	32	62.7
No	19	37.3

Table 10:Equipment of good digital infrastructure facilities
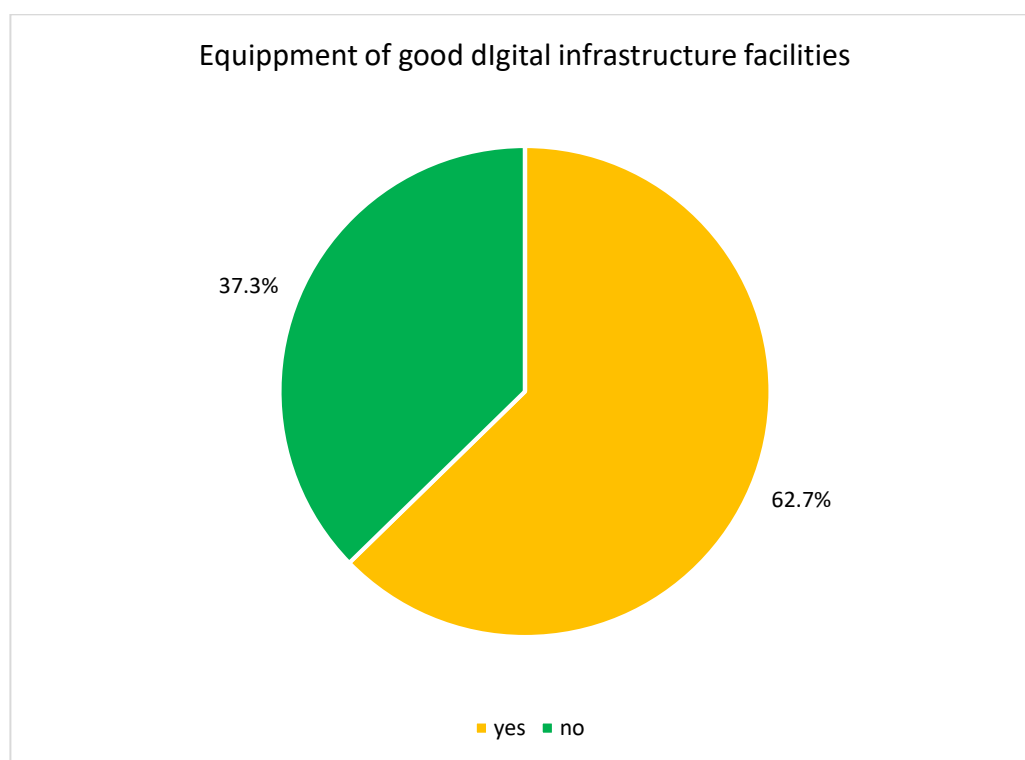

Figure 10: Equipment of good digital infrastructure Facilities

The above pie chart specifies that 62.7% of the respondents libraries equipped with the good digital infrastructure facilities where as 37.3% of respondent libraries does not provide good digital infrastructure facilities.

5.2.11 Barriers/obstacles blockading the digital infrastructure facilities

11. If not than please rate the given barriers/obstacles blockading the digital infrastructure facilities of your college library that effect the users ?(rate from 1-5 where 1- Strongly Agree, 2- Agree, 3-Neutral, 4-Disagree, 5-Strongly Disagree)

Title	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Lack of subscription based databases	6	4	7	2	
Complex softwares		12	3	2	2
Limited access to back issues	2	8	6	3	
Unfriendly user interface of websites	2	4	10	1	2
Poor internet connectivity	3	6	6	2	2

Table 11: barriers/obstacles blockading the digital infrastructure facilities
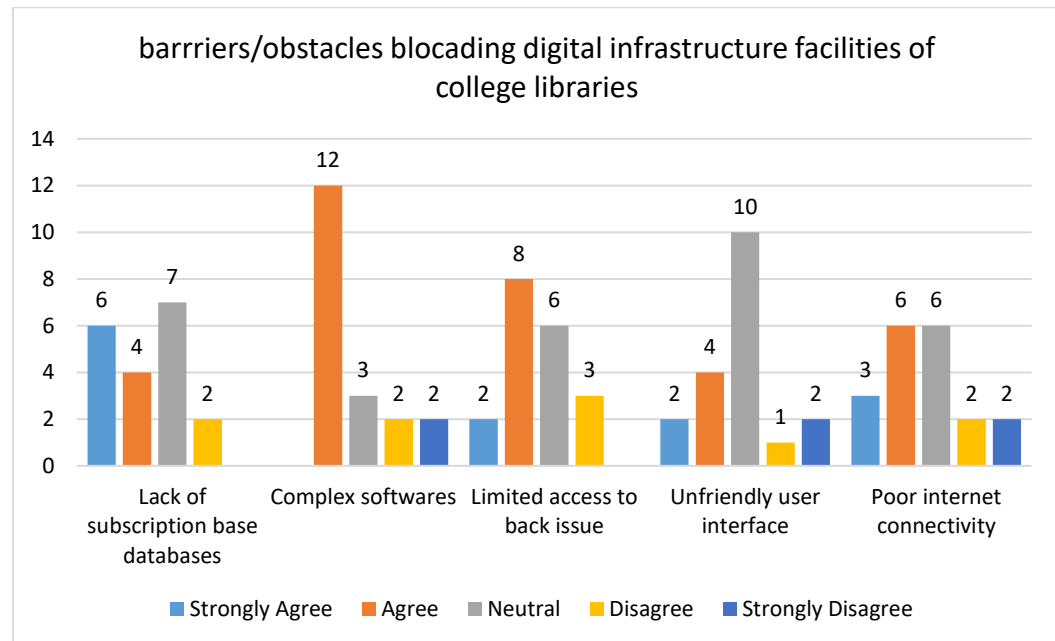

Figure 11: barriers/obstacles blockading the digital infrastructure facilities

- The question when asked to the 19 (37.3%) of the respondents if their answer is no than how they would rate the barriers/obstacles that blockading the digital

infrastructure facilities of their college libraries out of which 7 respondents response was neutral towards the obstacle lack of subscription based databases, 6 respondent strongly agree towards a barrier lack of subscription based databases where as 4 respondents just agreed towards lack of subscription based databases, further 2 respondents disagree towards the same barrier.

- 12 respondents agree towards the barrier complex software, 3 respondents are neutral toward complex softwares further 2 respondents disagree towards the obstacle complex software where as remaining 2 respondents strongly disagree towards this barrier.

- 8 respondents were agree towards the barrier limited access to back issues, 6 respondents answer were neutral towards the limited access to back issue where as 3 respondents disagree towards the same barrier and remaining 2 respondents strongly agree towards the limited access to back issue.

- 10 respondents are neutral toward the barrier unfriendly user interface of websites, further 4 respondents are agree towards the same barrier where as 2 respondent strongly agree towards the obstacle unfriendly user interface of website, further 2 respondents are strongly disagree towards the barrier unfriendly user interface and remaining 1 respondent disagree towards the same.

- 6 respondents agree towards the barrier poor internet connectivity, where as 6 respondents answer were neutral towards poor internet connectivity further 3 respondents strongly agree towards the obstacle poor internet connectivity, where as 2 respondents disagree towards the same barrier and remaining 2 respondents strongly disagree towards poor internet connectivity.

5.2.12 Mode of access of digital resources

12. Mode of access of digital resources?

Title	Responses	Percentage
Personal Computer (PC)	16	31.4%
Laptop	7	13.7%
Tablet	--	--
Smart Phone	28	54.9%

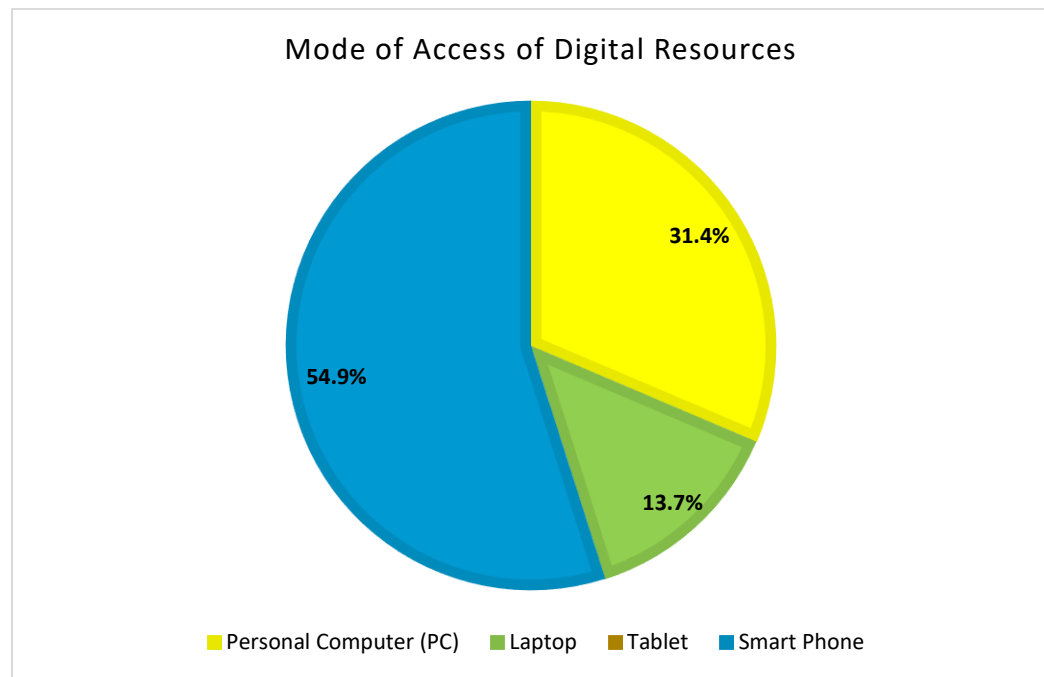**Table 12: Mode of access of digital resources**

Figure 12: Mode of access of digital resources

As per the above pie chart majority 54.9% respondents are using the smart phone to access, browse, and download the digital resources, where as 31.4% respondent preferred personal computer (PC) for their access and remaining 13.7% respondent are making use of laptops.

5.2.13 Time spent in accessing digital resources

13. How much time do you spend in accessing digital resources daily?

Title	Responses	Percentage
Less than 1 hour	19	37.3%
1 to 2 hours	28	54.9%
2 to 3 hours	3	5.9%
More than 3 hours	1	2%

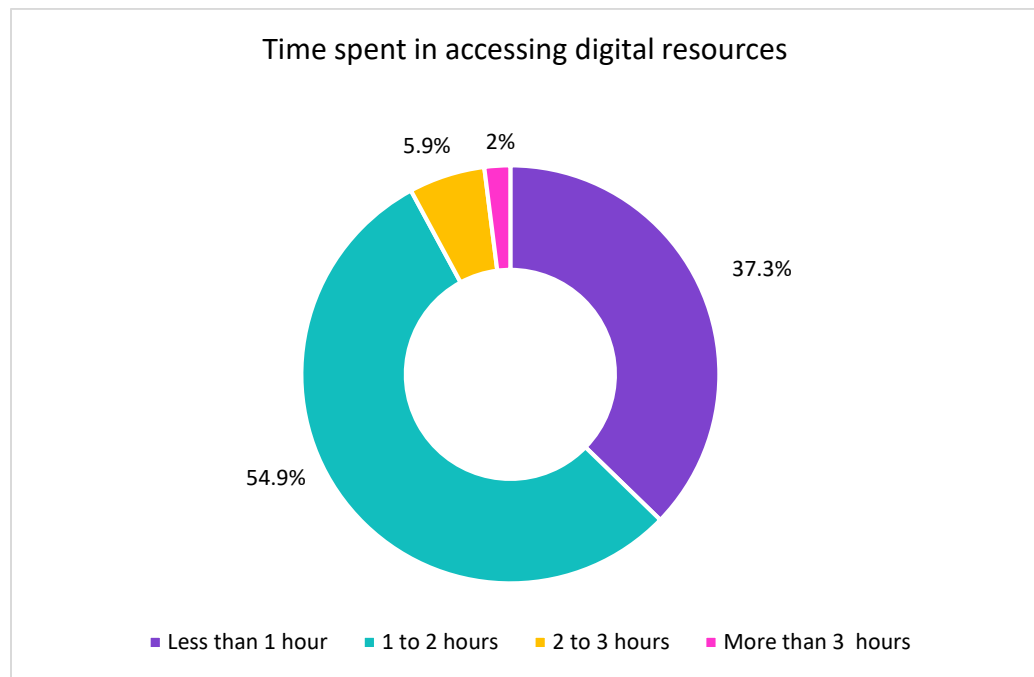**Table 13:Time spent in accessing digital resources**

Figure 13: Time spent in accessing digital resources

As per the above chart majority 54.9% of the respondents spend 1 to 2 hours in accessing digital resources daily where as 37.3% respondents spend less than 1 hours in accessing it, further 5.9% respondent access digital resources for 2 to 3 hours and remaining 2% spend more than 3 hours accessing it.

5.2.14 Means used for locating relevant information on digital resources

14. Which is the means used for locating relevant information on digital resources?

Title	Responses	Percentage
Search Engines	26	51%
Websites	20	39.2%
Online databases	4	7.8%
Other	1	2%

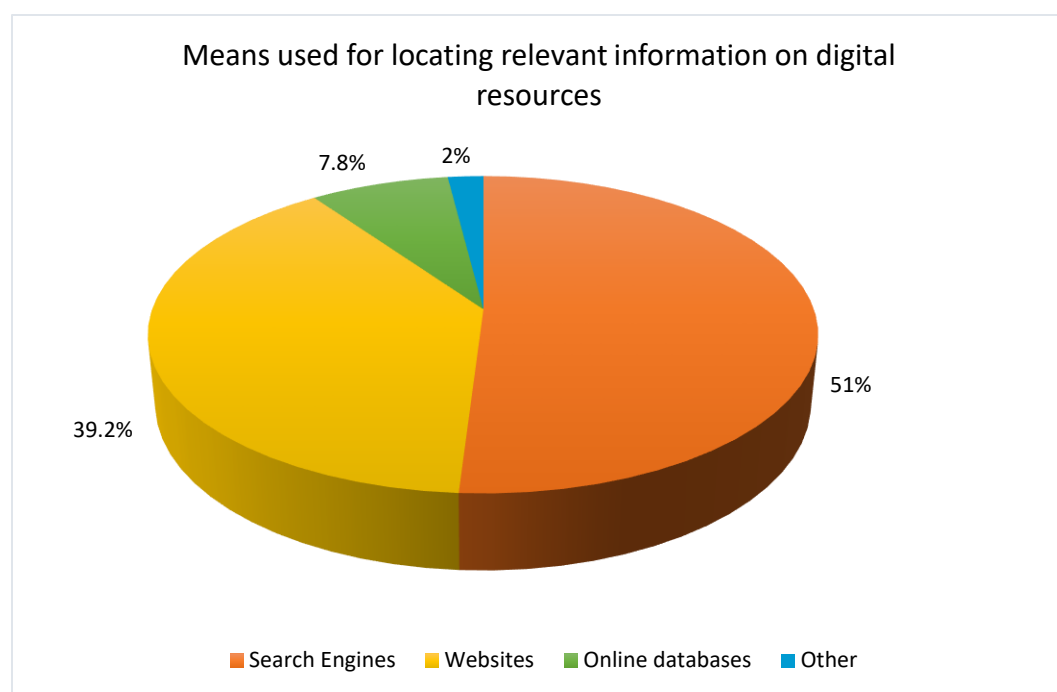**Table 14:Means used for locating relevant information on digital resources**

Figure 14: Means used for locating relevant information on digital resources

The above chart depicts that 51% of the respondents are making use of search engines for locating relevant information on digital resources, further 39.2% respondents are using websites for locating the same where as 7.8% respondents making use of online databases for locating relevant information on digital resources and rest 2% respondents make use of other sources to ascertain the same.

5.2.15 Perception about digital resources

15. What is your perception about digital resources?

Title	Responses	Percentage
Digital resources widen scope of learning	33	64.7%
Digital resources provide current and updated information	32	62.7%
Digital resources enhances student self-learning	20	39.2%
Digital resources save the time of users.	21	41.2%

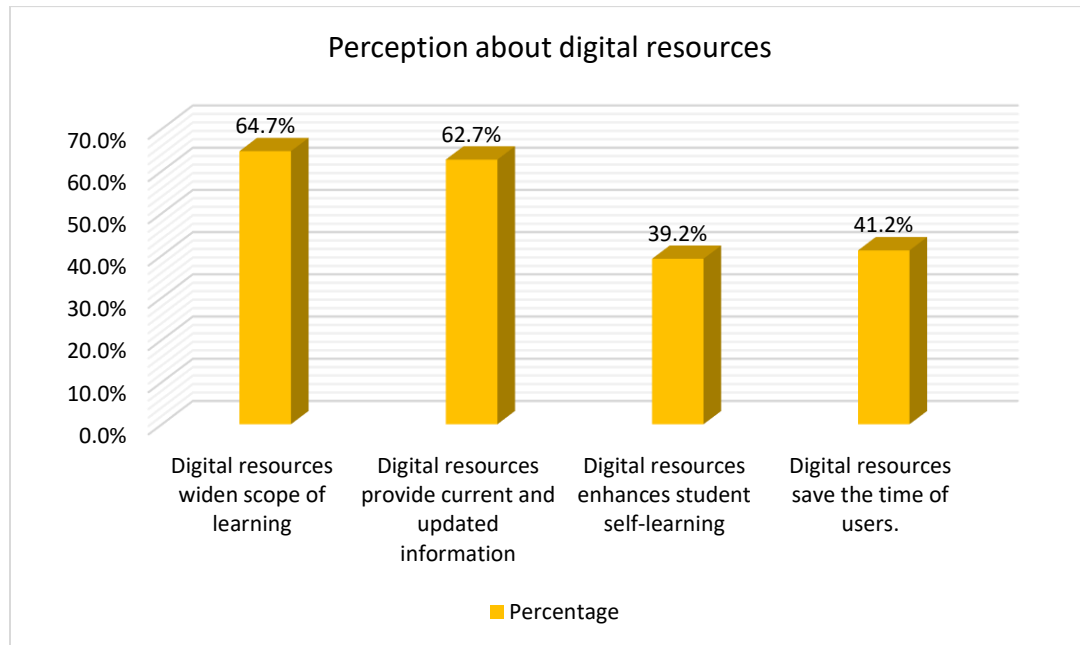**Table 15:Perception about digital resources**

Figure 15: Perception about digital resources

A question was asked to know the user perception about digital resources, so from the Total number respondents majority i.e. 64.7% respondent states that digital resources widen scope of learning, further 62.7% respondents says that digital resources provide current and updated information where as 41.2% respondent said that digital resources save the time of users and remaining 39.2% told that digital resources enhances student self- learning as depicted in the chart above.

5.2.16 Most preferred digital resources

16. According to you which is the most preferred digital resources?

Title	Responses	Percentage
E-books	24	47.1%
E-journals	14	27.5%
E-databases	3	5.9%
E-reference tools	3	5.9%
Streaming videos	5	9.8%
Plagiarism detection tool	1	2%
Artificial intelligence tools	1	2%

Table 16: Most preferred digital resources
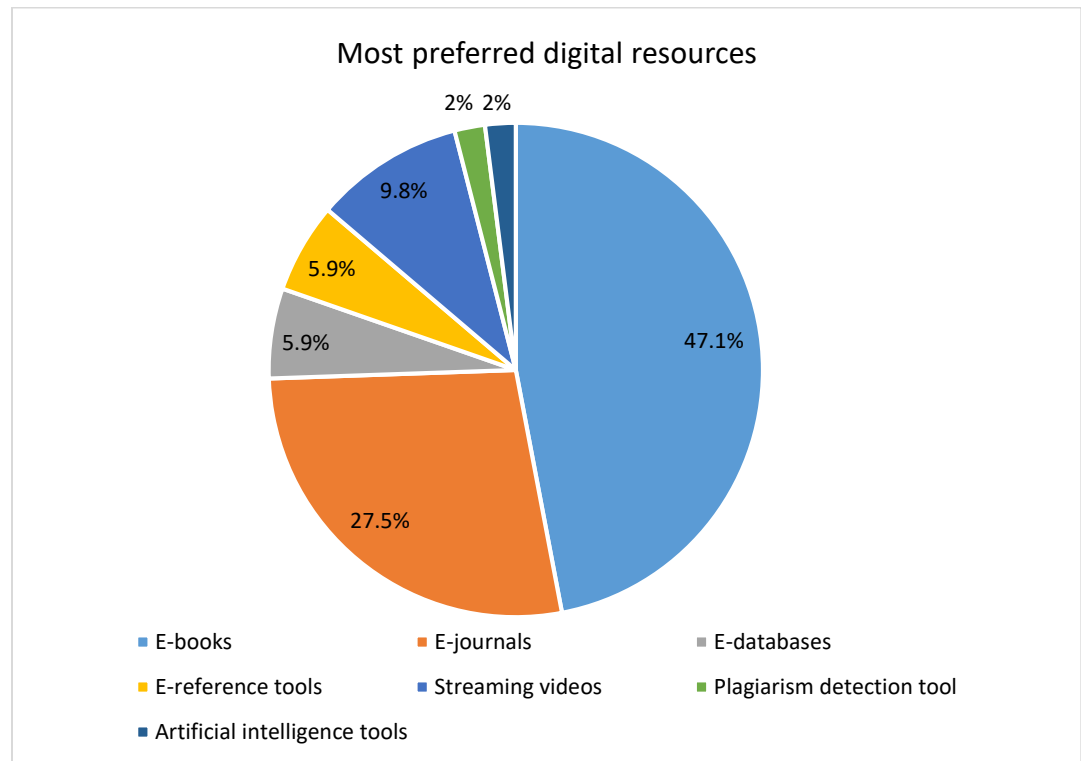
Figure 16: Most preferred digital resources

In the above pie chart it is observed that majority i.e. 47.1% respondents preferred e-books for their needs, 27.5% respondent opted for e-journals, further 9.8% respondents preferred streaming videos, 5.9% respondents selected e-databases, where as again 5.9% respondents preferred e-reference tools, 2% respondents opted for plagiarism detection tools and remaining 2% respondents preferred artificial intelligence tools from the other digital resources.

5.2.17 Purpose of using digital resources

17. What is your purpose of using digital resources?

Title	Responses	Percentage
Research/project work	27	52.9%
To keep updated on subject of interest	11	21.6%
Seminar/workshop	2	3.9%
For reference	7	13.7%
Other	4	7.8%

Table 17:Purpose of using digital resources
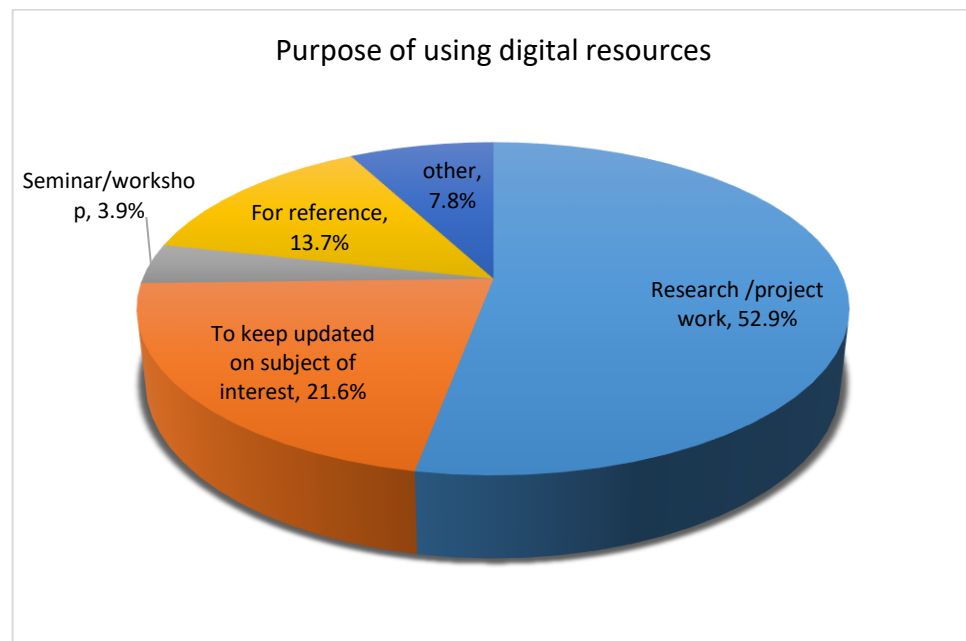
Figure 17: Purpose of using digital resources

The above pie chart shows that majority i.e. 52.9% respondents utilizing digital resources for the purpose of research/ project work, 21.6% of the respondents making use of digital resources to keep themselves updated on the subjects of their interest, further 13.7% respondent use it for reference purpose where as 7.8% of the respondents making use of digital resources for other purpose and rest 3.9% respondents utilizing it for seminars/workshops.

5.2.18 Accessing digital resources

18. Where do you mostly access digital resources?

Title	Responses	Percentage
Library	14	27.5%
Classroom	10	19.6%
Hostel	1	2%
Home	22	43.1%
Computer center	4	7.8%

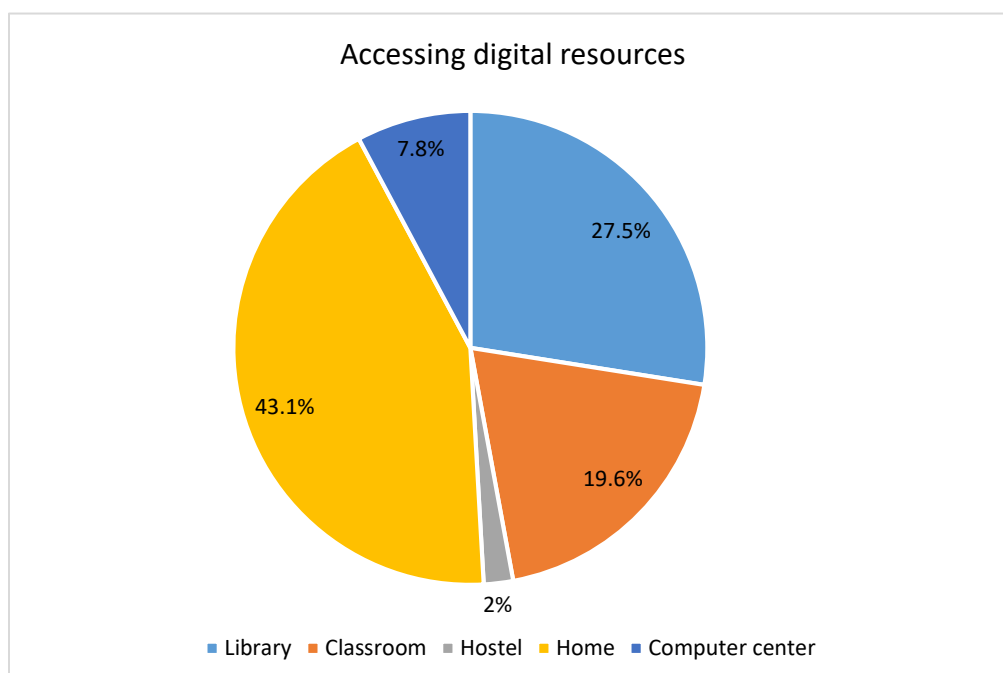**Table 18: Accessing digital resources**

Figure 18: Accessing digital resources

The above pie chart specifies that 43.1% of the respondents mostly access digital resources at home, 27.5% respondents access it in the library where as 19.6% respondents access digital resources in the classroom, further 7.8% respondents access it in the computer centers and remaining 2% respondents in the hostels.

5.2.19 Satisfaction level of digital resources

19. How satisfied you are with digital resources?

Title	Responses	Percentage
Highly satisfied	6	11.8%
Satisfied	31	60.8%
Average	12	23.5%
unsatisfied	2	3.9%

Table 19:Satisfaction level of digital resources
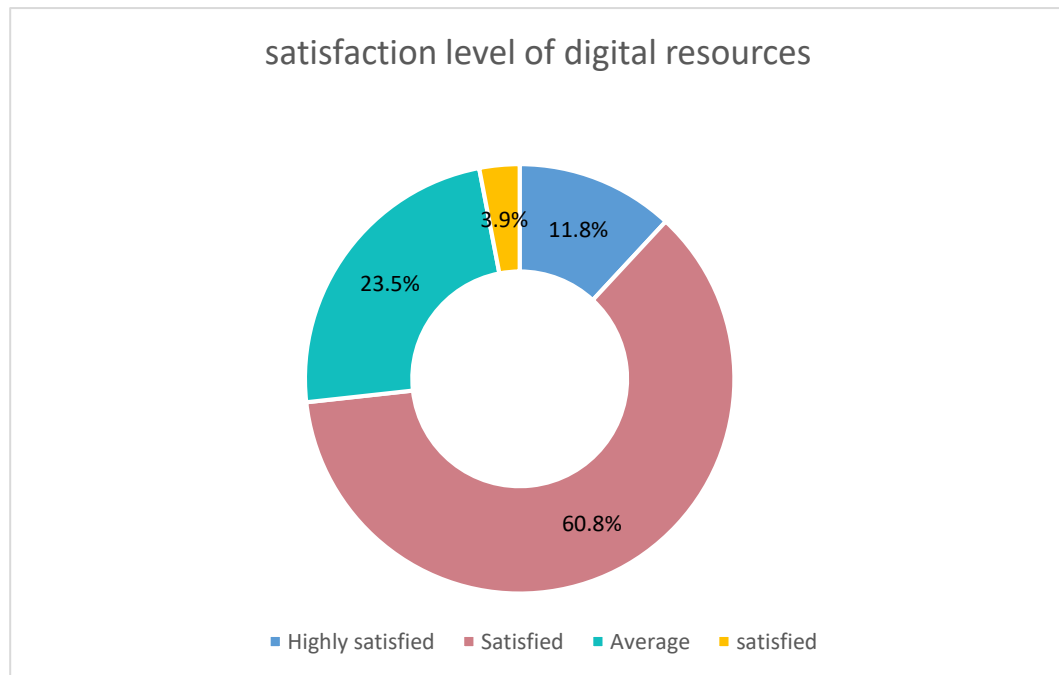
Figure 19: Satisfaction level of digital resources

A question was asked to know the satisfaction level of users towards digital resources From the total number of the respondents majority i.e. 60.8% of the respondents are satisfied with the digital resources, further 23.5% of the respondents are in the range of average level of satisfaction where as 11.8% of the respondents are highly satisfied with digital resources and remaining 3.9% of the respondents are unsatisfied with the digital resources.

CHAPTER VI

OBSEVATION, FINDINGS AND SUGGESTION

6.1 Findings

The research survey was conducted through online questionnaire method (Google form) and survey data has been observed thoroughly. The findings of the study are as follows.

- The study reveals that majority of the respondents libraries are equipped with e-books followed by e-journals and least respondents libraries provide the plagiarism detection tools and Grammarly.

- From the given responses of the user it has been found that most of the users get awareness of the latest digital resources subscribed by library through library websites and not through the orientation programme, library staff or with seminars and workshops.

- The study also indicates that apart from the common digital resources such as e-books, e- journals, e-databases, ETD maximum number of respondents are aware about e-maps and e-reference tools. But they don't have much knowledge about the plagiarism detection tools and streaming videos

- Further the study discovered that most of the academic libraries have less than 5 computers for the patrons to access digital resources and few libraries have equipped with 15 and above computers.

- It has been found from the study that success rate of finding relevant information from the digital sources of the majority of the users is up to 60% and the minority users says it is less than 50%.

- Large number of respondents says that their libraries provide remote access to the subscribed digital resources, where as only least number of respondents libraries doesn't have the provision of remote access, further this has been mostly

provided through intranet and VNP services and very few libraries provide access through Knimbus as ascertain from the study.

- The study examines that majority of the users wants that their libraries should conduct the training programme to get the knowledge of digital literacy and second majority of users require fast internet speed for quick searching and retrieval, where as remaining few user demand for knowledge of artificial intelligence tools and computer system to browse the digital resources.

- the study reveals that maximum number of users libraries provide good infrastructure facilities and least number of users libraries doesn't equipped with good facilities

- Further, this least users affect with the obstacles/barriers such as complex softwares, unfriendly user interface, poor internet connectivity etc.

- It has been discovered from the study that majority of the respondent make use of smart phones followed by personal computers (PC) to access digital resources and only few number of respondents utilize laptop for the same.

- It has been also revealed from the study that most of the users spend 1-2 hours in accessing digital resources and hardly few user spend more than 3 hours in accessing it.

- Study indicates that large number of the users make use of search engines to find the relevant information on digital resources followed by website and less number of users are utilizing online databases and other resources.

- From the study it has been found that majority of the users perception about digital resources was that it widens scope of learning secondly, that digital resources provide current and updated information that help the users in getting intact in their field further least number of users says that digital resources save their time, where as remaining few said that it enhances student self-learning.

- From the total number of respondents majority of the user most preferred e-books for their use followed by e-journal, third in the list is streaming videos next is e-databases and e-reference tools and few user preferred plagiarism detection tools and artificial intelligence tools as found in the study.

- Further study reveals that majority of respondents purpose of using digital resources is for research/project work, second majority is using it to keep themselves updated on the subject of their interest and least number of users are utilizing it for the purpose of references, seminars/workshop and for any other work.
- Finally it discovered that large number of users are satisfied with digital resources and very few users are unsatisfied.

6.2 Suggestions

- To create awareness about the latest subscribed digital resources among the users of academic libraries orientation programs as well as seminars/workshop should be conducted so that the user can know what type of modern digital resources are available in their libraries e-collection to utilize them for their needs.
- According to me all libraries should provide remote access to the subscribed digital resources so that user can access the library resources from anywhere.
- More number of computers should be provided by the libraries to the users so that they can access digital resources.
- Libraries should conduct training programme on digital literacy for their users so that they can get the proper knowledge of digital resources and also they will get to know various technique of using digital resources
- Also libraries should provide fast internet speed to their patrons so that the users can meet their needs.
- Mostly users has preferred e-books and e-journals so libraries should subscribed to more number of these digital resources.

6.3 Conclusion

Digital resources is said to be one of the most important source of information for the users today. It has now changed the users perception about digital resources. Now a days most of the people utilize digital resources for their benefits. It help the user to receive the sources extremely quickly by saving the users time. Even Libraries are now acquiring digital resources in a large numbers for the fulfillment of users needs. The study scrutinizes that awareness of digital resources is now generating among the users and most of them are becoming aware about the latest digital resources. Such as e-reference tools, streaming videos and they are utilizing it for the purpose of research/project work, to enhance their knowledge in the field of their interest. Some of the problems are also been discovered from the study such as digital infrastructure of the some of the libraries are not up to the mark users face difficulties of complex softwares, unfriendly user interface. There is also poor internet connectivity in the libraries and the most of libraries have less than 5 computers for the users to access. Most of the users face difficulty in finding relevant information so training programs should be organised to teach the various search techniques for the users. More number of computers should also be provided to the users by libraries. Inspite of all this difficulty users are still utilizing digital resources because of the easy access.

Bibliography

Akuffo, M. N., &Budu, S. (2020, May). Use of electronic resources by students in a premier postgraduate theological university in Ghana. South African Journal of Information Management, 21(1), 1-9. doi:10.4102/sajim.v21i1.1026

Anamika. (2019, March). E-resources: Types and Utility in Libraries. *Pune Research Times, An International Journal of Contemporary Studies, 4*(1), 1-5. Retrieved from http://www.puneresesrch.com/times

Anna Central Library. (n.d.). Retrieved from Anna Central Library: http://www.annacentenarylibrary.org/

Bhardwaj, M., & Sharma, S. (2015, December). Electronic Resources for University Library and Its Advantages. International Journal of Research in Library Science, 1(2), 1-11. Retrieved from https://www.ijrls.in/wp-content/uploads/2015/12/Electronic-Resources-for-University-Library-and-Its-Advantages.pdf

Bhardwaj, M., & Swadesh, S. (2015, December). Electronic Resources for University Library and Its Advantages. *International Journal of Research in Library Science, 1*(2), 1-11. Retrieved from https://www.ijrls.in/wp-content/uploads/2015/12/Electronic-Resources-for-University-Library-and-Its-Advantages.pdf

British Library. (n.d.). Retrieved from British Library: https://www.bl.uk/

Central Library of IIT Kharagpur. (n.d.). Retrieved from Central Library of IIT Kharagpur: https://library.iitkgp.ac.in/

Chandel, S. S., &Hingwasia, S. (2014). E-Resources and its Explosition: A Study with Special Reference to Academic Libraries (Vol. 1). New Delhi: ESS ESS Publications.

Dongardive, P. (2015, March). Use of electronic information resources at College of Dry Land Agriculture and Natural Resources, Mekelle University, Ethiopia. International Journal of Library and Information Science, 7(3), 55-68. doi:10.5897/IJLIS

Dukare, D. A. (2020, June). Concept and types of digital resources, What are the benefits of consortia approach in collection development? *IP Indian Journal of Library Science and Information Technolog, 5*(1), 46-49. doi:10.18231/j.ijlsit.2020.010

Dukic, D., &Striskovic, J. (2015, July). croatian university students use and perception of electronic resources. Library and Information Science Research, 37(3), 244-253. doi:10.1016/j.lisr.2015.04.004

7 Digital Learning Theories and Models. (n.d.). tech & learning. Retrieved from https://www.techlearning.com/tl-advisor-blog/7-digital-learning-theories-and-models-you-should-know

Electronic Resources. (n.d.). *Module 2 information sources*, 134-153. Retrieved from https://nios.ac.in/media/documents/SrSecLibrary/LCh-008.pdf

E-resources and its types. (n.d.).

Goa State Central Library. (n.d.). Retrieved from Goa State Central Library: https://centrallibrary.goa.gov.in/home

Harley, D., Henke, J., Lawrence , S., Miller, I., Perciali, I., &Nasatir, D. (2006, April 5)Use and Users of Digital Resources: A Focus on Undergraduate Education in the Humanities and Social Sciences. doi:10.6084/M9.FIGSHARE.3427445.V1

Hoq, K. G., & Haque, M. A. (2018, August). Student perception of electronic resources use in Rajshahi University Library: A case study. *International Journal of Library and Information Science, 10*(7), 78-84. Retrieved from https://academicjournals.org/journal/IJLIS/article-full-text/3083DC658409

Hossaini, S. B. (2017, May). Use and Impact of Electronic Resources: A Study on Two Selected Academic Libraries. International Journal of Law, Humanities & Social Science, 1(1), 23-59. Retrieved from https://www.ijlhss.com/wp-content/uploads/2017/05/IJLHSS-05-17-04.pdf

Isibika, I. S., &Kavishe , G. F. (2018, March). Utilisation of subscribedelectronic resources by libraryusers in Mzumbeuniversitylibrary, Tanzania. Global Knowledge, Memory and Communication, 67(1/2), 109-125. doi:10.1108/GKMC-09-2017-0075

Jayapragash, B., Ragavan, S., Prabu, R., &Sivakumaren, K. S. (2011). Usage of Electronic Resources at Bharthidasan University Library: A Study. Pearl: A Journal of Library and Information Science, 5(2), 17-22. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:pjolis&volume=5&issue=2&article=003#aff001

Kalita , R. (2019, July). The Availability and Uses of E-Resources in the College Libraries of Baksa District of Assam: Current Status and Prospects. International Journal of Innovative Technology and Exploring Engineering (IJITEE), 8(9S3), 108-112. doi:10.35940/ijitee.I3022.0789S319

Kaur, B., &Verma, R. (2009, March). Use of Electronic Information Resources: A Case Study of Thapar University. DESIDOC Journal of Library & Information Technology, 29(2), 67-73. doi:10.14429/djlit.29.243

Kaur, K., &Kathuria, K. (2016, November). Awareness and Use of E-resources: A Case Study of Mohinder Singh Randhawa Punjab Agricultural University Library, Ludhiana. DESIDOC Journal of Library & Information Technology, 36(6), 396-404. doi:10.14429/djlit.36.6.9640

Kenchakkanavar, A. Y. (2014, October). Types of E-resources and its Utilities in Library. *International Journal of Information Sources and Services, 1*(2), 97-104. Retrieved from https://uomustansiriyah.edu.iq/media/lectures/8/8_2020_11_17!11_04_27_PM.pdf

Kumari, P. (2015, June). Procurement, Management and Use of E- resources in Current Library Trends: Common Issues. *International Journal of Digital Library Services, 5*(2), 150-159. Retrieved from https//www.ijodls.in

Latheef, A. N., &Thiruvengadamani, T. K. (2017). DIGITAL RESOURCES USAGE IN THE ARTS AND SCIENCE COLLEGE LIBRARIES OF TAMIL NADU: WITH SPECIAL REFERENCE TO ISLAMIC MANAGEMENT COLLEGES. International Conference on Future Libraries: From Promises to Practices 2017, (pp. 247-251). Bengaluru. Retrieved from https://www.researchgate.net/publication/357824391_DIGITAL_RESOURCES_USAGE_IN_THE_ARTS_AND_SCIENCE_COLLEGE_LIBRARIES_OF_TAMIL_NADU_WITH_SPECIAL_REFERENCE_TO_ISLAMIC_MANAGEMENT_COLLEGES

Library of Congress. (n.d.). Retrieved from Library of Congress: https://www.loc.gov/

Library of Congress-Encyclopedia Britannica. (n.d.). Retrieved from Library of Congress-Encyclopedia Britannica: https://www.britannica.com/topic/Library-of-Congress

Lingaiah, V., &Murugan, K. (2015). AN ANALYTICAL STUDY ON USE OF ELECTRONIC RESOURCES BY STUDENTS AT KG REDDY COLLEGE OF ENGINEERING ANDRA PRADESH LIBRARY. National Conference on "Future Libraries: Issues and Challenges, (pp. 1-10). Gandhigram. Retrieved from https://www.researchgate.net/publication/318700832_AN_ANALYTICAL_STUDY_ON_USE_OF_ELECTRONIC_RESOURCES_BY_STUDENTS_AT_KG_REDDY_COLLEGE_OF_ENGINEERING_ANDRA_PRADESH_LIBRARY

Mahadevaiah, K. (2019, june). E-resources & Services and Its Importance for Users of Academic Library. *Journal of Emerging Technologies and Innovative Research (JETIR), 6*(6), 10-17. Retrieved from https://www.jetir.org

Majumdar, A. j., & Bose Majumdar, S. (2014, September). Access of Electronic Resources in Engineering College Libraries of Assam: An Empirical Analysis. 9th Convention PLANNER-2014, (pp. 165-173). Assam. Retrieved from https://www.researchgate.net/publication/308075818_Access_of_Electronic_Resources_in_Engineering_College_Libraries_of_Assam_An_Empirical_Analysis

Moustapha, A. A. (2021, March). Utlization of Electronic Resources by Library Users in Kwara State University, Nigeria. International Journal of Scientific & Engineering Research , 12(3), 1-28. doi:10.1429/ijser.2021.03.04

Mulla, K. R. (2011, May). Use of Electronic Resources by Faculty Members in HKBK College of Engineering: A Survey. Library Philosophy and Practice 2011. Retrieved from https://www.researchgate.net/publication/215709296_Use_of_Electronic_Resources_by_Faculty_Members_in_HKBK_College_of_Engineering_A_Survey?_sg=g27-Dj9z5s1cL5-5vMaBN1siXpLkoMBzJ1ytHIAVfaKI18aLM4YyCxIPwa8cl0Z8dYUomo-p7HiDe9w

Munusamy, N. (2017, october). Use and impact of electronic resources by information science students at Jimma University, Jimma, Ethiopia. Collection Building, 36(4), 163-171. doi:10.1108/CB-12-2016-0036

Muthu, M., &Sivaraman, P. (2015). E-Resources, Types, Needs and their Benefits for Users in Modern Era. New Delhi: Shree Publishers and Distributors. Retrieved from https://www.researchgate.net/profile/Senthur-Velmurugan/publication/337242703_Information_Resource_Management_Print_Final/links/5dcce8634585156b35106f20/Information-Resource-Management-Print-Final.pdf#page=55

Naik , L., & Kumar, K. S. (2018, september). Use of Electronic Information Resources at Selected First Grade College Libraries in Kolar District Karnataka: An Analytical Study. PEARL - A Journal of Library and Information Science, 12(3), 222-227. doi:10.5958/0975-6922.2018.00028.1

Naik , L., Narasappa, K. C., & Naik, G. R. (2019, March). Use of Electronic Information Resources at College libraries in Bangalore, India: A Study of College Learners. Library Philosophy and Practice, 1-13. Retrieved from https://core.ac.uk/download/pdf/228203576.pdf

Naik, L., & Kumar, S. K. (2017, September). USE OF E-RESOURCES BY THE FACULTY: A SURVEY OF FIRST GRADE COLLEGE LIBRARIES IN BANGALURE. International Journal of Library Science and Information Management (IJLSIM), 3(3), 110-116. Retrieved from https://www.researchgate.net/profile/Lokesha-Naik/publication/331929631_Use_of_E-Resources_by_the_Faculty_A_Survey_of_First_Grade_College_Libraries_in_Bangalure_-Mr_Lokeshanaik_Dr_S_Kishore_Kumar/links/5c937da7299bf111693bfab6/Use-of-E-Resources-by-the-Fa

National Digital Library of India. (n.d.). Retrieved from National Digital Library of India: https://ndl.iitkgp.ac.in/

National Library of Australia. (n.d.). Retrieved from National Library of Australia: https://www.nla.gov.au/

National Library of Singapore (online). (n.d.). Retrieved from National Library of Singapore (online): https://www.nlb.gov.sg/main/visit-us/our-libraries-and-locations/libraries/national-library-singapore/collections/Collections/national-library-online

New World Encyclopedia and Wikipedia. (n.d.). Retrieved from New World Encyclopedia and Wikipedia: https://www.newworldencyclopedia.org/entry/British_Library

Newmon, M., &Sengar, V. (2016, April). Digital Library And E-Resources Uses and Problem In Engineering College Of Rajasthan. International Research Journal of Engineering and Technology (IRJET) , 3(4), 1087-1090. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/54561268/IRJET-V3I4217-libre.pdf?1506594228=&response-content-disposition=inline%3B+filename%3DDigital_Library_And_E_Resources_Uses_and.pdf&Expires=1680168543&Signature=HEkCLxBlAdPnsSDOCwzuG0f0afcEx4iNiuHzSbzAyhx9KRLS

Patel, P., & Verma, N. (2018, December). USE OF ELECTRONIC RESOURCES BY THE FACULTY MEMBERS OF INDORE PROFESSIONAL STUDIES ACADEMY. *Kelpro Bulletin, 22*(2), 43-54. Retrieved from http//http://dspace.cusat.ac.in/jspui/bitstream/123456789/13317/1/Use%20of%20electronic%20resources.pdf

Patel, U. A. (2017, June). Usage of Electronic Resources by the Users of SVIT LIBRARY-Vasad, Gujarat, India: A study. Indian Journal of Library Science and Information Technology, 2(1), 11-15. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/54662909/Use_of_Electronic_Resources-libre.pdf?1507530164=&response-content-disposition=inline%3B+filename%3DUsage_of_Electronic_Resources_by_the_Use.pdf&Expires=1680437429&Signature=dPGOu--SalIEALi1ZEz8ZglTMzq8e405Ow

Pawar, R. R., & Moghe, G. S. (2014). Need of E-Resources in Academic Libraries. *Knowledge Management Challenges for Library and Information Professionals*, (pp. 1-7). Kirloskarwadi, Sangl. Retrieved from https://www.researchgate.net/publication/303972137_Need_of_E-Resources_in_Academic_Libraries

Qadri, G. O., Airen, E. A., &Oluwafemi, A. I. (2014, september). A study of the availability and utilisation of library electronic resources by undergraduate students in private Universities in Ogun state, Nigeria. International Journal of Library and Information Science, 6(2), 28-34. doi:10.5897/IJLIS.2013.0423

Qaiser , I., Tariq, M., &Ahamd, Z. (2021, January). Student's Challenges in Access to Digital Resources in Higher Education Institutes. Library Philosophy and Practice (e-journal), 1-17. Retrieved from https://www.researchgate.net/profile/Qaiser-Iqbal-7/publication/352282584_Student's_Challenges_in_Access_to_Digital_Resources_in_Higher_Education_Institutes_of_Pakistan/links/60c1b7074585157774c2609c/Students-Challenges-in-Access-to-Digital-Resources-in-H

Rahman, R. M., &Khare, V. P. (2020, September). Utilization Of Electronic Resources By the Library Users Of Central Library Of North Bengal University, Siliguri: A Case Study. Library Philosophy and Practice, 98-107. Retrieved from https://www.proquest.com/openview/deeb8e014c7604e4ea51527ac811c6c8/1?pq-origsite=gscholar&cbl=54903

Ranganadham , S. (2017, june). Use of Electronic Resources of SreeVidyanikethan Engineering College, A. Rangampeta, Tirupathi: A Survey. International Journal of Library and Information Studies, 7(2), 97-106. Retrieved from https://www.ijlis.org/articles/use-of-electronic-resources-of-sree-vidyanikethan-engineering-college-a-rangampeta-tirupathi-a-survey.pdf

Renukadevi, M., M., S., &Manickam, D. (2020, October). Use of digital resources by the users of Engineering College Libraries in Thanjavur District. GEDRAG & ORGANISATIE REVIEW, 33(4), 81-90. Retrieved from

https://www.researchgate.net/publication/346167659_Use_of_digital_resources_by_th
e_users_of_Engineering_College_Libraries_in_Thanjavur_District?_sg=v_pd63jgUpbgFw
cnY_EVBRVYNqothio_XLxNYOzzupBBMP7bVhA8F-e8j2AE8MJgHFLdKa60bRzkYso

S., P., &Patil, D. B. (2009, June). USE OF ELECTRONIC RESOURCES IN UNIVERSITY
LIBRARIES OF KARNATAKA: A CASE STUDY OF GULBARGA UNIVERSITY LIBRARY. Indian
Journal of Information Sources and Services, 3(1), 13-21. Retrieved from
https://d1wqtxts1xzle7.cloudfront.net/40524415/IJISS_Vol.3_No.1-
libre.pdf?1448944901=&response-content-
disposition=inline%3B+filename%3DA_Bibliometric_Analysis_of_the_Journal_o.pdf&Ex
pires=1680433071&Signature=dNn-2q7~jDAatxEBmFHlq34P8koHbML2jnxWlbB~RGZYS

Sagar , G. D., &Ghogare , G. S. (2020, March). Best practices towards use of E-Resources
in college libraries. Studies in Indian Place Names (UGC Care Journal), 40(49), 226-230.
Retrieved from
https://www.researchgate.net/publication/340087597_Best_practices_towards_use_of
_E-
Resources_in_college_libraries?_sg=8Kb1nnOhRPBoh4eyAMT8hOIiay96s9tYRd5FVQOa_
ehmBY_3CMgkTJLMlNItqdG_mkP6JkfPDyMd1rE

Satpathy, S., & Rout, B. (2010, July). Use of E-Resources by the Faculty Members with
special Reference to CVRCE, Bhubaneswar. DESIDOC Journal of Library & Information
Technology, 30(4), 11-16. doi:10.14429/djlit.30.455

satyabhama , v. (2020). electronic resources : advantages and disadvantages for
academic library user. *International Journal of Applied Research, 6*(10), 1097-1100.
Retrieved from https//www.allresearchjournal.com

Selvaganapathi, N., &Surianarayanan, S. (2013, june). Use and Impact of
Electronic Resources among the Faculty Members of St. Xavier's catholic College
of Engineering, Chunkankadai. Journal of Advances in Library and Information
Science, 2(2), 55-59. Retrieved from https://jalis.in/pdf/pdf2-2/Selvaganapathy.pdf

Sharma , P., & Sharma , A. K. (2018). E-resources and their use in Private Engineering
College Libraries. International Journal of Library Information Network and Knowledge,
3(1), 146-154. Retrieved from www.slp.org.in

Sharma, C. (2009). Use and Impact of E-Resources at Guru Gobind Singh Indraprastha
University (India): A Case Study. E-JASL:Electronic Journal of Academic and Special
Librarianship, 10(1), 1-11. Retrieved from
https://digitalcommons.unl.edu/ejasljournal/123

Sharma, N. (2018, September). Use of e-resources by the faculty members and students:
a study of Swami Shraddhanand College, University of Delhi, Delhi. The Journal of Indian
Library Association (JILA), 54(3), 163-172. Retrieved from
https://www.ilaindia.net/jila/index.php/jila/article/view/268

Singh, D., &Kumar, R. (2022, August). Electronic Resources at Technical University Libraries: A Study. International Journal for Multidisciplinary Research (IJFMR), 4(4), 223-233. Retrieved from https://www.ijfmr.com/research-paper.php?id=646

Singh, G. A., & Sinha , M. K. (2017). Use of electronic resources among research scholars and faculty members of university of Allahabad, Uttar Pradesh, India: A survey. *Library Progress International, 37*(2), 182- 201. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:bpaslp&volume=37&issue=2&article=005

Singh, V. (2013, January). Use of E-Reources by the Faculty and Research Scholars of Department of Computer and Mathematics of JamiaMilliaIslmic University Delhi: A Study. Indian Journals.com Library Progress (International), 33(2), 235-250. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:bpaslp&volume=33&issue=2&article=004

Singh, V. (2014, January 23). Use of E-resources by the faculty members and research scholars of department of computer science and mathematics of jamia milli islamia university, Delhi: a study. *Library Progress (International), 33*(2), 235-250. Retrieved from https://www.indianjournals.com/ijor.aspx?target=ijor:bpaslp&volume=33&issue=2&article=004

Siwach , A. K., & Malik , S. K. (2019, May). USE OF ELECTRONIC RESOURCES BY SCIENCE FACULTY AND RESEARCHERS IN SELECTED NORTH INDIAN UNIVERSITIES. Library Philosophy and Practice. Retrieved from https://www.researchgate.net/publication/333104148_Use_of_Electronic_Resources_by_Science_Faculty_and_Researchers_in_Selected_North_Indian_Universities

Swain, D. K., & Panda, K. C. (2009). Use of electronic resources in_business school libraries of an Indian state A study of librarians' opinion. *The Electronic Library, 27*(1), 74-85. Retrieved from https://www.researchgate.net/publication/220677217_Use_of_electronic_resources_in_business_school_libraries_of_an_Indian_state_A_study_of_librarians%27_opinion

Thangiah, R., & A. , L. M. (2012, June). Impact of Electronic Resources in ICMR Institutions of Tamilnadu. Journal of Advances in Library and Information Science, 1(2), 60-64. Retrieved from https://www.researchgate.net/publication/322437840_Impact_of_Electronic_Resources_in_ICMR_Institutions_of_Tamilnadu?_sg=yyK-q1MCA5KULeT2CX2cf1U3n7wQZLNzdy1eXNpp2YKFIFcocp9R2yJ0fmbwwuN6mezsUHMExtJEB-M

Thanuskodi, S. (2011, November). Usage of Electronic Resources at Dr T.P.M. Library, Madurai Kamaraj University: A Case Study. DESIDOC Journal of Library & Information Technology, 31(6), 437-445. Retrieved from

https://www.researchgate.net/publication/329911334_Usage_of_Electronic_Resources
_at_Dr_TPM_Library_Madurai_Kamaraj_University_A_Case_Study

Thanuskodi, S. (2012). Use of E-resources by the Students and Researchers of Faculty of
Arts, Annamalai University. International Journal of Library Science, 1(1), 1-7.
doi:10.5923/j.library.20120101.01

Velumurugan, S. V. (2013). E-Resources. *e-library Science Research Journal, 1*(12), 1-4.
Retrieved from https//www.researchgate.net/publication/337242694

World Digital Library. (n.d.). Retrieved from World Digital Library:
https://www.loc.gov/collections/world-digital-library/about-this-collection/

World Digital Library. (n.d.). Retrieved from World Digital Library:
https://ucddigitalliteracy.com/2020/04/27/world-digital-library-home/

ANNEXURE - I

Questionnaire for Users

Digital Resources and its Benefits to College Library Users for Academic Pursuit: A Study

Name:

Name of the Institution:

1. What type of Digital Resources is your library equipped with?
   (You can choose more than one option)

   | | E-Books
   | | E- Journals
   | | E-Databases
   | | Plagiarism detection tool
   | | Grammerly

2. How are you aware about the latest digital resources subscribed by the library?

◯ Orientation programme

◯ Library website

◯ Seminar/Workshop

◯ Library staff

◯ Others

3. Which are the other digital resources you are aware about rather than e-book,e-journals, ETD, e-databases? (you can choose more than one option)

☐ E-maps
☐ E-reference tools
☐ Streaming Videos
☐ Plagiarism detection tool
☐ Other

4. Number of computers provided by your library to browse digital resources?

◯ Less than 5
◯ 5 – 10
◯ 10 – 15
◯ 15 and above

5. Does your library provide remote access to subscribed digital resources?

◯ Yes

◯ No

6. If yes than how do they provide it?

◯ VPN

◯ Intranet

◯ Knimbus

◯ Third party vendor

7. Specify your rate of success of finding relevant information from digital
   resources?

◯ More than 75 %

◯ Up to 75 %

◯ Up to 60 %

◯ Up to 50 %

◯ Less than 50 %

8. What are the requirements of college library users in terms of digital
resources? (You can choose more than one option)

☐ Training programme should be conducted to provide digital literacy Require

☐ Fast internet connectivity for quick searching Require computer system to

☐ browse digital resources

☐ Knowledge of Artificial Intelligence (A.I) tools

9. According to you which are the Artificial Intelligence tools that help to meet the requirements of college library users in terms of digital resources? (you can choose more than one option)

☐ Chat GPT

☐ GPT-4

☐ Speech recognition tools

☐ Other

10. Does your library equipped with the good digital infrastructure facilities?

◯ Yes

◯ No

11. If not, than please rate the given barriers/obstacles blockading the digital infrastructure facilities of your college library that affect the users? (Rate from 1-5 where 1-Strongly agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly disagree)

	1	2	3	4	5
Lack of Subscription Based databases	◯	◯	◯	◯	◯
Complex Softwares	◯	◯	◯	◯	◯
Limited access to Back issues	◯	◯	◯	◯	◯

Unfriendly user Interface of Websites					
	⬭	⬭	⬭	⬭	⬭

Poor internet Connectivity					
	⬭	⬭	⬭	⬭	⬭

12. Mode of access of digital resources?

⬭ Personal Computer (PC)

⬭ Laptop

⬭ Tablet

⬭ Smart Phone

13. How much time do you spend in accessing digital resources daily?

⬭ Less than 1 hours

⬭ 1 - 2 hours

⬭ 2 - 3 hours

⬭ More than 3 hours

14. Which is the means used for locating relevant information on digitalresources?

⬭   Search engines

⬭   Websites

⬭   Online databases

⬭   Other

15. What is your perception about digital resources? (You can choose more than one option)

☐   Digital resources widen scope of learning

☐   Digital resources provide current and updated information

☐   Digital resources enhances student self-learning

☐   Digital resources saves the time of user

16. According to you which is the most preferred digital resources?

⬭   E-books

⬭   E-journals

⬭   E-databases

⬭   E-reference tools

⬭   Streaming videos

⬭   Plagiarism detection tools

⬭   Artificial Intelligence tools

17. What is your purpose of using digital resources?

- ( ) Research/ project work
- ( ) To keep updated on subject of interest
- ( ) Seminars/workshop
- ( ) For reference
- ( ) Any other

18. Where do you mostly access the digital resources?

- ( ) Library
- ( ) Classroom
- ( ) Hostel
- ( ) Home
- ( ) Computer center

19. How satisfied you are with the library digital resources?

- ( ) Highly satisfied
- ( ) Satisfied
- ( ) Average
- ( ) Unsatisfied