

**Open Access E-resources available for academic pursuit in Arts, Science and Commerce
Colleges in South Goa: A Study**

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I hereby declare that the data presented in this Dissertation report entitled, "Open Access E-resources available for academic pursuit in Arts, Science and Commerce Colleges in South Goa: A Study" is based on the results of investigations carried out by me in the Library and Information Science at the D.D. Kosambi School of Social Sciences and Behavioural Studies, Goa University under the Supervision of Dr. Carlos M. Fernandes and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities will be not be responsible for the correctness of observations / experimental or other findings given the dissertation.

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This is to certify that the dissertation report “Open Access E-resources available for academic pursuit in Arts, Science and Commerce Colleges in South Goa: A Study” is a bonafide work carried out by **Sunaya Babu Gaunker** under my supervision in partial fulfilment of the requirements for the award of the degree of **M.L.I.Sc.** In the Discipline Library and Information Science at the D.D. Kosambi School of Social Sciences and Behavioural Studies, Goa University.



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CHAPTER 1

INTRODUCTION



CHAPTER I

INTRODUCTION

1.1 Introduction

Open access e-resources (OAR) are a crucial component of the user community in the twenty first century since they allow students, researchers, academics, and even faculties to quickly and easily find solutions to their issues from their computers. Open access e-resources refers to electronic resources that are made widely available on the internet without licensing and copyright restrictions. Users can access these resources through various electronic devices such as computers, smartphones, tablets and e-readers. These resources include e-books, e-journals, online databases, websites, conference proceedings, theses and other forms of digital content. E-resources are valuable tool for teaching-learning and research. It is the supporting pillar of higher education in fulfilling educational objectives.

1.2 Review of Literature

1. **Dr. Natarajan, M. (2017).** This paper deals with the electronic resources (e-resources) and their different types. The information seeking behavior of students, researcher and faculty in the e-environment are discussed in detail. Role of library professionals for making the e-resources available to different types of user community is discussed in detail. Impact of students towards e-resources is given with the evaluation of them. It has been concluded that e-resources helps for anytime availability and easy to access, which helps for the researchers to carry out the research on time.
2. **Madhusudhan, M. (2010).** In his article titled "Use of electronic resources by Research scholars of Kurukshetra University" concluded that electronic resources had become an integral part of information needs of research scholars there. Further, he found that e-resources can be good

substitute for conventional resources, if the access is fast, and more computer terminals are installed to provide fast access to e-resources.

3. **Sharma, C. (2009).** Electronic resources are now widely available in university libraries. However, there is disagreement about how best to use them. This study looks at the several electronic resource databases that are available at the Guru Gobind Singh Indraprastha University Library. The survey also emphasizes how important and preferred online resources are to researchers and educators.

1.3 Objectives

1. To study the availability of open access e-resources in Arts, Science and Commerce College libraries in South Goa.
2. To study the availability of infrastructure facility in Arts, Science and Commerce College libraries for using e-resources.
3. To know the usage of e-resources in Arts, Science and Commerce Colleges in South Goa.
4. To study the challenges faced regarding open access e-resources in Arts, Science and Commerce Colleges in South Goa.

1.4 Scope of the Study

The present study is entitled as “Open Access E-resources available for Academic pursuit in Arts, Science and Commerce Colleges in South Goa: A study”. The scope of the study is mainly to focus on e-resources available under Open Archive initiative for the use of students and academicians and to identify the electronic resources and services which are provided by the Arts, Science and Commerce College libraries in South Goa.

1.5 Hypothesis

1. Open access e-resources are not used optimally.
2. The Library professional lacks confidence in Open Access e-resources for better utilization.
3. The models of open access e-resources are complicated and confusing.

1.6 Limitations

The present study is limited to Open access e-resources available for Arts, Science and Commerce Colleges in South Goa. Total 11 Colleges were selected from South Goa but only 8 colleges were chosen for the present study as the data from 3 colleges were not received.

1.7 Research Methodology

1. The researcher has browsed about all the literature available on the topic.
2. Further the researcher has used the survey method to collect the desired data from the respondents.
3. The questionnaire method (Google Form) was used to collect the data from the Librarian and Students from Arts, Science and Commerce colleges from South Goa.
4. At the end the researcher has used different statistical techniques in finalizing the data with suitable charts and graphs to make the interpretation clear and precise.

1.8 Population of Study

The study will include Library Professionals and users to acquire the desired results.

1.9 Organization of Study

Chapter I- Introduction

Chapter II- Review of Literature

Chapter III- Open Access E-resources and its facets

Chapter IV- Use of E-resources at National and International level.

Chapter V- Data Analysis and Interpretation

Chapter VI- Findings, Suggestions and Conclusion.

1.10 Conclusion

The study will highlight the different Open Access E-resources available and their benefits for students and faculty of Arts, Science and Commerce Colleges of South Goa. The study will allow further scope to enhance the research in the topic. Now E-resources have become important for academic libraries for their building collection so libraries must involve in creating and subscribing to different E-resources because of different types/characteristics of the E-resources and spread the awareness of E-resources among the users. E-resources are also useful for libraries as well as each and every user of the society who needs a variety of information through the globe.

1.11 References

1. Madhusudhan, M. (2010). Use of electronic resources by research scholars of Kurukshetra University. *The Electronic Library*. 28. 492-506. DOI:10.1108/02640471011033684
2. Natarajan, M. (2017). Use and Impact of Electronic Resources by Information Science Students at Jimma University, Jimma, Ethiopia. *Collection Building*, 36, 163-171. <https://doi.org/10.1108/CB-12-2016-0036>
3. Sharma, C.(2009). Use and Impact of E-Resources at Guru Gobind Singh Indraprastha University (India): A Case Study. *E-JASL 1999-2009* (volumes 1-10). 123. <https://digitalcommons.unl.edu/ejasljournal/123>
4. Quadri, G. O., Adetimirin, A. E., & Idowu, O. A. (2014). A study of availability and utilization of library electronic resources by undergraduate students in private universities in Ogun State, Nigeria. *International Journal of Library and Information Science*, 6(3), 28-34. DOI:10.5897/IJLIS2013.0423
5. Velmurugan, Chandran. (2011). Open access resources and its significance – An Introduction. *Proceeding of the National Conference on Networking of Libraries, Resources, Technologies and Users in the Knowledge Society (SALIS 2011), Kovilpatti,418-420.*
https://www.researchgate.net/publication/291056455_OPEN_ACCESS_RESOURCES_AND_ITS_SIGNIFICANCE_-_AN_INTRODUCTION

CHAPTER 2

LITERATURE REVIEW

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.

1. **Adeniji, M. A. (2015).** This study examines the awareness and utilization of e-resources by academic staff at Olabisi Onabanjo University's Ibogun campus. Thirty lecturers from seven departments were interviewed, revealing constraints such as power outages, limited bandwidth, insufficient funds, and network issues. The resources were used for research and teaching purposes. The study suggests that university management should invest more in e-resources for better service delivery and address constraints hindering effective e-resource utilization.
2. **Ajebomogun, F. O., & Fagbola, O. O. (2015).** The study examined the use of electronic resources by postgraduate students at the University of Agriculture in Abeokuta. It focused on accessing, frequency of use, usefulness, and strategies to improve students' use of electronic resources. The study involved 350 participants, with 210 questionnaires collected. Results showed email was the primary communication method, while other electronic facilities were not

utilized adequately. Recommendations for improvement were made based on simple percentage, frequency counts, and mean analysis.

3. **Ahmed, S. Z. (2013).** The study examines faculty members satisfaction with university-paid electronic information resources in eight public universities in Bangladesh. Findings indicate that faculty members are generally dissatisfied with the current level of subscribed e-resources, citing limitations such as limited titles, back issues, difficulty in finding information, home access, computer access, and slow download speeds. These constraints are primarily due to poor IT infrastructure and limited access to e-resources, leading to low satisfaction.
4. **Appleton, L. (2006).** This paper reports on a research study on the perceptions of electronic library resources in the UK further education sector. The study, which is qualitative, uses annotated quotations to explore personal experiences and perceptions of using these resources in teaching and learning activities.
5. **Bala, R., & Partap, B. (2018).** The study examines the awareness and perception of open access resources among management students and faculty at Tilak Raj Chadha Institute of Management and Technology (TIMT), Yamuna Nagar, Haryana. The majority (82.95%) are aware of and use these resources for academic activities. The study also discusses the reasons for using these resources, problems faced, and satisfaction levels. The researchers recommend regular awareness and training programs.
6. **Deka, P. (2020).** This study examines the use of open access e-resources by M. Phil. And PhD research scholars at Dibrugarh University across various subject domains. It aims to understand the types of e-resources used by these scholars and the challenges they face in evaluating and extracting these resources. The vast number of quality open access e-resources available on virtual platforms can meet the information needs of researchers and academicians worldwide.

7. **D'Antoni, S. (2009).** This special issue of Open Learning introduces the emerging Open Educational Resources (OER) movement, a young initiative with just a decade of development. It addresses issues in various settings, affecting education systems, institutions, learners, and educators.
8. **Diane, H. (2007).** Present study is about faculties of humanities and social sciences and examined the attitudes of users towards use and non-use of digital resources in teaching in under graduate faculties of Liberal Arts colleges and community colleges affiliated to university of California. Researcher held discussion groups and conducted a survey of fulltime and part- time faculty as well as undergraduate students of university and colleges. The survey was conducted in 2004 and 2005 in targeted 4443 faculties from specific disciplines with stratified random sampling. Study found that majority of faculty use their personal collection for teaching in keeping view in time saving. One of the most cited obstacles was that the availability, reliability and expenditure of the necessary equipment both in classroom as well as in personal level.
9. **Dadzie, P. S. (2005).** The study examines the use of electronic resources by students and faculty at Ashesi University, Ghana, focusing on information access, information type, and library communication tools. Results show high computer usage, high usage of internet resources, and low use of scholarly databases due to inadequate information about library resources. Recommendations include introducing information competency across the curriculum, teaching a one-unit course, and increasing campus PCs.
10. **Frehywot, S., Vovides, Y., Talib, Z., Mikhail, N., Ross, H., Wohltjen, H., & Scott, J. (2013).** Medical schools in resource-constrained countries are utilizing e-learning to improve access to medical education and enhance faculty effectiveness. However, this approach requires institutional readiness in human and infrastructural resources, which may not always be present in low and middle-income countries (LMICs). This paper summarizes the literature on e-learning in LMICs and presents a spectrum of tools and strategies used.

- 11. Gorla, S. (2012).** This paper discusses the implementation of consortium-based access to e-resources in Indian higher education and research institute libraries over the past decade. It highlights the use of emerging technologies like RSS feeds, Google Reader, and Delicious for efficient e-resource utilization. The paper emphasizes the importance of consortia in maximizing the use of e-resources in Indian libraries.
- 12. Geith, C., & Vignare, K. (2008).** The right to education emphasizes access to education, including the means to develop and acquire skills, knowledge, and credentials. Open Educational Resources (OER) and online learning offer solutions to address this issue. The authors compare their growth and financial sustainability, exploring potential scenarios to address the global education gap and ensure human rights in education.
- 13. Hilton III, J., Wiley, D., Stein, J., & Johnson, A. (2010).** The use of open educational resources is a significant movement in education, encompassing a continuum of openness. This includes four aspects of reuse, licensing and technical aspects, and their implications for those creating such resources. The concept of openness is not a simple dichotomy, but a continuum of adaptability and reuse.
- 14. Haridasan, S., & Khan, M. (2009).** This paper highlights the importance of electronic resources in library collections and their usage in the National Social Science Documentation Centre (NASSDOC) library in New Delhi, India. The study reveals that respondents are aware of e-resources, and many research scholars and faculty members use them for their work. Many faculty members agree on the need for computer and internet literacy.
- 15. Ishola, B. C., Aboyade, M. A., Ojokuku, B. Y., & Akintade, K. O. (2016).** Purpose of the present study was to examine the availability, accessibility and use of e- resources in selected private universities in South West, Nigeria. Survey research method was adopted for the study. The instruments for data collection were a researcher-designed questionnaire and observational

techniques. The study found that Internet services and e-resources are adequately available for use in the academic libraries studied; e-information resources are frequently available for use in the libraries; Library users do make use of online services, since those who use e-resources daily relatively outweighed the other pattern of usage; Ease of access and use are the major factors responsible for preference of the use of e-resources to other information formats. Though usefulness, quick response, reliability of the electronic sources were other good factor for preference of electronic sources; further findings reveal that majority of the respondents use e-resources for, course work 401 (90.72%), though the e-resources is also substantially use for general reading, teaching, research, deepening e-knowledge skills, finding answers, seeking virtual treasures etc. The study recommended that the National University Commission should ensure that all the universities are functionally networked and subscribes to a major relevant academic electronic database to facilitate students' access to and use of e-resources, on regular basis in Nigerian universities.

16. **Ibrahim, A. E. (2004).** The research study entitled "Use and User Perception of Electronic Resources in the United Arab Emirates University (UAEU)" has conducted survey to measure the frequency of use of e-resources, factors influencing use of e-resources, computer knowledge and language barriers from United Arab Emirates University (UAEU) of faculty members of electronic resources. 125(89%) responses were received out of 140 faculty member through questionnaires for user Interface satisfaction (QUIS) along with Likert's Five Point Scale and SPSS statistical package has been used to analyze and manipulate the collected data. A stratified random sample was drawn to represent not only to overall population but also the key subject. Study reveals that, existing environment is effectively enhanced to learning and research process in UAEU Library. Significantly low use was reported for e-books, e-journals and databases and indicates the unawareness attitude of said library. Further results show that faculty members were with fairly good computer skills that enabled them to search and utilize e-resources. Computer skills are not only sufficient for efficient use of e-resources but also training

program is must for faculties. Researcher has found out the barriers of Arabic language rather than English.

17. **Jogan., (2015).** in their paper entitled “Access, Awareness and Use of Electronic Resources by Post Graduate Students in Gulbarga University”. This study inspects postgraduate students’ views on the access, awareness and usage in facilitating their research and their satisfaction with the sources and services currently provided. The findings of this study shows that the majority(90.1%) of respondents acknowledged the important role of library in facilitating research, and 72.5% of the respondents were satisfied with the current role being played by the libraries.
18. **Kashyap, S. R. (2022).** This study aimed to compare the use of e-resources by students in the Arts, Social Science, and Science streams in Raipur city. A survey method was used, using a self-structured questionnaire to collect data from regular UG and P G students. The results showed no significant difference in the use of e-journals between the streams, with e-books being the most preferred e-resource. The Ho Hypothesis was accepted, and the Ha Hypothesis was rejected, indicating no significant difference in e-resource usage.
19. **Kumar, S. (2014).** conducted a study on Use of Electronic Resources by Post Graduate Students and Research Scholars of the Banaras Hindu University: A Study. The study found that the majority of users (37.47%) are frequently using e-resources for teaching and research purpose. The study reveals that 93.84 % of users are aware about the e-resources and most of them aware through Internet. The study also highlighted that(57.14%) of the users spend time less than one hour to access e-resources.
20. **Kumar, S., & Singh, M. (2011).** conducted a study on Access and use of electronic information resources by scientists of National Physical Laboratory in India: A case study. The purpose of this to determine the usefulness of e-resources to the scientists of National Physical Laboratory, New Delhi, India and their skills in using various search methods and techniques to access and

utilize these resources. The survey was conducted with the help of a questionnaire and personal interview.

- 21. Kumar, B. S., & Kumar, G. T. (2010).** This study investigates the perception and use of e-resources and the internet by engineering, medical, and management academics in Bangalore City, India. It aims to compare e-sources with print sources, understand their advantages and challenges, and determine the extent of internet use. Results show that while most academics use electronic sources, they prefer print sources. Many learned about electronic sources through trial and error or friend recommendations.
- 22. Kaur, B., & Verma, R. (2009).** This paper discusses the use of web and other tools by academic libraries to improve the usage of e-resources. It highlights the importance of marketing methods in library management, which often require organizational changes to adapt to changing environments. The paper also discusses user surveys, expectations, satisfaction measures, and communication methods. Examples of promotional activities and surveys conducted at the Library of Cracow University of Technology are provided. The paper proposes value-adding activities for libraries to enhance e-resource usage.
- 23. Muthuvennila, S., & Thanuskodi, S. (2018).** A study was conducted at Alagappa University DDE to investigate the accessibility and use of open access resources for Information Science PG students. The research involved 39 respondents who participated through questionnaires, interviews, and observations. The study found that most students were not aware of the available resources, making them difficult to access and use effectively. The majority of students were male (41%), with 59% female (59%). The study found that 90% of respondents were aware of the library's open access resources. The study also found that the majority of students used these resources within 1 to 3 years.
- 24. Momanyi, E. B., Toroitich, P., & Onderi, P. (2018).** The study at Maseno University Kenya examined the infrastructure supporting the IL program, its effectiveness, and the relevance of e-resources to students' needs. The research involved 100 respondents and used descriptive statistics for data analysis.

Findings revealed that the program was ineffective due to short orientation, overloaded orientation schedule, and inadequate e-resource training. The study also found underutilization of electronic resources in the library. Recommendations included emphasizing user instructions, computer information literacy, online databases, and information searching, and integrating an effective information literacy program into the education curriculum.

- 25. M. A. (2015).** This study examines the awareness and utilization of e-resources by academic staff at, Olabisi Onabanjo University's Ibogun campus. Thirty lecturers from seven departments were interviewed, revealing constraints such as power outages, limited bandwidth, insufficient funds, and network issues. The resources were used for research and teaching purposes. The study suggests that university management should invest more in e-resources for better service delivery and address constraints hindering effective e-resource utilization.
- 26. Mal, B. K., Bajpai, R. P., & Chakraborty, H. K. (2013).** The rapid shift from print media to e-resources in state university libraries of Uttar Pradesh has created new challenges for library professionals. The paper identifies various problems in collection building of e-resources and provides suggestions to improve the situation, as top higher education institutes are rapidly transitioning from print media to e-resources to meet user community needs.
- 27. Maharana, B., Sethi, B., & Behera, S. (2010).** The study aimed to understand the necessity and usage of internet and e-resources among MBA students at Sambalpur University, Orissa, India. Out of 120 students, 91 (75.83%) responded to a structured questionnaire. Results showed that most students have 2-4 years of experience using the internet and are aware of its applications. Over half of the students felt that management studies would be severely affected without internet and e-resources.

28. Madhusudhan, M. (2010). The paper examines the use of e-resources by Kurukshetra University research scholars, focusing on their skills, purpose, and access issues. It also explores their opinions on the features and usefulness of e-resources compared to conventional sources.
29. Naick, B. R., & Ramesh, R. (2018). The study investigated the use of electronic information resources (EIS) by faculty at Lakireddy Bali Reddy College of Engineering. It involved 246 faculties and used a questionnaire for data collection. Results showed that faculty across different branches are aware and highly proficient in using EIS. The study also examined the frequency of faculty visits to the college library and the number of days they use it. The findings suggest that EIS are essential for all department faculty at Lakireddy Bali Reddy College of Engineering for their individual development, research, and teaching purposes.
30. Okerson, A. (2000). This article examines past trends in electronic resources and publishing, analyzing issues like archiving, usage, utility, copyright, and licensing from 1991 to 1998/99.
31. Onobrakpor, D. U., Ozioko, O. R., Effiong, E. A., & Udofia, I., (2023). This study examines the accessibility of Open-Access electronic-resources by Postgraduate students of Federal Universities in South, Nigeria. The study adopted descriptive survey design. Purposive sampling was used to select four (4) universities from south south, Nigeria. The population for the study was 1401, consisting of all registered 330 Doctoral (PhD) and 1,071 Masters of Education (M.Ed) students of the faculty of education of the institutions. This study had shown that postgraduate students access Open-Access e-resources for academic purposes. This paper emphasised postgraduate student's access to Open Access e-resources and highlights the extent which was high, with no significant difference to both Med and PhD. This prompt the recommendations that adequate library ICT infrastructures be provided in the universities for postgraduate use as well as stable power supply to power the facilities.

32. Oyedipe, W. J., Adekunmisi, S. R., & Akinbode, R. O. (2017). The study examined the level of awareness and usage of Open Access among lecturers in the Faculties of Arts and Education, Olabisi Onabanjo University, Nigeria. A questionnaire designed by the researchers was employed to collect data for the study. The study revealed that lecturers had high level of awareness of Open Access and used them for conducting and publishing their scholarly works; however their level of awareness of Open Access content were higher than their actual use of the contents. The study further revealed that some lecturers used some open access contents, such as, e-journals, e-dictionaries and e-encyclopedias daily, weekly, monthly and whenever the need arises while some others like e-handbooks, e-guides and e-technical reports were not used at all. It further revealed that Open Access journals were the most utilised of all the Open Access contents surveyed amongst other findings. Many recommendations were proffered amongst which were sensitisation of faculty about benefits, challenges and policies guiding Open Access use through information literacy training provided by academic librarians and that academic staff should make themselves available for information literacy training programmes so as to make wise and effective use of Open Access to enhance their academic status.

33. Oladele, A. A., & Aragbaye, M. O. (2022). This study looks at the use of open access resources in two private universities in Oyo state, Nigeria. The study adopted a descriptive survey design and a self constructed questionnaire was used as a tool for data gathering. The population of study was comprised of the undergraduate students in undergraduates of Ajayi Crowther University, Oyo, and Lead City University, Ibadan. With the total population of 7,160 but in order to determine the sample size, the multi-stage random technique was used and the final sample size was 234. This study was guided by three objectives. Simple descriptive statistical analysis of frequency counts and percentages was used to analyze the data acquired. The study revealed that the most available open access resources in the selected private universities are open access journal, open courseware and free electronic books and most of the undergraduates used the open access resources occasionally. Also, it was revealed that undergraduate students are confronted with mild challenges against the use of open access

resources and some of these challenges include; poor internet connectivity, inconsistent/unreliable electricity supplies, insufficient digital literacy skills and low awareness of the importance of the use of open access resources. The study therefore recommended the need for university library management to sustain the availability and awareness of open access resources and also to provide alternate source of power supply in order for accessibility.

34. Okamoto, K. (2013). Open access textbooks and educational resources (OERs) are being promoted as a cost-effective alternative to expensive print textbooks. Academic libraries are actively participating in these initiatives by creating guides, promoting OATs and OERs, reviewing them, and even helping to create them. This article analyzes library initiatives across the United States.

35. Prince, G., & Saravanan, P. (2015). The study examines the awareness and perception of users in higher educational institutions in Kanyakumari district towards open access resources. Data was collected from students, research scholars, and faculty members from Arts & Science, Engineering, Education Colleges, and University of Kanyakumari district. The results show that most respondents are fully aware of open access resources and use them for their academic activities. They are satisfied with their use and satisfaction with their academic activities.

36. Richter, T., & McPherson, M. (2012). Education is crucial for addressing national and international issues like extremism, poverty, and hunger. However, developing countries need a shift in thinking and strong support from other countries to compete with Western industrialized nations. This article explores whether Western policymakers can avoid repeating past failures in providing foreign aid, how educators can manage a worldwide knowledge society, and if open educational resources can overcome the educational gap and foster educational justice.

- 37. Rolfe, V. (2012).** This study explores staff awareness and attitudes towards open educational resources (OER) in universities. Despite not being familiar with OER, respondents had a clear understanding of its meaning. They were familiar with internal content repositories but not externally. Barriers to OER included confusion over copyright and lack of IT support. Overcoming these barriers will help advance open educational practices, benefiting faculty staff and the global community.
- 38. Soni, N. K., Rani, S., Kumar, A., & Shrivastava, J. (2020).** The study examines the usage patterns of electronic and print journals, books, and other library services among users at the Institute of Nuclear Medicine & Allied Sciences (INMAS) TIRC Library. A questionnaire survey was conducted among scientists, service officers, DRTC, and researchers, and 121 users responded. Results showed that users are aware of library services, actively participate in collection development, and prefer electronic resources. With the introduction of electronic journals, usage has increased, while printed resources are also favored.
- 39. Sarafudheen, F., & Haseena, V. K. (2020).** The study investigates the collection management of e resources in the NITC library. Data was collected through questionnaires and interviews with librarians. Results show that librarians face fewer challenges like maintenance issues and no major issues like budget or license issues. Most research scholars and faculties do not mention problems or barriers, indicating high user satisfaction with e-resources.
- 40. Song, I. S., & Buba, A. A. (2017).** The study investigates the accessibility and use of e-resources among extension workers in Jigawa state, focusing on poor institutional ICT infrastructure, unstable power supply, and low information literacy skills. The findings suggest the establishment of research institutes, improved ICT infrastructure, and improved information literacy training for extension workers. It also recommends raising awareness about available e-resources and information search methods.

- 41. Sudhier, K. G., & Seethalekshmi, K. P. (2011).** The study analyzed the use of e-resources by students and research scholars at the Faculty of Arts in the University of Kerala. Out of 120 respondents, 56.67% used the internet for educational purposes and 19.16% for email checking. Google was the most preferred search engine, followed by Yahoo. 49.2% used e-resources for academic purposes, 27.5% for seminar presentations, and 11.7% for project works. The study found that most departments lack sufficient facilities for e-resource use.
- 42. Swain, D. K. (2010).** The study examines the interest of Orissa business school students in using electronic resources and evaluates the quality of information services provided by primary information reserves. The research identifies students' preference for e-journals, e-books, e-newspapers, e-reports, and e-articles, with less interest in electronic theses and dissertations. Most students are aware of EBSCO and Emerald Management Xtra, but not all other databases. The study also reveals that printed materials are more commonly used than e-resources, and Web OPAC usage is less than expected.
- 43. Sharma, C. (2009).** The paper explores the use of e-resources in university libraries, focusing on the availability of databases at Guru Gobind Singh Indraprastha University Library and the importance of online resources among teachers and researchers.
- 44. Swain, D. K., & Panda, K. C. (2009).** This paper examines the growth of electronic resources in the last decade and aims to establish standards and strategies to manage and access them. It surveys Business School libraries in Orissa, India, to measure the amount of e-resources accessed and examine the extent of Electronic Information Services (EIS) offered. The study also identifies challenges faced by information professionals in accessing and delivering EIS, offering suggestions and remedial measures.

- 45. Shuling, W. (2007).** The Library of Shaanxi University of Science and Technology conducted a study to understand the current conditions and requirements of its readers using electronic resources. The results showed that nearly half of the students were satisfied with the university's e-resources. Currently, traditional library storage is the primary method for obtaining literature, with e-books not replacing traditional books. The majority of readers prefer printed books, indicating that the two types of literature are mutually supply. The homepage of the library is the preferred method for obtaining information, with screen reading and unfamiliarity with the structure and retrieval methods being the main external factors.
- 46. Thanuskodi, S. (2011).** Information technology has transformed libraries into digital and virtual spaces, enabling better services and satisfying diverse user needs. E-resources, such as e-books, journals, and e-zines, are easily accessible in remote areas and solve storage problems. A study at Dr. T.P.M. Library, Madurai Kamaraj University found that MPhil students are most aware of e-resources, while postgraduate students and PhD scholars are less aware. Improvements in access facilities and subscription to more e-resources are recommended.
- 47. Velmurugan, C. (2011).** This paper discusses the role and usefulness of open access resources (OAR) in the 21st century, focusing on their introduction, types, and availability of journals. It also discusses the benefits of OAR for students, researchers, scholars, and faculties.
- 48. Velmurugan, C. (2010).** This paper discusses the importance and usefulness of open access and open resource applications in various fields, including education and business. It examines institutional repositories and Open Access resources, their impact on stakeholders, and their role in the environment of academic libraries in India.

49. **Veena, G. (2016).** The main purpose of this study is to investigate the awareness and utilization of open access electronic information resources and related issues among post graduate students of Mangalore University. A questionnaire-based survey method has been used in this research. A total of 180 questionnaires distributed but 152 were returned duly filled in as a sample. The findings shows that 72(47.36%) of respondents frequently used e-books/ e-journals, 58(38.15%) of respondents acquired their open access e-resource usage skill through teachers/research supervisors, 98(64.47%) of the respondents stated that they are satisfied with open access e-resources. The result of the study shows that majority of students are aware of open access e-resources.
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CHAPTER 3

OPEN ACCESS E-RESOURCES AND ITS FACETS

CHAPTER III

OPEN ACCESS E-RESOURCES AND ITS FACETS

3.1 Introduction

Open access is a revolutionary strategy that has completely changed the way that knowledge is shared and how scholarly publishing operates. Through its promotion of the free, immediate, and unrestricted availability of scientific literature to the worldwide audience, it challenges the traditional challenges that restrict access to research. By providing unrestricted access to the most recent intellectual and scientific research, open access promotes cooperation, creativity, and social advancement and benefits scholars, students, policymakers, and the general public. By removing obstacles to information movement, open access has become a catalyst for positive change in academics and beyond. The term "open access" refers to "any user's worldwide, free, permanent, immediate, full text, online access to digital scientific and scholarly material, primarily research articles published in peer-reviewed journals." Open access allows for easy access to the entire text of publications via their bibliographical data. It is helpful and advantageous for the academic community, but it also gives all internet users free access to research publications. Resources having unrestricted access are those that are available to everybody, anywhere, at any time. An open access system may not only be trouble-free but also an effective method in situations when resources are abundant compared to demand. This is because it requires very little control. (Velmurugan., 2011).

3.2 Background of Open Access

Open access (OA) is an innovative trend in scholarly communication that evolved in response to the constraints and difficulties that traditional publication methods faced. Scholarly communication was mostly dependent on publishers

and academic associations before to the development of the Internet and the World Wide Web, as they controlled the distribution of research outcomes. However, since a large amount of the scholarly record was only available in digital format, problems with access and preservation emerged when the shift toward electronic formats occurred. This sparked questions about the direction of scholarship and the requirement for better access to academic publications.

There have been issues with accessibility arising from the fast expansion of scholarly literature, especially for libraries in poorer nations. Libraries found it challenging to navigate through the vast amount of available literature, and organizations that fund research were burdened financially by the rising costs of scholarly periodicals. In addition, when journals moved toward electronic publishing, they were bundled into databases under the ownership of big business publishers, which resulted in usage and access restrictions. These partnerships frequently fall short of meeting the unique requirements of libraries, despite being profitable for publishers.

Open access enables academics and researchers to freely disseminate their results and add to the corpus of knowledge. Through the adoption of open-access principles, the academic community aims to establish a more egalitarian and inclusive research environment in which access to information is not restricted by financial restrictions or restrictive license arrangements. Over the years, a number of programs, regulations, and financial requirements have accelerated the adoption of open access in a wide range of academic fields. (Abdullah, et al., 2020)

3.3 What is Open Access?

The term "open access" describes a way to obtain literature that lets users access and use anything on the Internet for free without having to pay any money. It allows users to search, read, download, distribute, copy, and link to the entire texts of the publications without any limitations on their access to the content. The goal of the open-access movement is to reduce the financial burden that

libraries bear, as they frequently cannot afford to subscribe to every scientific publication. Open access aims to increase the accessibility of intellectual knowledge by granting unrestricted access to publications.

Open-access journals, archives, repositories, and open courseware are just a few ways to promote open access. Removing price tags and permission barriers to enable unrestricted user access and utilization of content is an essential principle of open access. However, there may still be some restrictions on copying and dissemination because copyright protects writers' rights to maintain the integrity of their work and to be properly acknowledged and cited.

After the Budapest Open Access Initiative (BOAI) was signed, open access gained official recognition. It includes granting free access to internet resources while getting beyond publisher agreements and copyright restrictions. Scholarly publications come in a variety of formats, including theses, dissertations, journals, articles, conference papers, technical reports, theses, and reprints.

Open access is a well-known methodology that permits the general public to read evaluations of scientific articles, browse information on a wide range of subjects, and provide feedback and reports on significant research discoveries. Platforms include self-posting on authors' homepages, open archives, institutional repositories (IRs), open-access journals, and more are used to accomplish it. The two primary open-access sources are institutional repositories, which gather and store the intellectual work of academic staff, researchers, and students at an institution, and open-access journals, which offer free full-text article access. (Ashikuzzaman., 2018).

3.4 Definitions of Open Access

The term "open access" describes a publishing framework that permits quick, unrestricted, and cost-free access to academic publications and research findings. The complete texts of digital information, including journal articles, conference papers, theses, and reports, can be read, downloaded, copied, distributed, and linked to without any cost to the user. Widespread information transmission is

encouraged by open access, which also fosters creativity, teamwork, and the development of research across many disciplines. It is founded on the idea that publically financed research should be available to the general public, with the goal of expanding access to scientific knowledge and enhancing its impact. Repositories, archives, journals, and other platforms that make scientific works freely and publicly available online can all be used to accomplish open access.

There are a variety of definitions have been given to the term open access.

The Bethesda Statement (2003) defines open access where “The author(s) and the copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship as well as the right to make small numbers of printed copies for their personal use.”

Suber(2012) one of the pioneers in this field, defined; “open access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions.”

Open Access (Eprint services, n.d.) is “free, immediate, permanent online access to the full text of research articles for anyone web-wide.”

Fitzgerald (2010) opines that open access “aims to disseminate knowledge broadly and freely across the internet in a timely fashion.” Hubbard (n.d.) said it is “to make the full text of the research article freely available.”

According to Materu (2004), “the present decade can be called the o-decade (open source, open systems, open standards, open archives, open everything) just as the 1990s were called the e-decade”. (Ashikuzzaman., 2018).

3.5 Principles of Open Access

Open Access Journals: These can be accessed freely as soon as they are published. They remove all restrictions and limitations on access to their content, including paywalls and subscriptions. Journals such as PLoS Biology and D-lib are two examples.

Institutional and Digital Repositories: These are subject- or domain-specific repositories where articles are publicly accessible online by authors or their institutions. Administrators of these repositories may be associations, academic institutions, or specific institutions. Arxiv, which specializes in physics and related fields, is an example of such a repository.

limited Access Journals: A few traditional journals use a restricted access strategy, allowing readers to freely access some parts or articles while restricting access to the remaining content of the publication behind a barrier. For example, the prestigious scientific publication Nature provides open access to certain of its articles, but most of its material is subscription only.

Delayed Open Access: This method involves making publications available through traditional subscription models at first, then switching to open access after a certain period of time from the publication date. Before releasing the material for public use, publishers have the right to impose a restriction. Journals published on sites like HighWire Press use this strategy.

Dual Mode: This is a publishing model in which a journal publishes both an open-access online edition and a print edition that is available through subscription. One example of a dual-mode journal is the British Medical Journal (BMJ), which offers both an open-access online version and a print version for subscribers.

Economy-based Access: Based on a nation's or institution's economic capabilities, certain systems seek to grant free access to magazines. Institutions in underdeveloped nations or areas with limited resources can obtain scholarly material for free or at a reduced cost thanks to initiatives like HINARI and AGORA.

These various approaches help achieve the primary goal of open access by giving scholars, researchers, and the general public access to and use of scholarly literature without being restricted by their means. They provide substitutes for traditional subscription-based methods, encourage knowledge exchange, and support cooperation and creativity in academic and research environments.

3.6 What are Open Access Resources? (OAR)

Open access resources refer to digital content that is freely available and accessible to the public without any financial barriers. These resources encompass a wide range of scholarly literature, research outputs, educational materials, and other types of content that can be accessed and utilized by anyone with an internet connection. Here are some examples of open-access resources:

Open Access Journals: Research articles published in a variety of disciplines' OA journals are freely accessible to readers. PLOS ONE, BioMed Central, and the Directory of Open Access Journals (DOAJ) are a few examples.

Institutional Repositories: Scholarly works, including articles, conference papers, and theses, can be deposited and shared in institutional repositories, which are developed by numerous universities and research institutions. The institution's intellectual work is freely accessible through several repositories. Harvard DASH and Stanford Digital Repository are two examples.

Preprint servers: It allow researchers to share their work before it is formally subjected to peer review. They hold preliminary copies of research articles. Preprints are freely available and can be obtained on sites such as bioRxiv (for biological sciences) and arXiv (for physics, mathematics, computer science, and other fields).

Open Educational Resources (OER): OER are educational materials that are publicly accessible and can be used for research, teaching, and learning. Textbooks, lecture notes, presentations, films, and interactive modules are

among them. OpenStax, MIT OpenCourseWare, and OER Commons are a few instances of OER platforms.

Government and Institutional Reports: A large number of international organizations, research centers, and governmental entities release publically accessible reports and data sets. Reports from the National Institutes of Health (NIH), the World Bank Open Knowledge Repository, and the World Health Organization (WHO) are a few examples.

Digital Libraries and Archives: These resources offer a vast array of digitized material, such as historical records, manuscripts, images, and artwork. The Internet Archive, Europeana, and the Digital Public Library of America (DPLA) are a few examples.

Funding Agency Platforms: A number of funding organizations mandate that recipients make their research results publicly available. Open-access publications from supported research are hosted by PubMed Central (research funded by the NIH) and Europe PubMed Central (Europe PMC).

Open-access resources have broken down barriers to knowledge and brought forth a new era of cooperation and accessibility. These platforms, which include preprint servers, institutional repositories, open-access journals, and educational materials, have democratized information access and empowered scholars, instructors, and students all across the world. We can promote innovation, quicken the rate of scientific advancement, and guarantee that knowledge genuinely belongs to everyone by supporting open access. Now let's embrace the wide world of freely available resources and open the doors to knowledge.

3.7 Features of Open Access Resources (OAR)

Free and Digital: Open Access (OA) literature is mainly shared online, where anybody with an internet connection can quickly access it. Additionally, it is freely accessible to readers without the need for paywalls or subscription fees, ensuring uninterrupted access to information.

Copyright Compatibility: Open Access (OA) does not mean copyright-free content. The copyright to their works is still held by the authors. However, they frequently provide users with the permission to view, share, and reuse their content in keeping with particular licensing arrangements, such as Creative Commons licenses.

Alignment with Scholarly Procedures: Open Access (OA) is consistent with important procedures in academia, including career development, print publication, revenue creation, peer review, and preservation. To guarantee the quality and authenticity of published research, open access journals frequently use strict peer review, and they can maintain their operations through various funding models like article processing charges (APCs) or institutional support.

Author-driven Initiative: The Open Access (OA) movement places a strong emphasis on authors freely sharing their works to the global knowledge pool without expecting payment. In order to maximize the impact of their research and assist both the academic community and the general public, authors decide to make it widely accessible.

Production Costs: Although open access (OA) gives users free access, it does not remove the expenses related to publishing research. Financial resources are needed for the creation and distribution of scholarly content, and these can be obtained in a number of ways, including grants from research organizations, author fees, and institutional support.

Peer Review Importance: Open Access (OA) recognizes the role that peer review plays in preserving the quality and authenticity of academic publications. Large-scale open-access programs emphasize the value of strict peer review procedures and promote openness in the evaluation and dissemination of research.

Delivery Mechanisms: Open-access journals and open-access archives are the two primary ways by which OA literature is usually distributed. Open Access (OA) journals are specialized publications where all of the information is available for free. Preprints, post-prints, conference papers, theses, and other

research outputs are gathered and preserved via open access archives, sometimes referred to as repositories.

Open access, with its emphasis on digital accessibility, copyright compatibility, and diverse publishing models, aims to democratize knowledge by removing barriers to access and fostering wider dissemination of research findings. It aligns with established scholarly practices while embracing new opportunities offered by the digital age, ultimately promoting the progress and impact of scientific and scholarly knowledge.

3.8 Characteristics of Open Access (OA) Resources

Open-access resources possess several key characteristics that distinguish them from traditional scholarly publications. These characteristics include:

Unrestricted Use: Open Access (OA) resources are distinguished by their unrestricted accessibility to readers, which serves to break down barriers. Open-access resources are freely accessible and downloadable, in contrast to traditional scholarly journals that often ask for costly subscriptions or paid access. All people can now access information without financial restrictions, irrespective of their institutional affiliation or economic status.

Promoting Innovation and Collaboration: One of the key characteristics of open-access (OA) resources is the ability to use, remix, redistribute, and reuse the content. Many Open Access (OA) publications come with open licenses, such as Creative Commons licenses, which allow users to interact with the content in different ways. This quality advances research and knowledge creation by promoting teamwork, stimulating creativity, and permitting the creation of additional work.

Digital Format: Expanding Access and Effectiveness - Open Access materials are mostly in digital format, making use of digital technologies and the internet. The digital format makes it simple to distribute, store, and retrieve academic

content. By overcoming the restrictions imposed by physical space, researchers and readers can easily access open access resources from their devices. The digital format facilitates widespread access and interaction while expanding the reach of knowledge globally.

Preservation and Long-term Accessibility: Preserving Information - Since open access (OA) recognizes the value of conserving intellectual work, using institutional or subject-specific archives is encouraged. By acting as digital archives, these repositories guarantee the availability and accessibility of research products for an extended period of time. Open Access (OA) resources aid in the preservation of scientific history by encouraging archival methods, which enables subsequent generations to draw from and expand upon the body of existing knowledge.

Strict Peer Review: Preserving Academic Integrity Open Access (OA) resources are subject to strict peer review, yet being publicly available. A vital component of academic publishing, peer review guarantees the quality, authenticity, and integrity of the research. These norms are maintained by open access publications, which enable researchers to disseminate their work while preserving the high level of research related to traditional publishing.

Diverse Content Types: Enhancing the Research Environment OA includes a wide range of content categories not just research publications. Preprints, theses, dissertations, conference papers, and datasets are all included. This variety of information makes it easier to explore various scholarly viewpoints, promotes the exchange of various research results, and supports interdisciplinary study. Open Access (OA) resources are part of an evolving and diverse research environment.

Global Accessibility: Information Without Limits- The capacity of open access materials to overcome social and economic boundaries is among their most powerful features. Open access guarantees that knowledge is available to academics and scholars across the globe by eliminating access limitations. This worldwide accessibility encourages the democratization of knowledge,

facilitates cross-border collaboration, and allows for the exchange of varied viewpoints.

Enhanced impact and Visibility: Open Access (OA) materials provide academics the chance to make a bigger effect as well as more visibility. Because open access makes research publicly available, it promotes larger readership and citation of scientific work. This enhanced visibility has the potential to boost career progression and interdisciplinary collaborations by increasing citation rates and reputation within the academic community.

Knowledge Equity: Open Access (OA) resources play a critical role in addressing inclusiveness and knowledge equity. Their role is to close the knowledge gap that exists between different institutions and geographical areas by providing researchers with limited resources with access to the same academic material as their peers in well-funded institutions. Global differences in research and education have been reduced and a more equitable dissemination of information is encouraged by OA resources.

Rapid Dissemination: Open access resources help research findings to get distributed quickly. compared with traditional publishing strategies, which may involve lengthy publication timelines, open access facilitates quick dissemination of research findings. This feature is especially helpful in research domains that move quickly since it makes it possible for scientists to express their discoveries to the public and other scientists more quickly, which increases the rate of scientific advancement.

Collaboration and Interdisciplinarity: Open Access resources promote interdisciplinary research and collaboration. Facilitating simple access to a wide range of scholarly publications can enable researchers from many fields to more successfully collaborate and build upon one other's work. Open Access (OA) encourages sharing of ideas and interconnected methods, resulting in creative findings and solving complex societal issues.

Knowledge transfer and Public Engagement: Open Access resources support both public participation and research. They facilitate the access to and use of scholarly knowledge by non-academic audiences like practitioners,

policymakers, and the general public. Because OA makes it possible for research to be used in practical settings, it promotes knowledge transfer and increases the influence of research on society.

Format Flexibility and Multimedia Content: Open Access resources are available in a variety of formats that go beyond typical text articles. Multimedia components including pictures, movies, interactive data visualizations, and audio recordings are supported. Because of the content format's flexibility, researchers can present their work in ways that are more approachable and engaging for a variety of learning styles, which improves the research experience as a whole.

Publications and Open Data: Open Access (OA) materials frequently encourage the sharing of research data with publications. Open Access (OA) promotes scholarly transparency, reproducibility, and cooperation. Open access increases the reliability and validity of scientific research by facilitating the open sharing of datasets, methods, and study protocols. This enables other researchers to verify and expand upon previously published findings.

Open-access resources have transformed the way scholarly content is disseminated and accessed. Academic publishing has undergone a radical change as a result of their attributes, which include global accessibility, preservation initiatives, unrestricted use, digital format, free availability, and a dedication to peer review. Open Access (OA) materials facilitate study, encourage teamwork, and push scientific and scholarly advancements, increasing knowledge accessibility and societal impact.

3.9 What are Open Access E-resources?

Open access e-resources refer to digital materials that are freely available online for anyone to access, read, and often reuse without financial or legal barriers. These resources encompass a wide range of content, including scholarly articles, books, journals, datasets, educational materials, and more. Open access e-resources are freely accessible to anyone with an internet connection, eliminating

the need for payment or subscription fees. This accessibility promotes knowledge dissemination, especially in regions or communities where access to traditional subscription-based resources may be limited. Most open access materials are published under licenses that allow users to read, download, copy, distribute, and sometimes modify the content without violating copyright laws. Common open access licenses include Creative Commons licenses, which provide a standardized way to grant permissions for use. Open access e-resources democratize access to knowledge by removing financial barriers, benefiting researchers, students, educators, and the general public. Open access facilitates collaboration and knowledge exchange across geographic and disciplinary boundaries, driving innovation and progress. Open access publications often receive more visibility and citations, leading to greater impact for authors and their research. Open educational resources support flexible and lifelong learning opportunities, empowering learners of all ages and backgrounds. Various repositories, directories, and platforms curate and provide access to open access e-resources. Examples include institutional repositories, subject-specific repositories, open access journals indexed in directories like the Directory of Open Access Journals (DOAJ), and platforms like arXiv and PubMed Central. While open access promotes free access to information, sustainable funding models are essential to support the production, dissemination, and preservation of open access e-resources. Funding sources may include grants, institutional support, publication fees, and consortial agreements.

3.10 Need for Open access E-resources

The need for open access e-resources arises from several factors, including:

Promotion of Knowledge Sharing: Open access e-resources facilitate the widespread sharing of knowledge and research findings, ensuring that valuable information is accessible to researchers, practitioners, policymakers, educators, and the general public worldwide.

Addressing Access Barriers: Traditional subscription-based models create access barriers for individuals and institutions with limited financial resources, particularly in low- and middle-income countries. Open access e-resources help overcome these barriers by providing free, unrestricted access to scholarly content.

Enhancing Research Impact: Open access publications often have higher citation rates and broader dissemination compared to subscription-based journals, leading to increased visibility and impact for authors and their research outputs.

Fulfilling Funding Agency Mandates: Many funding agencies and institutions require researchers to make their findings openly accessible as a condition of funding. Open access e-resources enable compliance with these mandates, ensuring that publicly funded research is available to the public.

Supporting Interdisciplinary Collaboration: Open access e-resources facilitate collaboration and knowledge exchange across disciplines, fostering interdisciplinary research and innovation. By breaking down access barriers, researchers from different fields can easily access and build upon each other's work.

Enabling Global Participation: Open access e-resources promote inclusivity and diversity by enabling researchers from around the world to participate in scholarly communication. This inclusivity fosters a more equitable and democratic exchange of ideas, perspectives, and expertise.

Accelerating Scientific Discovery: Open access accelerates the pace of scientific discovery by facilitating rapid dissemination of research findings. Timely access to up-to-date information allows researchers to build upon existing knowledge and advance their research more efficiently.

Supporting Education and Lifelong Learning: Open access e-resources provide valuable resources for educators, students, and lifelong learners, supporting teaching, learning, and professional development initiatives. By eliminating access barriers, open access promotes equitable access to educational materials and scholarly resources.

Increasing Transparency and Accountability: Open access promotes transparency and accountability in scholarly communication by making research outputs openly available for scrutiny and review. This transparency helps ensure the integrity and credibility of the research process.

Catalyzing Innovation in Publishing: The open access movement has sparked innovation in scholarly publishing, leading to the development of new publishing models, tools, and technologies that aim to improve the dissemination, evaluation, and reuse of research outputs. This innovation benefits both authors and readers by enhancing the efficiency and effectiveness of scholarly communication.

3.11 Advantages of Open Access E-Resources

Open access e-resources offer several advantages, including:

Widespread Access: Open access e-resources are freely available to anyone with an internet connection, which ensures that knowledge and information are accessible to all, regardless of geographical location, affiliation, or financial status.

Cost Savings: Open access eliminates the need for subscription fees or pay-per-view charges, reducing financial barriers for individuals, institutions, and researchers. This can result in significant cost savings for libraries, universities, and research institutions.

Increased Visibility and Impact: By making research freely available, open access e-resources can reach a larger audience, leading to increased visibility, citation rates, and academic impact for authors and their work.

Faster Dissemination of Knowledge: Open access allows research findings to be disseminated more quickly, accelerating the pace of scientific discovery and innovation. This can lead to more rapid progress in addressing pressing societal challenges.

Promotion of Collaboration and Interdisciplinary Research: Open access facilitates collaboration among researchers by removing access barriers and enabling the sharing of data and findings across disciplines and geographic boundaries. This can foster interdisciplinary research and innovation.

Public Engagement and Education: Open access e-resources enable members of the public, including policymakers, educators, and interested citizens, to access and engage with scholarly research, promoting informed decision-making and public understanding of science.

Preservation and Long-Term Access: Many open access repositories and platforms employ robust preservation strategies to ensure the long-term accessibility and archiving of research outputs, safeguarding them for future generations.

Compliance with Funding Mandates: Open access policies and mandates from funding agencies and institutions require researchers to make their findings openly accessible, ensuring that publicly funded research is available to the public.

Innovation in Scholarly Communication: The open access movement has spurred innovation in scholarly communication, leading to the development of new publishing models, tools, and technologies that aim to improve the dissemination, evaluation, and reuse of research outputs.

Ethical Imperatives: Open access aligns with the principles of academic freedom, equity, and inclusivity, promoting a more equitable and democratic system of knowledge dissemination that benefits both researchers and society as a whole.

3.12 Disadvantages of open access e-resources

Open access e-resources offer several Disadvantages, including:

Financial Sustainability: The shift to open access can pose financial challenges for publishers, especially smaller or independent publishers who rely on subscription fees to cover costs. Finding sustainable funding models for open access publishing can be difficult, potentially leading to publication fees or other costs for authors or institutions.

Quality Control Concerns: Some critics argue that the lack of traditional peer review or quality control mechanisms in certain open access publications can compromise the rigor and reliability of research findings. While many reputable open access journals uphold rigorous peer review standards, the proliferation of predatory or low-quality journals in the open access landscape remains a concern.

Digital Divide: Despite increased accessibility, the digital divide still exists, with disparities in internet access and digital literacy impacting certain communities and regions. Individuals without reliable internet access or technological resources may face barriers to accessing open access e-resources, exacerbating existing inequalities in knowledge dissemination.

Information Overload: The sheer volume of open access content available online can be overwhelming for researchers, students, and practitioners, making it challenging to identify relevant, high-quality resources amidst the noise. This can result in information overload and difficulty in navigating the vast open access landscape.

Copyright and Licensing Issues: While open access promotes broader dissemination and reuse of research outputs, navigating copyright and licensing requirements can be complex. Authors must carefully consider licensing agreements and intellectual property rights when publishing in open access journals, which may restrict certain uses or adaptations of their work.

Perceived Prestige: Despite the growing acceptance of open access publishing within the academic community, some researchers still perceive traditional subscription-based journals as more prestigious or reputable. As a result, authors may face pressure to publish in established, high-impact journals to advance their academic careers, potentially overlooking reputable open access outlets.

Long-Term Preservation Challenges: Ensuring the long-term preservation and accessibility of open access e-resources can be challenging, particularly for smaller repositories or platforms with limited resources. Without robust preservation strategies, there is a risk that valuable research outputs could be lost or inaccessible over time.

Fragmentation of Content: The decentralized nature of open access publishing can lead to fragmentation of research content across various repositories, platforms, and formats. This fragmentation can make it difficult to discover and access relevant research outputs, particularly for interdisciplinary or cross-disciplinary research.

Misuse and Misinterpretation: Open access e-resources are susceptible to misuse, including misinterpretation or misrepresentation of research findings. Without proper context or critical evaluation, open access content may be misused to support flawed arguments or agendas, leading to misinformation or confusion.

Transition Challenges: The transition to open access publishing involves significant cultural, institutional, and infrastructural changes within the academic publishing ecosystem. Overcoming resistance, addressing funding gaps, and navigating transitional challenges can be complex and require coordinated efforts from various stakeholders.

3.13 Categories of Open Access E-resources

- E-journals
- E-Books
- E-Databases
- E-Theses and Dissertations
- E-Newspaper
- E-encyclopaedias
- Web Dictionaries
- Institutional Repositories

E-Journals: These are scholarly journals that make their articles freely available to readers without requiring a subscription or payment. Authors often retain copyright, and articles are typically published under open licenses, allowing for widespread distribution and reuse.

E-Books: These are scholarly books that are published under open access licenses, allowing readers to access, download, and share them freely online. Open access books cover a wide range of academic disciplines and topics and are often published by academic presses, universities, or scholarly societies.

E-Databases: Online collections of structured data, such as bibliographic databases, abstracting and indexing services, reference databases, and specialized data repositories.

E-Theses and Dissertations: These repositories collect and provide access to graduate theses and dissertations, making them freely available for researchers, students, and the general public. OATD platforms may be institutional or centralized and contribute to the dissemination of graduate research.

E-Newspaper: An e-newspaper, also known as a digital newspaper or online newspaper, is a digital version of a traditional print newspaper that is available on the internet. E-newspapers provide readers with the convenience of accessing

news anytime, anywhere, and often offer additional features such as multimedia content, interactive elements, and searchable archives.

E-Encyclopedia: An e-encyclopedia is a digital version of an encyclopedia, which is a comprehensive reference work containing articles on a wide range of subjects or topics. E-encyclopedias may be general-purpose or specialized, covering various disciplines such as science, history, literature, art, and more. E-encyclopedias provide users with instant access to information, enabling them to quickly search for and retrieve relevant content on specific topics of interest.

Web Dictionaries: Web dictionaries are online dictionaries that provide definitions, translations, pronunciation guides, and other linguistic information for words and phrases in different languages. Web dictionaries are valuable resources for language learners, writers, translators, and anyone seeking to improve their vocabulary and language skills.

Institutional Repositories: Institutional repositories are digital platforms or databases created and maintained by academic institutions, research organizations, or libraries to collect, preserve, and disseminate the scholarly output produced by their faculty, researchers, and students. Institutional repositories typically include research articles, preprints, conference papers, theses, dissertations, datasets, and other types of scholarly works. They serve as centralized archives of institutional research output, providing open access to the institution's intellectual capital and enhancing visibility, impact, and preservation of scholarly work.

3.14 Why is Open Access Important for Academic Libraries?

Academic libraries are part of an environment where open access is vital to both the academic community and the library's mission. It continues to be an effective instrument that promotes the ideas of fair access to information, encouraging teamwork, and stimulating creativity. Open Access offers a revolutionary approach in view of the growing expenses related to journal subscriptions and the requirement for wider dissemination of research findings. As the preservers of knowledge, academic libraries understand the enormous benefits of Open Access in terms of increasing access to academic literature, facilitating scholarly communication, reducing expenses, raising the profile and influence of academic research, and advancing scientific inquiry. The reason behind the significance of Open Access for academic libraries is presented in this introduction, which also provides a framework for future research on its advantages and implications. Open Access is of great importance for academic libraries due to the following reasons:

1. Open Access guarantees that academic material is freely accessible to everyone, irrespective of location or means. As custodians of knowledge, academic libraries work hard to give their patrons complete access to information resources. Libraries can close the gap between subscription-based resources and the increasing need for unrestricted access to academic articles by adopting Open Access. In addition to empowering scholars, students, and the general public to examine and interact with a variety of scholarly texts, this promotes equality.
2. Scholarly communication is supported and made possible in large part by academic libraries. Open Access encourages the timely and accessible distribution of research findings, promoting the sharing of knowledge both within and between fields. Libraries can promote researchers' publication in Open Access journals and institutional repositories.
3. Academic libraries on limited funds face substantial challenges due to the rising costs of journal subscriptions. Open Access resources allow

libraries to more effectively use their resources since they provide a more affordable option than traditional subscription-based models. Libraries may lower costs, grow their collections, and give their patrons access to a greater range of resources by adopting Open Access. Consequently, this enhances the libraries' capacity to facilitate research, teaching, and learning initiatives within their respective organizations.

4. Open Access publications are freely accessible to a global audience, breaking down barriers to knowledge dissemination. Academic libraries can leverage Open Access platforms and institutional repositories to showcase the research output of their faculty and students, enhancing their visibility and impact. By maximizing the exposure of scholarly works, Open Access amplifies the reach and influence of academic institutions, enabling them to contribute meaningfully to the scholarly community and society.
5. Open Access is closely intertwined with the principles of open science, which advocate for transparency, collaboration, and the sharing of research outputs. Academic libraries play a vital role in fostering a culture of open science by supporting Open Access initiatives, promoting open data practices, and facilitating the adoption of open science tools and methodologies. By embracing Open Access, libraries contribute to the wider movement toward a more inclusive, collaborative, and transparent research ecosystem.
6. Open Access extends beyond research publications and includes educational materials as well. Academic libraries can leverage Open Access resources to support the development and adoption of Open Educational Resources (OER). OER provides free and openly licensed educational materials that educators and students can use, adapt, and share. Libraries foster innovative teaching practices by promoting OER and enhancing access to quality educational content.
7. Open Access enables academic libraries to extend their reach beyond the academic community and engage with the public. Libraries democratize

knowledge and promote public understanding of research findings by providing free access to scholarly resources. Open Access facilitates knowledge transfer to policymakers, professionals, journalists, and the general public, fostering informed decision-making and societal progress.

8. Open Access has emerged as a transformative paradigm that aligns with the mission and values of academic libraries. By promoting equitable access to information, facilitating scholarly communication, managing costs, enhancing research visibility, and advocating for open science, Open Access empowers libraries to be at the forefront of knowledge dissemination and academic progress. Embracing Open Access is a strategic decision for libraries and a commitment to fostering a more equitable and impactful scholarly landscape for the benefit of researchers, students, and society.

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CHAPTER 4
**OPEN ACCESS E-RESOURCES AT THE
INTERNATIONAL AND NATIONAL LEVEL**

CHAPTER IV

OPEN ACCESS E-RESOURCES AT NATIONAL AND INTERNATIONAL LEVEL

4.1 Open Access E-resources at National Level

4.1.1 Goa State Central Library

The Central Library in Goa, officially known as the Krishnadas Shama Central Library, is one of the prominent institutions serving the informational and educational needs of the residents of Goa. The Central Library is located in the heart of the capital city, Panaji (also known as Panjim), making it easily accessible to the public. The library was established in 1832 during the Portuguese colonial era, making it one of the oldest public libraries in India. It was initially named the Publica Livraria and was later renamed the Krishnadas Shama Central Library in honor of Krishnadas Shama, a noted Goan historian and author. The Central Library boasts an extensive collection of books, periodicals, newspapers, manuscripts, maps, and other materials in multiple languages, including English, Konkani, and Portuguese. The collection covers a wide range of subjects such as literature, history, science, arts, and culture. The library provides various services to its patrons, including lending facilities, reference services, reading rooms, internet access, and photocopying/printing services. It also offers assistance to researchers and scholars seeking access to its collections. In recent years, the Central Library has been digitizing its collections and providing access to digital resources such as e-books, online databases, and digital archives. This initiative aims to enhance accessibility and preserve valuable materials for future generations. The Central Library regularly organizes cultural events, workshops, seminars, and exhibitions to promote literacy, education, and cultural awareness among the community. These events often feature local authors, artists, historians, and intellectuals. Over the years,

efforts have been made to renovate and modernize the Central Library to improve its infrastructure, facilities, and services. These initiatives aim to create a more conducive environment for learning, research, and community engagement. Overall, the Central Library in Goa continues to play a vital role in preserving Goa's literary and cultural heritage while adapting to the changing informational needs of its diverse population. It remains a cherished institution for both scholars and the general public alike.

4.1.2 Goa University

Goa University is a premier educational institution located in Taleigao Plateau, Goa, India. Established in 1985, it offers undergraduate, postgraduate, and doctoral programs across various disciplines including arts, science, commerce, management, law, and technology. The university is known for its commitment to academic excellence, research, and innovation. With regards to open access e-resources, Goa University, like many academic institutions around the world, has recognized the importance of providing unrestricted access to scholarly information. The university may have established a digital repository where scholarly works, research papers, theses, dissertations, and other academic materials produced by faculty, researchers, and students are archived and made openly accessible to the public. Goa University might have adopted an open access policy that encourages faculty and researchers to make their scholarly outputs openly accessible. Such policies often mandate depositing research outputs in the institutional repository or publishing in open access journals. The university may support open access publishing by hosting or sponsoring open access journals that are freely available to readers. These journals promote the dissemination of research findings without barriers such as paywalls. Goa University might promote the use of open educational resources, which are freely accessible teaching and learning materials that can include textbooks, lecture notes, multimedia content, and more. OER can help reduce the cost of education and increase access to knowledge. The university library likely provides access

to a wide range of open access e-resources, including scholarly articles, journals, databases, and repositories. Librarians may also offer guidance and support for finding and accessing open access materials. The university may engage in awareness campaigns and advocacy efforts to promote open access principles among faculty, researchers, and students. This could include workshops, seminars, and training sessions on open access publishing, copyright, and intellectual property rights. By embracing open access e-resources, Goa University contributes to the democratization of knowledge, fosters collaboration and innovation, and maximizes the impact of its research outputs within the academic community and beyond.

4.1.3 National Library Calcutta

The National Library in Kolkata, formerly known as the Imperial Library, is one of the largest libraries in India. It serves as the apex body for all libraries across the country, ensuring the development and promotion of library services and activities. The National Library of India is situated on the scenic Belvedere Estate, Alipore, and houses a vast collection of books, manuscripts, periodicals, maps, and other materials. The National Library in Kolkata (formerly Calcutta) provides access to various open access e-resources. These resources cover a wide range of subjects including arts, humanities, sciences, social sciences, and more. However, the specific list of available resources may change over time due to updates and additions. To access open access e-resources provided by the National Library in Kolkata, you may want to visit their website or contact them directly for the most up-to-date information. Additionally, you can explore open access repositories and databases such as DOAJ (Directory of Open Access Journals), PubMed Central, and others, which provide access to scholarly articles, journals, and other academic resources freely accessible to the public. The library houses an extensive collection of printed materials, including books, journals, newspapers, and other publications covering diverse subjects and languages. The National Library preserves numerous valuable manuscripts,

including ancient texts, historical documents, and rare manuscripts in various languages. The library provides access to digital resources such as e-books, e-journals, databases, and online catalogs, offering users the convenience of accessing information remotely. The library boasts special collections on specific subjects, rare books, archives, and more, making it a valuable resource for researchers and scholars. The National Library offers various services to its users, including reference assistance, inter-library loan services, digitization services, and more. To access resources and services offered by the National Library in Kolkata, you may visit their website, explore their online catalog, or visit the library in person. Additionally, the library periodically organizes exhibitions, seminars, and workshops to promote awareness and engagement with its collections and services.

4.1.4 Indian Institute of Management Ahmedabad (IIM Ahmedabad)

The Indian Institute of Management Ahmedabad (IIM Ahmedabad or IIMA) is one of the premier management institutes in India and is renowned globally for its excellence in management education, research, and consultancy. IIM Ahmedabad was established in 1961 as the second IIM to be set up after IIM Calcutta. It was founded by noted industrialist and philanthropist Shri Vikram Sarabhai, along with other eminent personalities. The institute is located in Ahmedabad, Gujarat, and is spread over a sprawling 106-acre campus. The campus is known for its modern infrastructure, state-of-the-art facilities, and sustainable design. IIM Ahmedabad offers various management programs including the flagship two-year Post Graduate Programme in Management (PGP), the one-year Post Graduate Programme in Management for Executives (PGPX), Fellow Programme in Management (FPM), and various executive education programs. The institute boasts of a highly qualified and experienced faculty who are experts in their respective fields. They contribute to research, teaching, and consultancy, thereby enriching the learning experience for students. IIM Ahmedabad is known for its rigorous academic curriculum and

innovative teaching methods. The case study method, pioneered by Harvard Business School, is extensively used in teaching to facilitate active learning and critical thinking among students. The institute is recognized for its cutting-edge research in various areas of management, including finance, marketing, operations, strategy, and organizational behavior. It also provides consultancy services to businesses, government organizations, and non-profits. IIM Ahmedabad has collaborations with leading international business schools and institutions across the world for student exchange programs, joint research initiatives, and academic collaborations. These partnerships enhance the global exposure and learning opportunities for students and faculty. The institute has a vast alumni network consisting of distinguished professionals who hold leadership positions in diverse sectors globally. The alumni association, IIM Ahmedabad Alumni Association (IIMA-AA), plays a significant role in fostering lifelong connections and supporting the institute's initiatives.

4.2 Open Access E-resources at International Level

4.2.1 Stanford University

Stanford University is one of the most prestigious and renowned research universities in the world. Stanford University was founded in 1885 by Leland Stanford, a railroad tycoon, and his wife Jane Stanford. The university was established in memory of their son, Leland Stanford Jr., who had died of typhoid fever at the age of 15. Situated in the heart of Silicon Valley, California, Stanford's campus covers 8,180 acres and is known for its picturesque landscapes and modern facilities. Stanford is consistently ranked among the top universities globally for its academic programs, faculty, and research output. It offers undergraduate and graduate programs in various disciplines, including humanities, social sciences, natural sciences, engineering, business, law, medicine, and more. The university has played a significant role in the development of numerous tech companies, including Google, Hewlett-Packard,

and Cisco. Its research activities cover a wide range of areas, from artificial intelligence and biotechnology to renewable energy and social sciences. Stanford University Libraries (SUL) is the library system of Stanford University in California, USA. It is one of the largest academic library systems in the world, with over 9 million volumes, nearly 300,000 serials, and numerous digital resources. The libraries serve Stanford's diverse community of students, faculty, and researchers, as well as scholars worldwide. The main libraries on campus include Green Library, which houses humanities and social sciences collections, and Meyer Library, which primarily serves undergraduate students. Stanford University Libraries is renowned for its special collections and archives, which include rare books, manuscripts, photographs, maps, and other unique materials. Some notable collections include the David Rumsey Map Center, the Lane Medical Library & Knowledge Management Center, and the Hoover Institution Library & Archives. Stanford Libraries provide access to a vast array of digital resources, including e-books, e-journals, databases, and digital archives. These resources support research and scholarship across a wide range of disciplines. Stanford Libraries offer various services to support research and scholarship, including reference assistance, research consultations, interlibrary loan, and workshops on information literacy and research skills. Stanford University Libraries collaborate with other libraries, institutions, and organizations locally, nationally, and internationally to enhance access to resources and support innovative research and teaching initiatives.

4.2.2 University of Cambridge

The University of Cambridge is one of the oldest and most prestigious universities in the world. Founded in 1209, the University of Cambridge is one of the world's oldest universities. It grew out of an association of scholars who settled in the town of Cambridge in the early 12th century. The university is located in the city of Cambridge, England. Cambridge is consistently ranked among the top universities globally for its academic programs and research

output. It offers undergraduate and graduate programs in a wide range of disciplines, including arts, humanities, sciences, engineering, and medicine. Cambridge is a leading research institution with a reputation for innovation and discovery. Its research activities cover diverse areas, from basic science and technology to social sciences, humanities, and the arts. Cambridge University Library (CUL) is the main research library of the University of Cambridge in England. Established in 1424, it is one of the oldest university libraries in the world. The library serves the academic and research needs of the university's faculty, students, and staff, as well as scholars from around the globe. Cambridge University Library holds a vast and diverse collection of over 8 million volumes, including books, journals, manuscripts, maps, and electronic resources. The library's collections cover a wide range of subjects, reflecting the breadth and depth of research and scholarship at the University of Cambridge. CUL is renowned for its special collections, which include rare books, manuscripts, archives, and other unique materials. Highlights of the special collections include the Codex Sinaiticus, the papers of Sir Isaac Newton, the Charles Darwin Collection, and the archives of notable figures such as T.S. Eliot and Stephen Hawking. Cambridge University Library provides access to a growing number of digital resources, including digitized manuscripts, archives, and other materials. These resources enable researchers to explore and engage with primary sources online from anywhere in the world. The library offers a range of services to support research and scholarship, including reference assistance, interlibrary loan, document delivery, and research skills training. Librarians and subject specialists provide expert guidance and support to help users navigate the library's collections and access the information they need. Cambridge University Library collaborates with other libraries, cultural institutions, and research organizations to enhance access to resources, share expertise, and support collaborative research projects. These partnerships help expand the reach and impact of the library's collections and services.

4.2.3 National University of Singapore

The National University of Singapore (NUS) is one of the leading universities globally and is situated in Singapore. Established in 1905 as the Straits Settlements and Federated Malay States Government Medical School, it has grown into a comprehensive university offering a wide range of undergraduate and graduate programs. NUS consistently ranks among the top universities worldwide. It often secures top positions in various global university rankings such as the QS World University Rankings and the Times Higher Education World University Rankings. NUS offers a comprehensive range of undergraduate and graduate programs across various disciplines, including arts and social sciences, business, computing, engineering, law, medicine, science, and more. NUS is renowned for its research contributions across various fields. It has numerous research centers and institutes focusing on diverse areas such as biomedical sciences, engineering, social sciences, and sustainability. The National University of Singapore (NUS) Libraries system is a comprehensive network of libraries that support the research, teaching, and learning needs of the university community. NUS Libraries comprises several libraries located across the main Kent Ridge campus and other NUS campuses. The main library is the Central Library, which houses a vast collection of resources and serves as the primary research library. Additionally, there are subject-specific libraries catering to disciplines such as medicine, engineering, business, law, and more. The libraries collectively hold a vast collection of print and electronic resources, including books, journals, databases, multimedia materials, rare manuscripts, and archival materials. The collections cover a wide range of subjects and support the diverse academic programs offered by NUS. NUS Libraries provide access to a plethora of digital resources, including e-books, e-journals, databases, and multimedia materials.

4.2.4 Massachusetts Institute of Technology USA (MIT)

The Massachusetts Institute of Technology (MIT) is a prestigious private research university located in Cambridge, Massachusetts, USA. Established in 1861, MIT has consistently been ranked among the world's top universities and is renowned for its excellence in science, engineering, and technology. MIT is known for its rigorous academic programs and emphasis on research. It offers undergraduate and graduate programs in fields such as engineering, science, architecture, management, humanities, and social sciences. MIT is a major research institution with numerous research centers, laboratories, and initiatives. The university is involved in cutting-edge research across various disciplines, including artificial intelligence, biotechnology, nanotechnology, robotics, and renewable energy. The MIT Libraries system is a group of libraries located on the campus of the Massachusetts Institute of Technology (MIT) in Cambridge, Massachusetts, USA. The libraries collectively serve the research, teaching, and learning needs of the MIT community, as well as providing resources and services to support the broader scholarly community. The MIT Libraries house extensive collections of print and electronic resources, including books, journals, databases, government documents, maps, and multimedia materials. The collections cover a wide range of subjects, with particular strengths in science, engineering, technology, architecture, and management. MIT students, faculty, and staff have access to the libraries' collections and services, including borrowing privileges, research assistance, and access to online resources. Visitors from other institutions may also have access to certain resources through interlibrary loan agreements and reciprocal borrowing programs. The MIT Libraries maintain digital collections and archives that provide access to digitized materials, including historical documents, photographs, manuscripts, and publications. These digital resources support research and scholarship at MIT and beyond. Overall, the MIT Libraries play a critical role in supporting the

academic mission of MIT by providing access to information, resources, and services that facilitate research, teaching, and learning across disciplines.

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<https://nus.edu.sg/NUSlibraries>

<https://libraries.mit.edu/>

CHAPTER 5

DATA INTERPRETATION AND ANALYSIS

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 8 different colleges namely:

- ❖ Government College of Commerce and Economics, Borda, Margao
- ❖ Parvatibai Chowgule College of Arts and Science, Margao
- ❖ Swami Vivekanand Vidyaprasarak Mandal's college of Commerce
- ❖ Rosary College of Commerce and Arts, Naveli
- ❖ PES Ravi. S Naik College of Arts and Science, Farmagudi Ponda Goa
- ❖ CES College of Arts and Commerce, Cuncolim Goa
- ❖ VVM's Shree Damodar College of Commerce and Economics
- ❖ MES Vasant Joshi College of Arts and Commerce

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

5.2 Analysis and Interpretation of Questionnaire A (Librarian questionnaire)

5.2.1 Gender of the Librarian

Table No. A-1

Gender	Total	Percentage
Male	5	62%
Female	3	38%

Table No. A-1: Gender of the Librarian

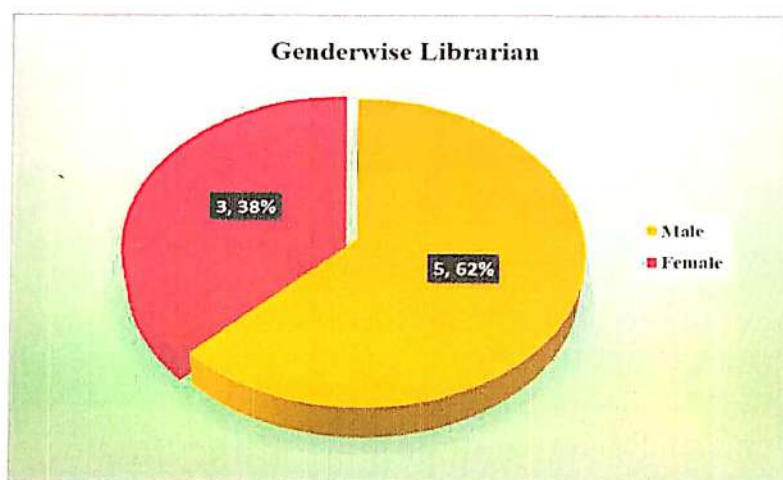


Figure No. 1: Gender of the Librarian

The study reflected that majority community is with male category with rate of 62% (05) and minority is from female category that is 38% (03). The study clearly shows that librarian from male categories are working in more number of Arts, Commerce and Science college libraries in South Goa than female librarian category.

5.2.2 Are you aware about open access e-resources?

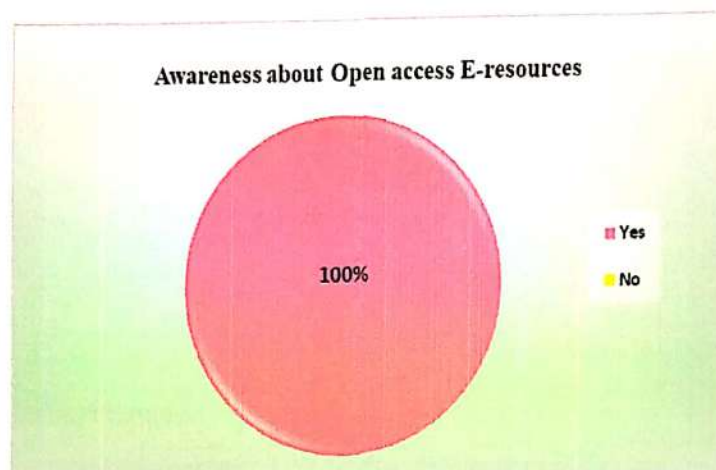


Figure No. 2: Awareness about Open access E-resources

The present research study indicates that all the Librarians from 8 Colleges are aware regarding open access e-resources with rate of 100%. OAERs reference service will be beneficial to overcome financial problems of their institutions.

4.2.3 If yes, access to which type of open access e-resources are provided by your library?

Table No A-2

Resources	Total	Percentage
E-Book	8	100%
E-Journal	8	100%
E-Databases	6	75%
E-Theses	6	75%
E-Newspaper	8	100%
Encyclopedias	3	38%
Web Dictionaries	5	63%
Any other	1	13%

Table No.2: Availability of Open access E-resources in the library

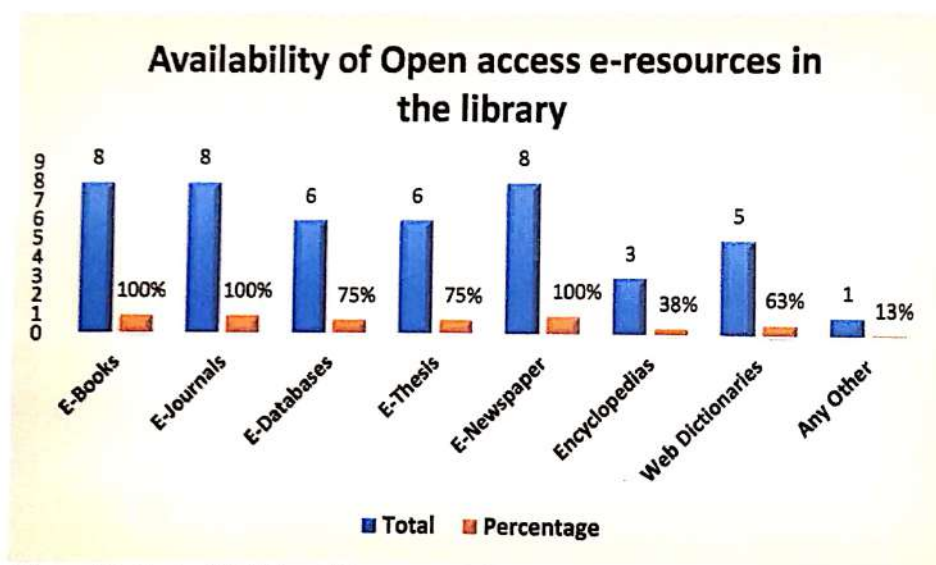


Figure No 3: Availability of Open access E-resources in the library

The above figure shows the open access e-resources available in Arts, Science and Commerce Colleges in South Goa. The study indicates that E-books, E-Journals and E-Newspapers are provided by all the 8 College Libraries in South Goa. Followed by E-databases and E-Thesis, provided by 6 Libraries. Libraries

have made available, Web dictionaries, Encyclopedias and other resources to their academic community by 5, 3, 1 libraries.

5.2.4 Does your Library provide all supporting services like computers, and internet connectivity for accessing E-Resources?

Table No A-3

Response	Total	Percentage
Strongly Agree	62	62%
Agree	12	12%
Neither agree nor disagree	13	13%
Disagree	13	13%
Strongly disagree	0	0%

Table No.3: Availability of Technical infrastructure facility

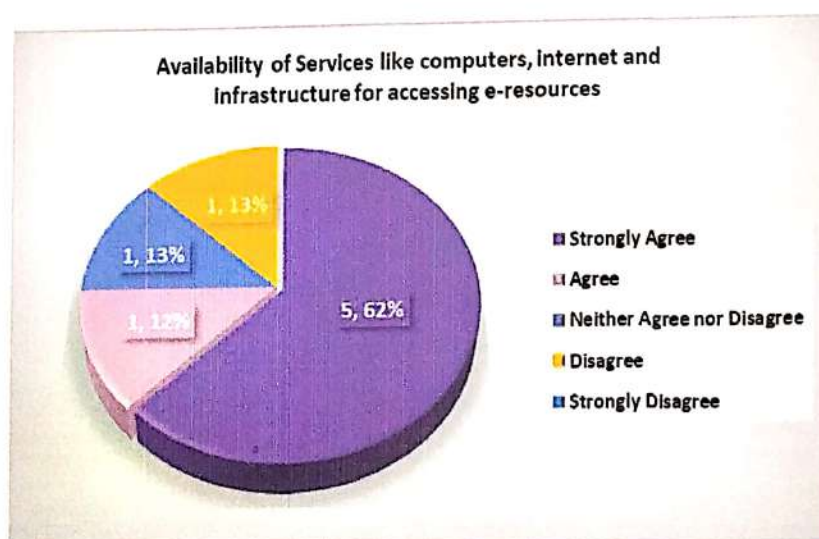


Figure No. 4: Availability of Technical infrastructure facility

In this research study, it is identified that 62% (5) librarian Strongly Agreed that they are having availability of adequate computers and Internet connectivity, further 12% (1) librarian Agreed that the library provide all supporting services like computers and Internet connectivity, followed by Neither agree nor disagree by 13% (1) librarian, whereas 13% (1) Librarian Disagreed.

5.2.5. Are there any user supportive initiative carried out by your library for the users?

Table No A-4

User supportive initiative	Total	Percentage
User orientation programme	8	100%
Information supportive programme	6	75%
Library workshops related to E-resources	7	88%
Seminars	1	13%
Book talks	2	25%
Formal circular	2	25%

Table No. 4: User supportive initiative carried out by library

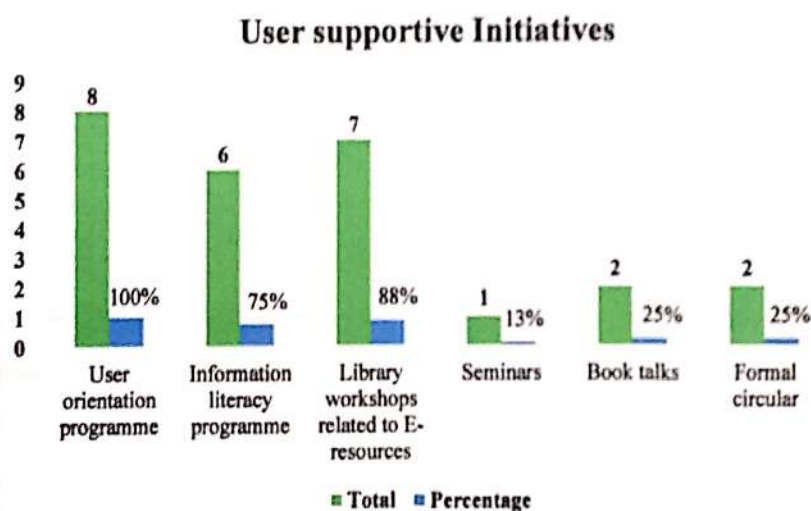


Figure No. 5: User supportive initiative carried out by library

From this study it observed that Arts, Science and Commerce College libraries are providing various types of services to their readers such as user orientation programme, information literacy programme, Library workshops related to e-resources, Seminars, Books talks, Formal circular etc. User orientation programme is popular among these institutions and this supportive service is

provided by majority libraries with rate of 100%. Apart from this, these libraries are providing information literacy programme, Library workshops related to e-resources, Seminars, Books talks, Formal circular with rate of 75%, 88%, 13% 25% and 25% respectively.

5.2.6. Is there Institutional Repository available for students and faculty your library?

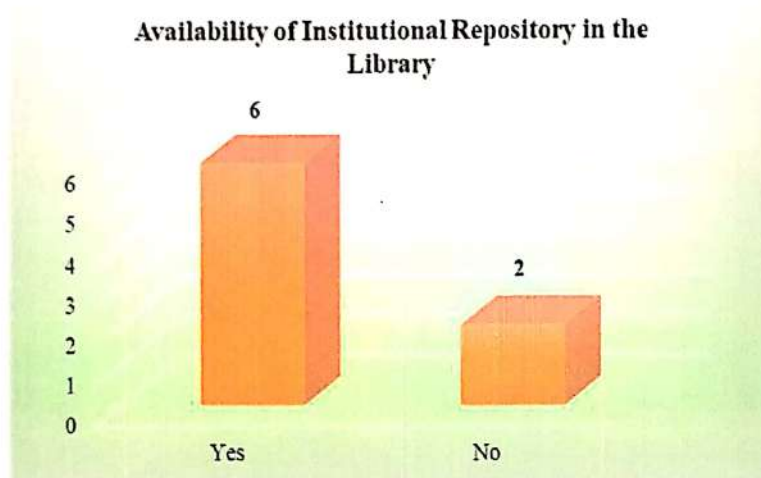


Figure No. 6: Availability of Institutional Repository in the library

This question was asked to know about the availability of Institutional Repository in the library. The study indicates that majority of the Libraries (6) are having their Institutional Repository and remaining (2) Libraries are not having their institutional Repository.

5.2.7. Are you satisfied with the availability of open access e-resources in your library?

Table No A-5

Satisfaction Level	Total	Percentage
Highly Satisfied	3	37%
Satisfied	4	50%
Neither satisfied nor dissatisfied	1	13%
Dissatisfied	0	0%
Highly Dissatisfied	0	0%

Table No. 5: Satisfaction with the OAER available in the library

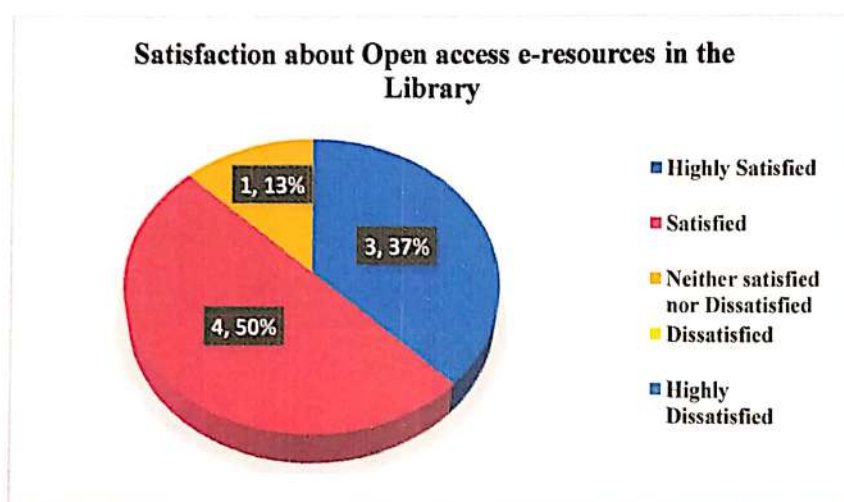


Figure No. 7: Satisfaction with the OAER available in the library

The present research study found that majority librarian communities are satisfied with the availability of open access e-resources with rate of 50% (4), followed by 37% (3) Librarians are highly Satisfied and 13% (1) Librarian is neither Satisfied nor Dissatisfied. It means that majority libraries are satisfied with their electronic based resources within their libraries.

5.2.10. How do you handle request for open access materials that are not available in the library's collection?

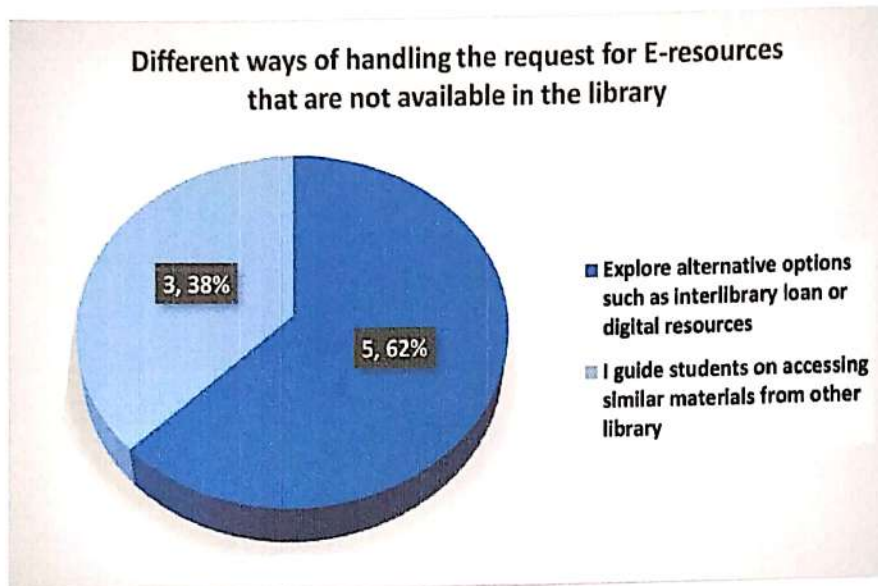


Figure No. 8: Different ways of handling request for resources not available in the library

The above figure shows that the majority of the Librarian with the rate of 62% (5) explore alternate options such as interlibrary loan or digital resources to handle the request for resources that are not available in the library's collection whereas remaining 38% (3) Librarian guide students on accessing similar materials from other library.

5.2.11. Is there a library website available for your library?

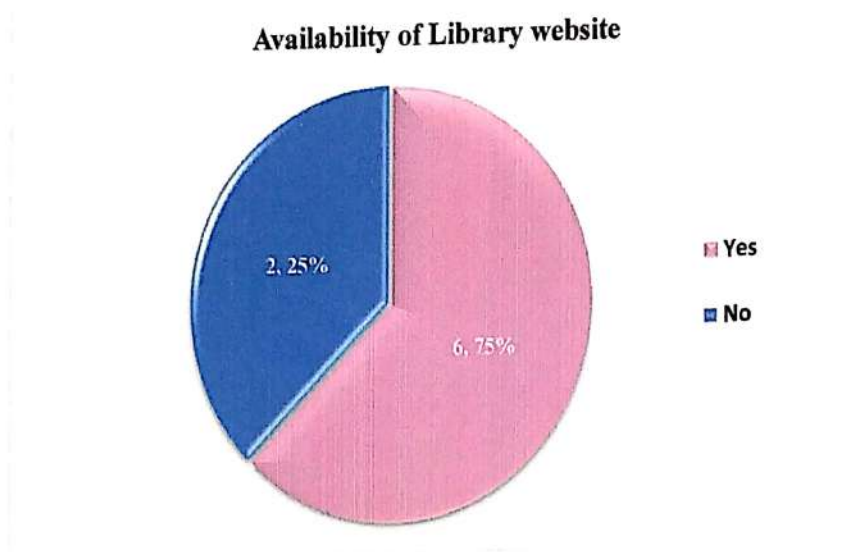


Figure No. 9: Availability of Library Website

This question was asked to know about the availability of Library websites of the library. The study indicates that majority of the Libraries with the rate of 75% (6) are having their Library Website. The remaining 25% (2) libraries are not having their library websites.

5.2.12. Are there open access e-resources provided by your library available on the library website?

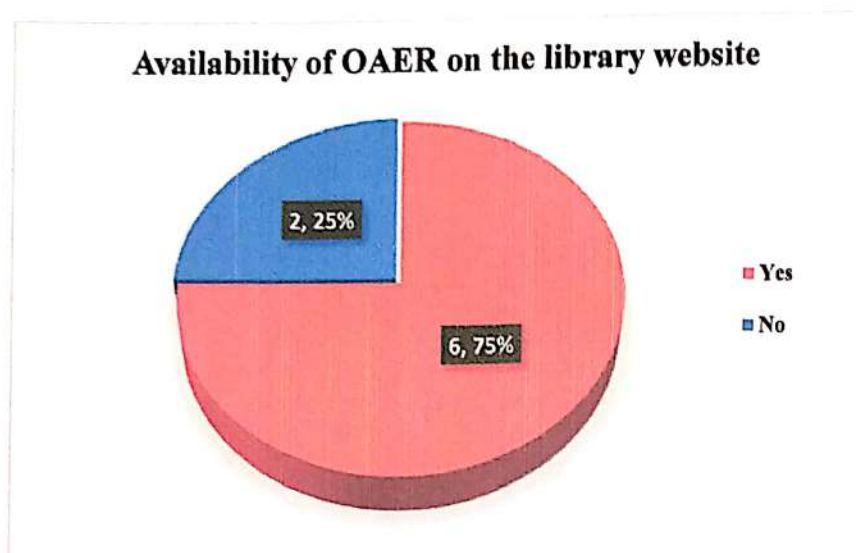


Figure No. 10: Availability of OAER on the library website

The study indicates that out of total 8 libraries only 6 libraries are having their library website and the open access e-resources that are provided by their library are available on the library website. Remaining 2 libraries are not having their library website, hence the resources are not available on the library websites.

5.2.13. What are the barriers/challenges regarding collection development of open access e-resources?

Table No A-6

Barriers/Challenges	Total	Percentage
Lack of Budget	6	46%
Lack of technically supporting staff	4	31%
Less support from authority	2	15%
Any other	1	8%

Table No.6: Barriers/Challenges regarding collection development of OAER

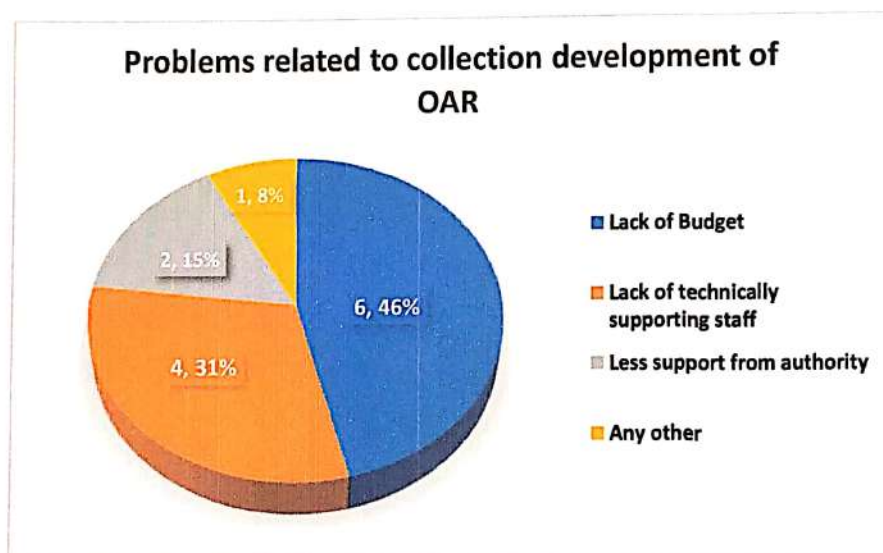


Figure No. 11: Barriers/Challenges regarding collection development of OAER

The above figure shows the barriers before librarians while maintaining the collection development policy of electronic resources. Lack of budget is a major hurdle opined by majority of the librarian with rate of 46% (6). Followed by lack of technically supporting staff is the next problem found among the Arts, Science and Commerce College libraries with rate of 31% (4). Further, it is also found

that the less support of authority of institute and opinion is expressed by 15% (2) Librarian. And one respondent could not give their any opinion regarding it.

5.3 Analysis and Interpretation of Questionnaire B (User's questionnaire)

5.3.1. Response to questionnaire as per gender wise.

Table No B-1

Gender	Total	Percentage
Male	63	63%
Female	37	37%

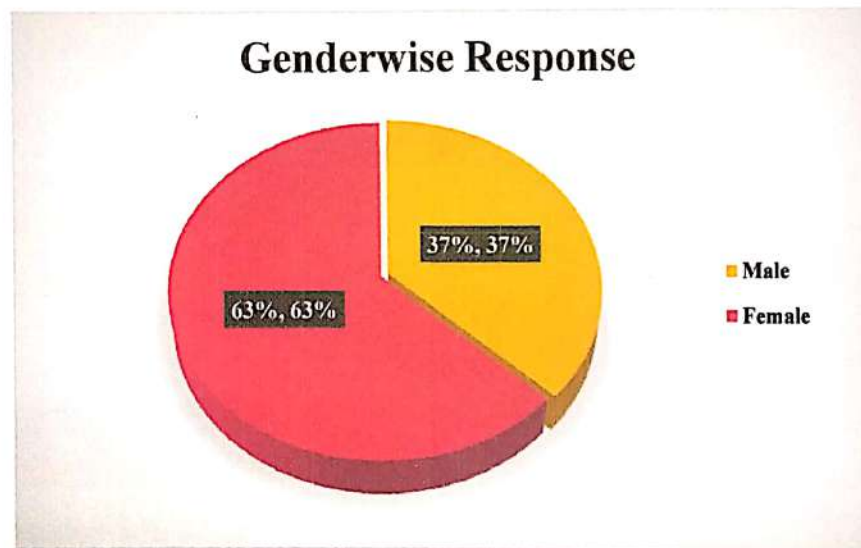


Figure No. 1: Gender of the Respondent

The above figure shows that majority respondents are from male category have responded to this questionnaire with rate of 37% and female category have responded to this questionnaire with rate of 63%.

5.3.2. How often do you visit your college library?

Table No B-2

Frequency	Total	Percentage
Daily	13	13%
Weekly	34	34%
Monthly	25	25%
Rarely	28	28%

Table No. B-2: Frequency of visiting the library

Frequency of visiting Library

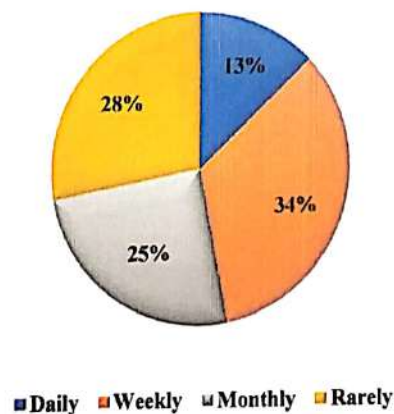


Figure No. 2: Frequency of visiting the library

This question was asked to know about the frequency of visiting the library by respondents. This study indicates that the majority of the respondents with the rate of 34% visit the library Daily, followed by 28% respondents visit the library Rarely, 25% respondents visit the library Monthly and 13% respondents visits the library Daily.

5.3.3. Are you aware about open access e-resources?

Table No B-3

Awareness about OAER	Total	Percentage
Fully Aware	15	15%
Aware	36	36%
Somewhat aware	49	49%
Not aware	0	0%

Table No. B-3: Awareness about OAER

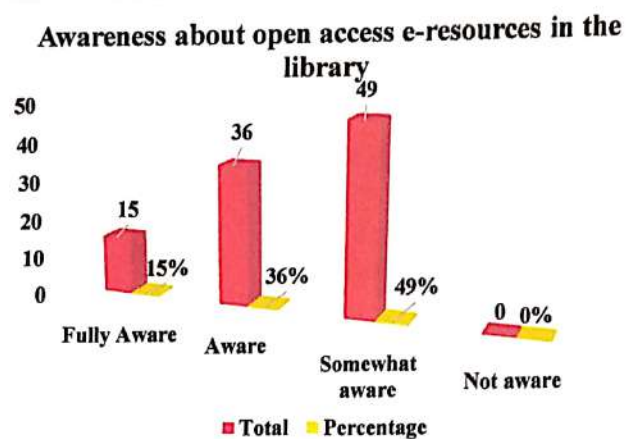


Figure No. 3: Awareness about OAER

The above figure shows that the majority of respondents with the rate of 49% are somewhat aware about the open access e-resources provided by the library, followed by 36% respondents are Aware and 15% respondents are Fully Aware about the open access e-resources available in the library.

5.3.4. Which of the following open access e-resources do you use that are provided by your library?

Table No B-4

Resources	Total	Percentage
E-Book	63	63%
E-Journal	25	25%
E-Databases	10	10%
E-Theses	5	5%
E-Newspaper	32	32%
Encyclopedias	8	8%
Web Dictionaries	11	11%
Institutional Repository	10	10%

Table No. B-4: Use of Open access E-resources in the library

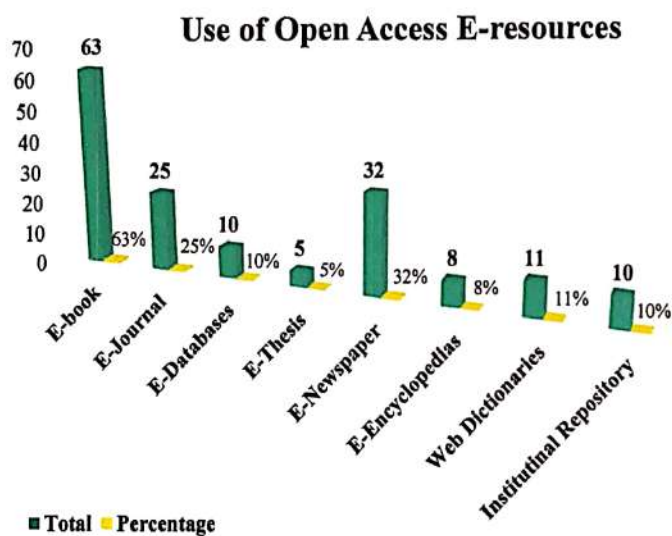


Figure No. 4: Use of Open access E-resources in the library

The purpose of asking this question was to get information regarding the use of open access e-resources available in the libraries. It is observed that majority of the respondents use E-book with the rate of 63%, followed by E-Newspaper with 32%. Further 25% respondents use E-journal followed by Web Dictionaries, E-

Databases, Institutional Repository, E-encyclopedias and E-thesis with the rate of 11%, 10%, 10%, 8% and 5% respectively.

5.3.5 How frequently do you use open access e-resources available in the library?

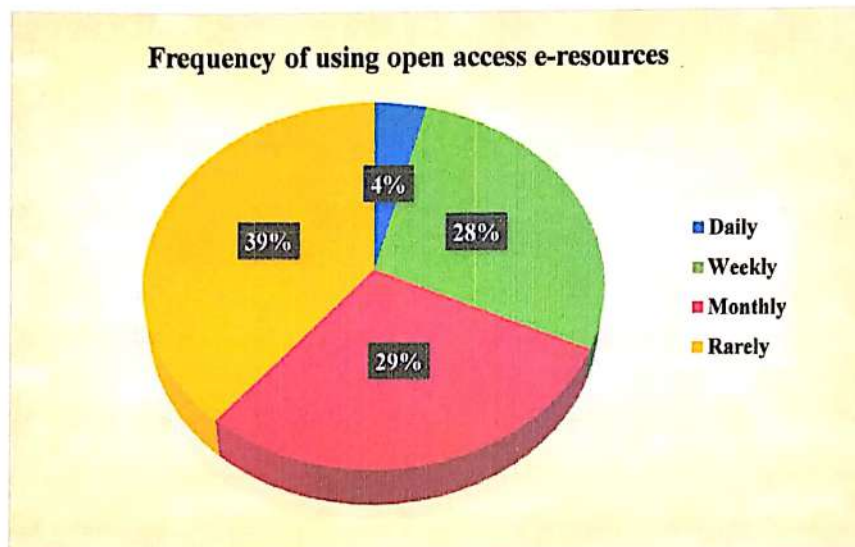


Figure No. 5: Frequency of using open access e-resources

It is observed that majority of the respondents with the rate of 39% are using the open access e-resources Rarely, 29% respondents use the resources Monthly followed by 28% respondents accessing the resources Weekly and only 4% respondents use the resources Daily.

5.3.6 What is the purpose of using open access e-resources?

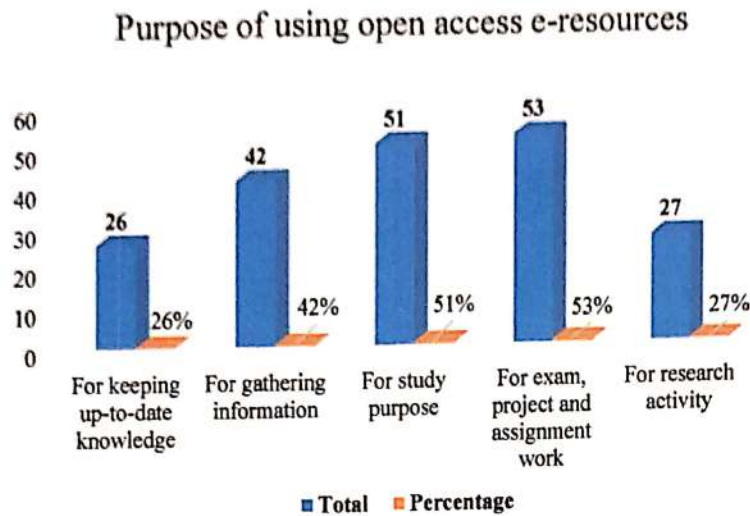


Figure No. 6: Purpose of using open access e-resources

This question was asked to know the purpose behind using the open access e-resources. The study indicates that majority of the respondents use the resources for exam, project and assignment work, 51% respondents use resources for study purpose, 42% respondents use resources for gathering information, 27% respondents use resources for research activity and minority with the rate of 26% use resources for keeping up-to-date knowledge.

5.3.6 From where do you mostly access open access e-resources?

PLACE OF ACCESSING E-RESOURCES

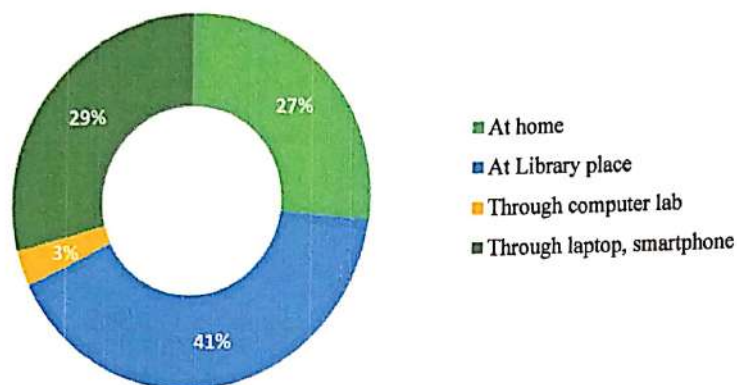


Figure No. 7: Place of accessing open access e-resources

This study indicates that majority of the respondents with the rate of 41% access the e-resources At library place, followed by 27% respondents accessing the resources through laptop and smartphone, 27% respondents access the resources at home and minority with the rate of 3% through computer lab.

5.3.7 Does your Library provide adequate computers and Internet facility in the library?

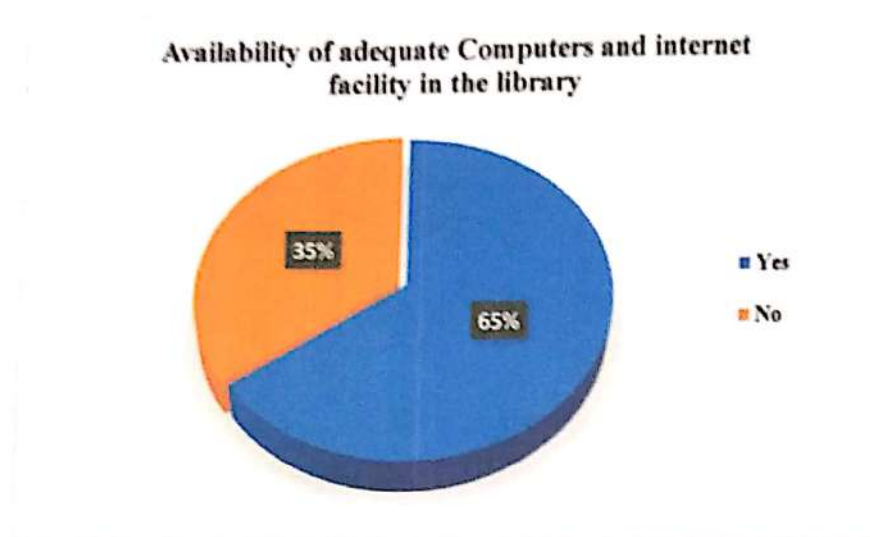


Figure No. 8: Availability of adequate technical infrastructure facility in the library

When questioned about the availability adequate computers and internet facility in the library 65% respondents said Yes that their library provide adequate computer and internet facility in the library remaining 35% said that their library don't provide adequate computer and internet facility in the library.

5.3.8 What are the benefits of using open access e-resources?

Benefits of using open access e-resources

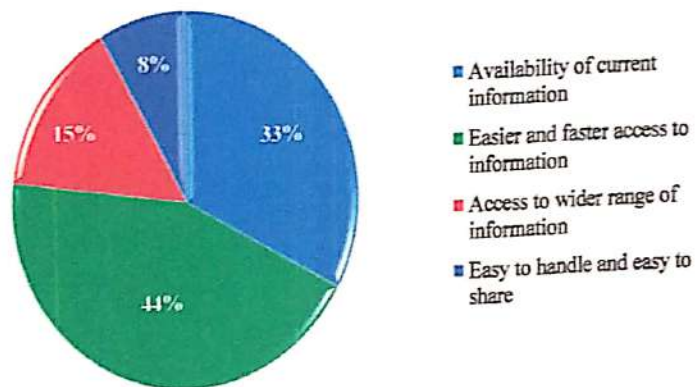


Figure No.9: Benefits of using Open access E-resources

It is observed that majority of the respondents with the rate of 44% believe that open access e-resources provide easier and faster access to information, followed by 33% respondents saying e-resources make available the current information whereas 15% respondents said that e-resources provide access to wide range of information and minority with the rate of 8% respondents said e-resources are easy to handle and easy to share.

5.3.9 What are the barriers/ challenges faced while using OAER?

Table No B-5

Barriers/Challenges	Total	Percentage
Low speed internet	50	50%
Frequent power shortage	6	6%
Lack of computer knowledge	18	18%
Lack of guidance and training	13	13%
Less number of computers and poor connectivity	8	8%
Lack of support from Library staff	5	5%

Table No. B-5: Barriers/challenges faced while using OAER

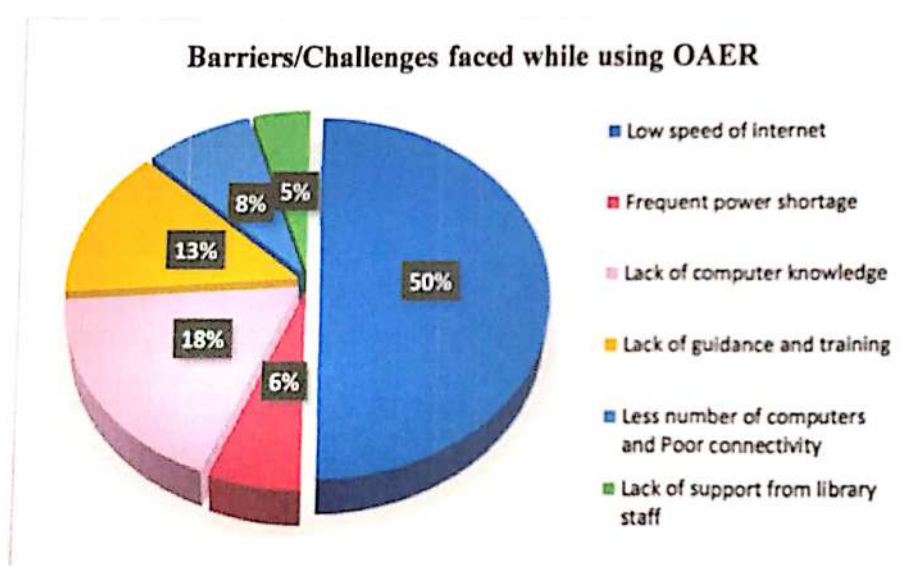


Figure No. 10: Barriers/challenges faced while using OAER

The study indicates that majority of the respondents with the rate of 50% face problem because of low speed of internet. 18% respondents face problem because of lack of computer knowledge, 13% respondents face problem because of lack of guidance and training, 8% respondents face problem because of less number of computer and poor connectivity, 6% respondents face problem because of frequent power shortage and 5% respondents face problem because of the lack of support from library staff.

5.3.10 Do you need training or guidance to access open access e-resources available in the library?

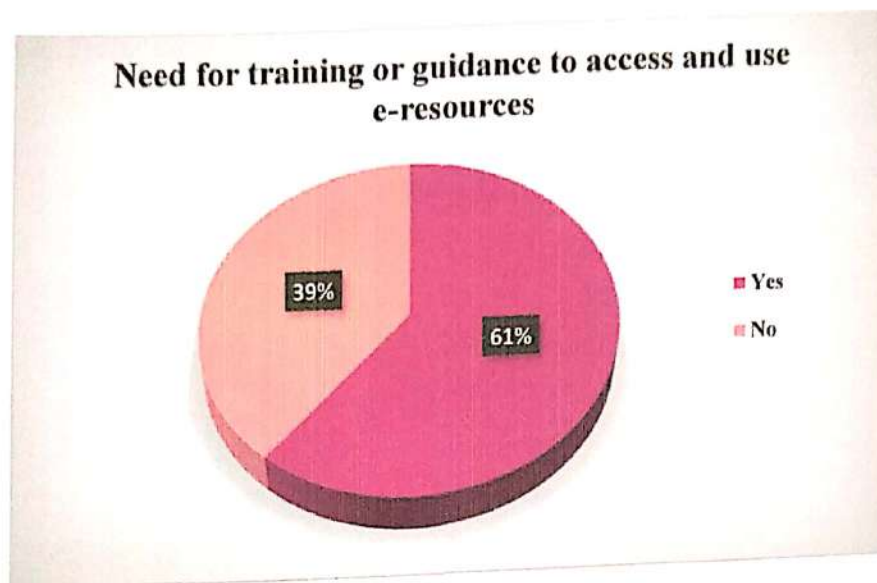


Figure No.11: Need for training or guidance to access E-resources in the library

This above figure shows that the majority of the respondents with the rate of 61% responded with yes that they need training or guidance to access and use E-resources and remaining 39% responded No that they don't need training to use e-resources.

5.3.11 What is the training mode you would like to prefer?

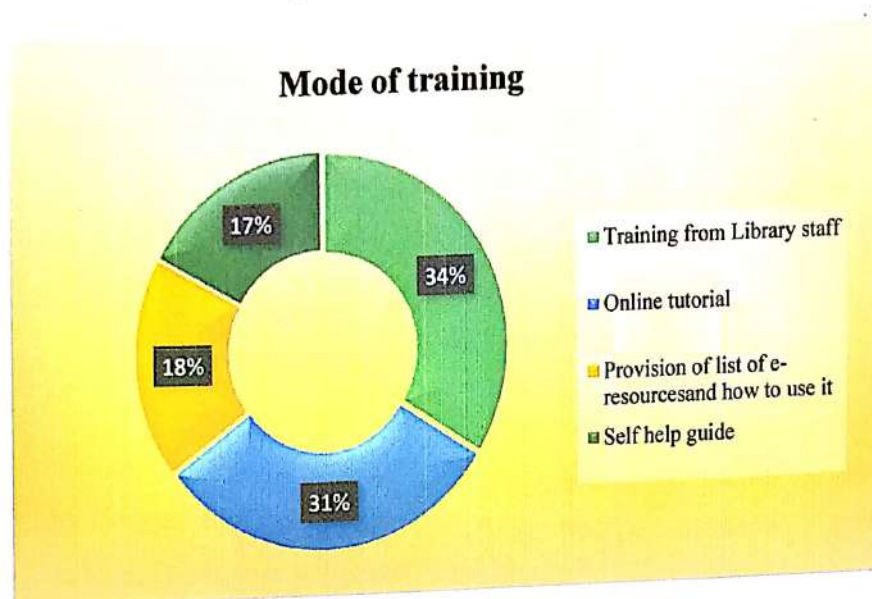


Figure No. 12: Mode of training

When questioned about the mode of training that they will prefer majority of the respondents with rate of 34% said that they will prefer training from library staff, 31% said that they will prefer Online tutorial, 18% responded that they will prefer provision of list of e-resources and how to use it and 17% responded that they will prefer Self help guide.

5.3.12 How satisfied are you with open access e-resources provided by your library?

Table No B-6

Satisfaction level	Total	Percentage
Highly satisfied	10	10%
Satisfied	47	47%
Neither satisfied nor dissatisfied	38	38%
Dissatisfied	3	3%
Highly dissatisfied	2	2%

Table No B-6: Satisfaction with OAER in the library

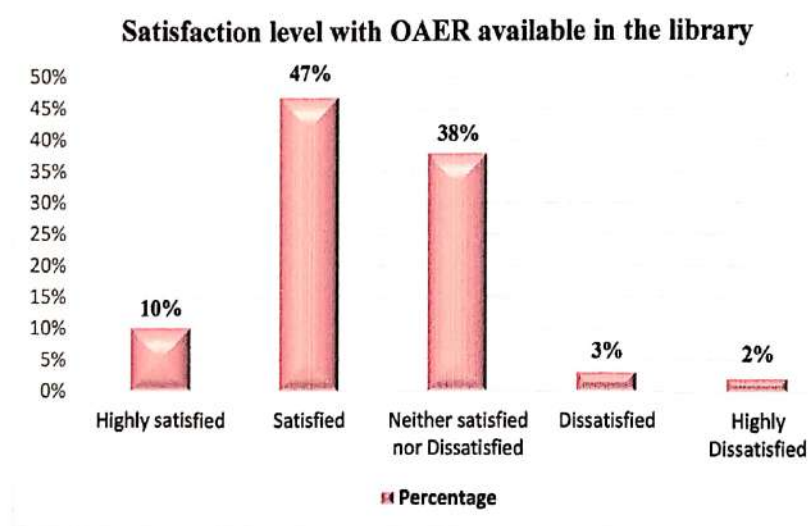


Figure No. 13: Satisfaction with OAER in the library

A question was asked to know the satisfaction level of users towards open access e-resources provided by the library. It is observed that majority of the respondents are satisfied with the open access e-resources, further 38% of the respondents are Neither satisfied nor dissatisfied, whereas 10% of the respondents are Highly satisfied, 3% are Dissatisfied and remaining 2% are highly dissatisfied.

CHAPTER 6
FINDINGS, SUGGESTIONS AND
CONCLUSION

CHAPTER VI

FINDINGS, SUGGESTIONS AND CONCLUSION

6.1 Findings from Librarian questionnaire (Questionnaire A)

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

- The present study identified that the number of male category of librarians is more than female category librarians with number of 5 and 3 respectively.
- The study found that all the librarians are aware of the open access e-resources.
- The study revealed that E-book, E-journals and E-Newspaper are provided by all the 8 libraries, majority of the libraries provide E-databases, E-Theses, and Web Dictionaries, followed by E-encyclopedias and other resources.
- The study found that 5 college libraries supports services by computers and internet facilities, however other 3 libraries needs to initiate such facilities to the user.
- The study found that 6 college libraries has Institutional Repository and other 2 college libraries are in process of forming it.
- The study noted that 5 college librarian explore alternative options such as interlibrary loan or digital resources and 3 librarians guide students to access similar materials from other libraries.
- The study revealed that the Librarian of 4 colleges are satisfied with the OAER available in the library, however 3 college libraries are

highly satisfied and 1 college library is Neither satisfied nor Dissatisfied.

- Further study noted that most of the college libraries takes initiative to support users. Majority of the libraries conduct user orientation programme, followed by Library workshops related to E-resources and Information literacy programmes. Further few libraries carry out initiatives like formal circular, Book talks and Seminars.
- The study locate that 6 college libraries has website and 2 college libraries needs to develop library website immediately.
- The study further revealed that college libraries who are having their library website has linked their OAER to their library websites.
- The study found that 6 college libraries said there is a problem of budget, 4 college libraries said they lack technically supporting staff and 3 college libraries said less support from the authority.

6.2 Findings from Users' questionnaire (Questionnaire B)

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

1. The study noted that the majority of the respondents are from female category with the rate of 63% and remaining 37% are from male category.
2. The study revealed that 49% of the are somewhat aware about the open access e-resources provided by the library however 15% of the users are fully aware whereas remaining 36% are aware of the resources.
3. The study found that majority of the respondents use E-book followed by E-newspaper, and E-journals and very few respondents use Web dictionaries, E-databases, Institutional repository and Encyclopedias. E-Theses are used by minority of the respondents.
4. Further the study noted that majority of the respondents use the OAER for exam, project and assignment work, second majority using it for study

- purpose and remaining users are utilizing it for the purpose of gathering information, for research activity and for keeping up-to-date knowledge.
5. The study reveals that majority of the respondents are using OAER at library place, second majority through laptop and smartphones, third majority from home and minority through computer lab.
 6. The study reveals that maximum number of users libraries provide adequate computers and internet facilities and least number of users libraries are not equipped with good facilities.
 7. The study found that majority of the respondents face problem of low speed of internet while accessing OAER, lack of computer knowledge is another major problem faced by the users and other problems like lack of guidance and training, less number of computers and poor connectivity, frequent power shortage and lack of support from library staff are faced by the users.
 8. The study noted that majority of the respondents want their library of provide training or guidance to access and use OAER available in the library.
 9. Further the study revealed that the respondents would like to have training from the library staff, followed by online tutorials, provision of list of e-resources and how to use it and self help guide.
 10. Finally it discovered that majority of the respondents are satisfied with the OARE available in their library, second majority are Neither satisfied nor dissatisfied, very few are highly satisfied, and minority are highly dissatisfied.

6.3 Suggestions as per findings of Librarian questionnaire (Questionnaire A)

- Those libraries which still have not adequate computer and internet facility to their students they should implement this facility for enhancement in academic performance.
- The study explored less than 50% libraries are satisfied with the availability of OAER in their library. There is a need to increase collection

development of e-resources by the libraries to support their users because of changing needs of academic community in virtual environment.

- The budgetary provision of the libraries should be increased especially for e-resources and there should have been adequate technically supporting staff for providing better services to the user.
- Library professionals should regularly organize various programmes such as library orientation programmes, information literacy programmes, library workshops related to e-resources etc for proper use of electronic based resources.
- Today, there are various electronic based resources available with free of charges through various platforms. Library community should continuously encourage their students who are still not aware about it.

6.4 Suggestions as per findings of Users' questionnaire (Questionnaire B)

- The users who are not familiar with OAER provided by their library it is need of library authority to make an attempt to make them fully familiar with these resources by conducting orientation programmes as well as seminars/workshops related to e-resources in this digital age.
- There should be adequate technical infrastructure facility for enjoying electronic resources without hurdles by which user can utilize the library resources effectively.
- Proper guidance and training should be provided by libraries to their users for the effective use of the electronic resources.
- Present study indentified various problems among user community which has become barrier while using OAER. The libraries should urgently apply advanced high speed plan of Internet and strengthen power back up facility. Besides it, librarian should prepare plan of programme organization for providing proper guidance and practical training to their user community about use of electronic based resources. It is urgent need in this digital era.

- Institutional authority and library management should move forward with measures that the entire community is completely satisfied by providing essential services that meet the needs of tech-savvy users.

6.5 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 helps 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-book, e-journals, E-newspaper e-databases Web-dictionaries etc. and they are utilizing it for the purpose of research/project work, and 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 related to poor connectivity, lack of computer knowledge, lack of guidance and training etc. 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.

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ANNEXURE



ANNEXURE

Questionnaire for Librarian

1. Name of the College:

2. Name of the Librarian:

3. Gender: Male ☐ Female ☐

4. Are you aware about open access e-resources?

Yes ☐ No ☐

5. Which types of Open access e-resources are provided by your Library?

E- Books ☐

E- Journals ☐

E-Databases ☐

E-Theses ☐

E-Newspaper ☐

Encyclopaedias ☐

Web Dictionaries ☐

6. Does your library provide all supporting services like computer and internet connectivity for accessing e-resources?

Yes ☐ No ☐

7. Are there any user supportive initiative carried out by your library for the users?

User orientation Programme ☐

Information Literacy programme ☐

Library workshops related to E-resources ☐

Seminars ☐

Book talks ☐

Formal circular ☐

8. Is there Institutional Repository available for students and faculty in your Library?

Yes ☐ No ☐

9. Are you satisfied with availability of open access e-resources in your Library?

Yes ☐ No ☐

10. How do you handle request for open access e-resources that are not available in the library's collection?

Explore alternative options such as interlibrary loan or digital resources ☐

Guide students on accessing similar materials from other library ☐

11. Is there a library website available for your library?

Yes ☐ No ☐

12. Are there OAER provided by your library available on the library website?

Yes ☐

No ☐

13. What are the barriers/challenges regarding collection development of Open access e- Resources?

Lack of Budget ☐

Lack of technically supporting staff ☐

Less support from Authority ☐

Any other ☐

14. Please give your valuable opinion and suggestions.

Questionnaire for User

1. Name of the College:

2. Name of the Student:

3. Gender: Male ☐ Female ☐

4. How frequently do you visit your college library?

Daily ☐

Weekly ☐

Monthly ☐

Rarely ☐

5. Are you about Open access e-resources provided by your library?

Fully Aware ☐

Aware ☐

Somewhat aware ☐

Not Aware ☐

6. Which of the following open access e-resources do you use that are provided by your library?

E-book ☐

- E-Journal ☐
- E-Databases ☐
- E-Thesis ☐
- E-Newspaper ☐
- Encyclopaedias ☐
- Web Dictionaries ☐
- Institutional Repositories ☐

7. How frequently do you use open access e-resources?

- Daily ☐
- Weekly ☐
- Monthly ☐
- Rarely ☐

8. What is the purpose of using open access e-resources?

- For keeping up-to-date knowledge ☐
- For gathering information ☐
- For study purpose ☐
- For exam, project & assignment work ☐
- For research activity ☐

9. From where do you access open access e- resources?

- At home ☐
- At Library place ☐
- Through computer Lab ☐
- Through laptop, smartphone ☐

10. Does your Library provide adequate computer and Internet facility in the library??

Yes ☐ No ☐

11. What are the benefits of using open access e-resources?

Availability of current information ☐

Easier and faster access to information ☐

Access to wider range of information ☐

Easy to handle and easy to share ☐

12. What are the barriers/challenges faced while using open access e-resources?

Low speed of Internet ☐

Frequent power shortage ☐

Lack of proper knowledge ☐

Lack of guidance and Training ☐

Less Number of Computers & connectivity ☐

Lack of support of Library Staff ☐

13. Do you need training or guidance to access open access e-resources available in the library?

Yes ☐ No ☐

14. What is the training mode you would like to prefer?

Training from Library staff ☐

Online tutorials ☐

Provision of list of e-resources ☐
And how to use it

Self help guide ☐

15. How satisfied are you with Open access e-resources provided by your Library?

Highly satisfied ☐

Satisfied ☐

Neither satisfied nor
Dissatisfied ☐

Dissatisfied ☐

Highly Dissatisfied ☐

16. Please give your valuable opinion and suggestions