

**E-RESOURCES SUBSCRIBE BY GOA UNIVERSITY LIBRARY: A STUDY**

**DISSERTATION SUBMITTED IN PARTIAL  
FULFILMENT OF THE GOA UNIVERSITY THE  
DEGREE OF MASTER OF LIBRARY AND  
INFORMATION SCIENCE**

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### **CERTIFICATE**

This is to certify that dissertation entitled “**E-resources subscribe by Goa University: A study**” submitted by **Vansila Chandrakant Gaonkar** in partial fulfilment of the requirement of the degree of Masters of Library and Information Science of Goa University is her own work carried out under my guidance and worthy of examination.

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Research Guide

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## **DECLARATION**

I state that the present dissertation “ **E-resources subscribe by Goa university library A Study**” is my original contribution and the same has not been submitted on any occasion for any other degree or diploma of this university or other university/ institute. To the best of my knowledge, the present study is the first comprehensive work of its kind from the area mentioned. The literature related to the problem investigation has been cited.

Place: Taleigao Plateau Vansila Chandrakant Gaonkar

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Information science iv

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

E- resources has dramatically change the way of people and institution's function. It has led to tremendous change in the way library's function and offer services to their users. At present, the libraries actively procure, organize, display and issue E-forms of books, journals, newspapers, theses and dissertations. The new generation of users prefer online resources as they want all information at the click mouse. The e-resources have certain inherent characteristic features which offer convenience to the users. The complexity of electronic resource has grown to comprise of library online catalogue list of CD-ROMs, online journals, databases, newspapers, reference materials, and the use of electronic resources it is not so easy, or it appears, at the same time, there is a pressing need for guidance in the use of such resources.

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'Electronic resources' is a general term for electronic information stored online, in CD-ROMs and on databases. An electronic resource refers to "a manifestation of a work encoded for manipulation by computer. The manifestation resides in a carrier- accessed either directly or remotely".

Electronic resources are invaluable research tools which complement print-based resources in any traditional library. Electronic resources provide access to information that might be restricted to the user because of geographical location or finances. They also provide access to 2



current information as these are often updated frequently. Through their various search techniques, electronic resources provide extensive links to explore additional resources or related content. In addition, electronic resources are convenient to use since the users are able to access information from the library, internet cafe', offices or at times from the comfort of their homes at any time of the day. Library resources, whether print or electronic are expensive and for the latter in particular, its continuous use depends to a large extent on the sustainability of the current technological and infrastructural development of the university. (Madhusudhan, 2010)

### **1.2 Definition**

According to sukula "An e-resources is an electronic information resources that can be accessed on the web, on or off campus. User can get the information what he or she want, when it is needed. (shukla, 2010)

E-resources is that, information (usually a file) which can be stored in the form electrical signal usually, but not necessary on a computer.

According to Liu (2006), "electronic resources are those electronic products that delivers a collection of data, be it text referring to full text basis, e-journals, image collection, other multimedia products and numerical, graphical or time based, as a commercially available till that has been published with an aim to being marketed. These may be delivered on CD-ROM or on tape or via internet and so on. (Liu, 2006) 3

### **1.3 Objectives**

- I I.To know the availability of different type of E-resources goa university library.
- II II.To find out the reasons for acquiring subscribed E-resources.
- III III.To examine the different criteria for selection of E-resources and collection development policy.
- IV IV.To know the contain each databases.

V

### **1.5 Methodology**

### **1.4 Scope**

Goa university library and college undergraduate students from goa are taken into consideration to find out the student's perception and preference in using source of information.

- I. The researcher has collected different information by using different tools such as questionnaire, surveys, and personal discussion regarding E-resources.
- II. The researcher has browsed all the literature available on the E-resources.
- I III. Researcher has tried to find out statistical techniques such as graphs, charts, maps etc.

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## **1.6 Conclusion**

In the modern world of information explosion E-resources has become a necessity for the libraries. The use of E-resources is now facilitating the role of libraries which should be of great concern to the profession. The use of E-resources enables the library to save space of library and time of the users. E-resources are useful for libraries as well as each and every users of the society who are starving to get a variety of information through the globe 5

## **CHAPTERIZATION**

**Chapter 1: - Introduction**

**Chapter 2: - Review of literature**

**Chapter 3: - Explanation of concept**

**Chapter 4 :- libraries e-resources at national and international level**

**Chapter 5 :- Data analysis And findings**

**Chapter 6:- Findings, conclusion, suggestions 6**

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

A literature review on the research topic gives an obvious idea about the knowledge. It also helps in establishing the objectives and hypothesis of the study. The literature review was conducted and reviewed in brief in the following section.

1. (Omotayo, 2010)communication channel for researchers presently. With the advent of the internet and e-publishing, libraries have become more easily accessible to users. Print books may be around for a long time, but print journals. It is an important to study the use of electronic journals, scholars' attitudes, and future patterns of use, for library development and because of the central role, journals play prominent role in scientific communication

2. (Tenopir, 2003)in his study entitled "use and user of electronic library resources: an overview and analysis of recent research studies" analysed the result of over two hundred 38 studies on the usage of electronic resources in libraries published from 1995 to 2003. Results drawn from his study indicated that the electronic resources have been rapidly adopted in academic spheres, though the behaviour varies according the discipline.

3. (karina,B.,& Anthony, H., 2011)defined "e-resources in the broadest sense, which includes virtual learning environments (VLEs), platforms (such as XCRI), research software's (such as NVivo, endnote or SPSS), and other e-resources (such as the use of web 2.0 technologies, social networking technologies or mobile phone technologies) as they relate to system used to aid learning, teaching, administration or management.'" Sharma (2009) in his article discussed the impact of e-resources

on users and opined that today availability of e-resources in a university(academic) library is very common. But their proper and maximum use is a matter for discussion. In his study author has also highlighted the use of e-resources, preferences and importance of online/ electronic resources among the teachers and research scholars.

4. (kannappanavar, B.U.,&manjunnatha, K.V., 2011) discussed e-resources and its impact on engineers. The authors discussed the role of libraries in enhancing the use of e-resource. Authors collected data from engineering college libraries and analysed and explored the status of resource and services provided to the users. Some of the colleges 4. have rich collection and infrastructure facilities, which have to share with other colleges. In the era of information technology, computers and communication infrastructure are pre requisites, hence libraries have to provide more fund and trained manpower to maintain and extend better services to the engineering college users.

5. (singh, 2010) describes the use of electronic resources by the students and teachers of various college libraries. The survey was particularly conducted to know the use of e-resources and awareness of electronic resources in various college libraries. The analysis of the data collected covers various types of e-resources, purpose of use of e-resources, problems faced this study has also shown the preferences and importance given the e-resources by the students and teachers of various college libraries.

6. (Mora rojeski, 2011) studied the libraries have grappled with how to integrate e-books into our collections since they came into the market. E-books offer some tempting advantages, such as, saving physical space in the library increasing. Access to those of campus, and potentially allowing multiple users simultaneous use of one item. Recent books like no shelf required offer some guidance for libraries grappling with questions that e--books bring up. many larger institutions engage in standing orders for print acquisitions or purchases of large packages of e-books.

7. (Basho run,M.tunji, isah Abdulmunin, M.Y.Adisa, 2011) his study shown that the electronic resources by the academic staff of the university. Revealed frequency of use of electronic resources was low reasons alluded to were lack of time because of the time required to focus on teaching; lack of awareness to electronic resources provided by the library; power outage in effective communication channels, slow network and inadequate searching skills. The study recommended adequate Information and communication technologies (let) training for all categories of academic staff and provision of adequate power supply.

8. (chetan sharma, 2009) study revealed that the use of e-resource is very common among the teachers and research scholars of guru Gobind Singh Indraprastha university and majority of the teachers and research scholars are dependent on e-resource to get the desire and relevant information. But practical usage of e-resource is not up to the worth in comparison to investment made in acquiring these resources, secondly infrastructure and training program should also be revised as

per requirement, it is observed that the availability of e-resources on the campus is almost sufficient for all the existing disciplines but the infrastructure to use these resources is not adequate and can hinder the ability to meet the requirements of users.

9. (Zhang, ye.,liu, 2011) conducted a survey of the use of e-resources at seven universities in Wuhan, China. The purpose of this survey was to report on users' information behaviour in Chania. The aim was to help producers. And providers collect and develop more e-resource. The results showed that most national science and technology library users were 75 graduates and young staff members; male users performed better than female ones. Finding suggested that e-resource producers should offer more foreign literature and providers should improve the quality of services.

10. (muhammad Tahir, 2011) discussed the emergence to assess the use of electronic information resources and facilities by humanities scholars at the university of the Punjab, Lahore Pakistan. The results correspond with previous studies conducted in other countries. The humanists still to the printed information sources but they they pay good attention to electronic resources. Most of them have access to computer and internet at office and home. They are regular users of a variety of electronic technologies. Although faced with many problems, the humanists perceive that modern technology made their work easier.



11. (Bhardwaj, M., & Sharma, S., 2015). discusses about different types of e-resources, benefit of electronic resources and utilisation of e-resources by users and gives few opinions for the development of e-resources services for the future need. Due to information explosion the digital library is growing all over the world and the user needs for the electronic resources are increasing day by day, according to their academic requirement.

12. (Saklani, V.K., 2020) Author's article describes the use of e-resources in the academic library and analyses the status of use of e-resources. Information technology has made rapid changes in the field of education. Along with this, librarians will also have to adapt to this new development for storage and e-delivery and distribution of information.

13. (Kaur, B., & Verma, R., 2009) Their article attempted to study the issues like use of electronic information resources, its impact on the collection of print and electronic journals, its awareness among the users, and from where these resources are being accessed. A survey was conducted in the academic year 2006-07 at the Thapar University, Patiala. A total number of 504 users from the undergraduate, postgraduate, research scholar and faculty members were selected and their responses were gathered with the help of questionnaire. The findings of their study show that users from all the categories use e-resources; the awareness of e-resources motivates users to use such resources to the communication technology,

internet and e-publishing of scholarly research has opened new ways for searching and accessing information. His article focuses on electronic resources which are used in library and information science department.

14. (wani, S.A., 2018)Emphasises that information communication technology like internet and WWW changes the function and format of library and information centre. The development of e-resources and their increased use changes the library from physical to visual. Due to electronic publishing most of E-resources like E- journals, E-books, online database are published electronically etc. in education field academic libraries purchase such type of E-resources for students and scholars. Users also give importance to E-resources instead of physical library. The main problem faced by academic library is availability of fund for purchasing E-resources. Their paper is discussing about the resources advantage issues and challenges for management of E-resources.

15. (velmurugaon,v.s., 2013) in his paper it deals with the concept of E-resources, features and types as well as use of E-resources in libraries and selection cum evaluation of E-resources it also reveals the importance of using E-resource. Further it states that E-resources have become very popular in libraries & information centres in modern era. According to their survey more number of libraries subscribes to E-journals and E-books and few libraries have online database and CD ROM database collection. However, in order to meet the ever-increasing demand of the user community in digital environment, libraries have to develop a away to manage and access to materials available in electronic format. His study

concludes that libraries are now increasingly involved in creating and acquiring E-resource due to extra ordinary features of electronic resources.

16. (Habiba, U.,&chowdhury, S., 2007) this paper presents and analyses the status of electronic resources, facilities and services that are provided by the Dhaka university library (DUL). It discusses about the purpose of using E-resources, benefits, subject coverage status, and overall, the satisfaction level of the users. Different problems that are faced by DUL users while accessing e-resources are also being investigated and perceived impact of e-resources on the users. Finally, it reports the results from questionnaire-based survey of use of e-resources and its impact of DUL users.

17. (Noh, 2012) seek to verify the correlation between university libraries and academic research achievement and to examine which university library resources relate to research achievement. This study confirmed that labor and budget, investment in e-resources and an investment in university libraries enhances academic research achievement.

18. (S.haridasan., 2009) in his study, impact, and use of E-resources by social scientists in national social science documentation center (NASSDOC), India he asserted the importance of E-resources in libraries for collection development and degree of user satisfaction.

19. (K.R mullu, M chandrasekhara, 2006) carried out a study entitled “E-resources and services in engineering college libraries- a case study. Libraries have witnessed a

great metamorphosis in recent years both in their collection development and in their service structure. Over the last several years, a significant transformation has been noticed in collection development policies and practices. It examines the level of effort taken by the engineering college libraries in Karnataka to build electronic resources.

20. (sathe, nila A., 2002) during the month-long study, patrons completed sixty-nine surveys of electronic and ninety surveys of print journal use. Results analysis indicated that fellows, students, and residents preferred electronic journals, and faculty preferred print journals. Patrons used print journals for reading articles and scanning contents they employed electronic journals for printing articles and checking reference. Users consider electronic journals easier to access and search than print journals; however, they reported that print journals had higher quality text and figures.

21. (Natarajan, K., Suresh, B. sivaraman, p. and sevukan, R, 2010) study revealed that the use and user perception of electronic resources in Annamalai university: case study. Survey of 117 faculty members and research on use and user perception of electronic resources in Annamalai university reveals that despite the availability of wide range of e-resources the frequency of their use was low. The reasons identified for this are lack of time, lack of awareness, lack of subject coverage; and slow downloading.

22. (Fatima, Nishat, Ahmad and naved, 2008) study shown that e-resources information seeking behaviour. Data collected from 60 students by administering questionnaires

on their information seeking behaviour at Ajmal khan tibbiya college, AMU, indicates that guidance in the use of library resources and services is necessary to help students meet their information requirements.

23. (Bhat, veena R.,kumar and B.Tsampath, 2008)in this paper shown that the use of web-based sources in scholarly electronic journals in the field of library and information science: a citation analysis. Citation analysis of research articles from scholarly electronic journals in the field of library and information science.

24. (pujar, S.M, sangam, S.L, 2007) study that the electronic resource information use by economists: discusses the information use pattern of Indian economists in the present internet era. Highlights the use of various types of resources, including institutional resources and role of NASSDOC in providing various services to social scientists.

25. (Herger, N.E., 2008) in his study entitled “electronic resources in medical libraries: issues and solutions”, is a collection of ten articles on issues of electronic access and use of books and journals in medical libraries. The author has pointed out that management of electronic resources has become an essential function for medical libraries. Further author opined that use of e-resources is increased due to “costs and challenges of shifting collections from print to electronic materials collaborative arrangement and cost sharing that may save on the cost of bundled electronic journals, and history of pricing; development of open access scholarly publishing and ways open access affects the pricing of subscription journals; and the issue of open access publishing and desired relief for library budgets.

26. (Aggarwal,Bhalla, 2012) studied the teacher/educator's preference for print or electronic resources of information. The methods and media of information storage and its dissemination had undergone a sea change meaning thereby, the traditional print media acceptance, they will be popular among the academics in coming times.

27. (saikia, 2011) this article discusses a survey conducted by author to learn perception of teachers and research scholars of Tezpur university towards electronic journals. The survey determined the views and feeling of teachers and research scholars on electronic journals. The survey distinguished between user's format preferences for those journal that are most important to their teaching and research. A study is conducted to learn users' perception of online journals and determine a policy for subscription of journals to meet the needs of teachers and research scholars' university.

28. (Ganski, K.L., 2008) summarizes the accessibility of e-resources from the websites of theological libraries. To discover this, theological libraries are providing digital access to e-journals, recommended religious Internet resources, and digital libraries. The outcome of the study is that, slightly more than half of these websites make e-resources available and are easily accessible through a quick navigational pathway. Terminology used to access e-resources is found to be different and varied. The findings are that theological library websites are attempting to meet the digital needs of their students and also recommend to understand the positive impact if any, on the digital needs of theological students.

29. (Egberongbe, H.S., 2011) on The Use and Impact of Electronic Resources at the University of Lagos pointed out that the uses of e-resources are very common among the Lecturers and research scholars of University of Lagos to get the desired and relevant information. However, it is noticed that the usage of these E-resources are not up to the mark as compared to the investments done on this due to lack of infrastructural facility which has proved to be the main hindrance towards the use of available e-resources and ability to meet the requirements of users. If this is rectified, then the available e-resources will be sufficient for all the existing disciplines.

30. (Chandra, H., 2003) the librarians have to take initiative to develop the e-resources to generate satisfaction among the end users. They have to create the comprehensive and interactive website for their libraries. The professionals should think of having a fruitful collaboration with other libraries to delivering effective and efficient e-reference services and solutions. For this purpose, they can hire subject wise technically sound personnel.

31. (chohdo, 2015) in their paper on —Use of E-Resources in Punjab University Library, Chandigarh examined the impact of various e-resources, databases available in Panjab University Library. They explored the preferences and importance of E-resources. They revealed that 80% respondents are aware about the availability of 34 OPAC, E- resources etc. It is found that respondents (38.67%) explore electronic books followed by 32% electronic Journals. It is observed that 73.33% respondents are satisfied with e-resources which are available in the library. Library should provide user training and new techniques like controlled vocabulary

and advanced search strategies which can make electronic search process much faster and easier should be brought to notice among the electronic resource's users.

32. (England, 2013) in his paper on —An investigation into the move towards electronic journals: a case study of NHS libraries in Kent, Surrey and Sussex, ¶ revealed that electronic journals are so embedded into practice in academic libraries that it is easy to forget that this is not the case everywhere. In NHS libraries, for example, the staffs face a particular set of issues. This article is based on Rebecca England's dissertation on this topic, completed as part of the MSc Econ course in Information and Library studies at Aberystwyth University. Rebecca is E-resources Librarian at the Maidstone and Tunbridge Wells NHS Trust. She investigated the momentum towards electronic journals in NHS libraries in the Kent, Surrey and Sussex region and the potential for a regional purchasing consortium.

33. (Herring, 2002) studied to know the scholars using electronic resources and the type subject 's area of online resources that are being referenced. The researcher brought out that online resources are increasingly important for today 's scholars and researchers. There is change in information seeking behaviour. The use of information resources is greater as scholars and researchers feel comfortable and familiar with the resources available through the web.

34. (Anjana, 2016) in their paper on —Use of e-Resources in Higher Education: Advantages and Concerns¶ revealed that e-resources have become an inseparable part of this educational system. E-resources have a prominent role to play in supporting higher education and in fulfilling educational objectives. E-resources are rich source of information for those students who want extra learning materials in addition to their regular classroom activities. With the world moving rapidly into



digital media and information, the role of e-resources in higher education is becoming more and more important and its importance will continue to grow and develop in the 21st century. Thus, the paper aims to examine the advantages of e-resources in higher education and to identify the various concerns related to e-resources.

35. (christanson, marily, 2005)in his article entitled —Patterns of Use of Electronic Books|| reported that in order to understand the patterns of use of electronic books, total net library usage for one year for five academic institutions was collected. Ranked use by number of titles closely fit the power curve, a model known to describe modern developments such as airport hubs and Internet links. A chi-square test of independence compared subject use by library and showed a modest institutional effect. Subject were more popular than traditional social sciences and humanities. Implications for acquisitions and decisions are reviewed.

36. (Dhanavandan, 2012)explained the availability of E-resources facility and accessing mode in the engineering institutions in Tamil Nādu. To evaluate the E-resource facility, a well-structured questionnaire was distributed among library professionals for survey of engineering institutions in Tamil Nādu. It is revealed from the study that more libraries subscribe to e-journals and e-books and only a few libraries have online database and CD ROM database collection. Along with this almost all the libraries have internet facility in their campuses. Majority of the institution libraries have OPAC.

37. (al, mases et, 2016)in their paper on —Strategies to Enhance Access and Use of E-Resources by Postgraduate Students in Selected University Libraries in Kisii County, Kenya|| Electronic information resources subscribed into by academic libraries play a vital role in addressing varied user information needs and engender

research and development among them. Research design of study aimed at identifying library users 'opinion on the access and use of e-resources was used. By using stratified sampling of 88 libraries postgraduate students and library staff, library staff in-charge of e-resources were interviewed. The study revealed that there are increased access and use of library resources and services through the adoption and use of strategies identified in this study.

38. (sanjiv kumar and sharma, yogita, 2010) This article evaluates the use of electronic resources by the users of Mohinder Singh Randhawa Library, Punjab 35 Agricultural University, Ludhiana. A study was conducted on the use of electronic resources by post-graduate students, teachers and research fellows and they found that e-resources have changed the information seeking and dissemination patterns. E-resources are capable of providing most recent, relevant and authentic information. The present study concludes that internet is the most used e-resource.

39. (Roy D., Ding C., Jin L., Thomas D., 2018) in their study on —Association Rule Based Clustering of Electronic Resources in University Digital Library, revealed that Library Analytics is used to analyse the huge amount of data that is collected by most colleges and universities when the library electronic resources are browsed. In this research work, we have analysed the library usage data to accomplish the task of e- resource item clustering. They compared different clustering algorithms and found that association-rule (ARM) based clustering is more accurate than others and it also identifies the hidden relationships between articles which are content-wise not similar. We have also shown that items in the same cluster offer a good source for recommendation.

40. Parveen Kumari (2015) in his paper on —Procurement, Management and use of E-Resource in Current Library Trends: Common Issues revealed that access and

preservation to information are the oldest and very fundamental function of library and information Centre. E-resources provide viable solution to the library problems such as easy access, preservation, high storage, and minimum space with multimedia document and remote access to information collection. Their study defines the importance and types of electronic resources in libraries and discusses the advantages/disadvantages of electronics resources in libraries. Proper utilization of e- resources is possible only if necessary, training facilities provided to make use of the e-resources available on the web. Regular feedback from the end users of the e collection must be submitted. This also helps to identify the importance, merits, demerits, problems and barriers in managing and using e-resources.

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## **CHAPTER 3**

### **EXPLANATION OF CONCEPTS**

#### **3.1 Introduction**

Advances in information technology, urge for information providers to repackage and generate alternate products, demand of users to have easy to search, browse, retrieve and reuse mode of feature rich non print information sources all lead to the present trend of hybrid libraries. In such libraries irrespective of the form and format, content is acquired, processed and serviced. It is difficult to think of even public libraries without some content in electronic format, be it the free CD-ROMS that accompany magazines or books. The dependence on e-resources is increasing rapidly over the last few years. The digitization of information in print media has brought a new concept altogether in all an electronic resource is defined as a resource which requires computer access or any electronic product that delivers a collection of data, be it referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed. These may be delivered on CD ROM, on tape, via Internet and so on. These are more useful due to inherent capabilities for manipulation and searching, providing information access is cheaper to acquiring information resources, savings in storage and maintenance etc. and sometimes the electronic form is the only alternative. The developments in scientific publishing and the Pricing policies of publishers posed new challenges and opportunities for academic libraries in purchasing and managing the serials within their restricted budget. The library and information services of the 21st century is fast changing. With the rapid Development of electronic publishing, libraries are not only acquiring reading materials such as printed books and journals but also arranging for providing access to various learning Resources in electronic form. The web resources and the use of web as a tool 26



is changing the Way users live and learn. While in the early phase, the World Wide Web was mainly used for push type applications to provide information and resources to users, the development of Web 2.0 and the spread of open sources and shared use concept have focused on user generated content and applications for sharing. This has led to the rapid development and popularity of electronic resources. E-Resources are occupying a significant portion of the global literature. They refer to information sources in electronic form. The different types of e-resources are, E-books, E-journals, Databases, CDs/DVDs, E-conference proceedings, E-Reports, E- Maps, E-Pictures/Photographs, E-Manuscripts, E-Theses, E-Newspaper, Internet/Websites - Lustres, Newsgroups, Subject Gateways, USENET, FAQs etc. These may be delivered on CD- ROM / DVD, over the Internet and so on. Providing access to e-resources is a service to help library users to find e-Databases, e-Journals, e-Magazines, e-Books/ e-Audio/ e-Images, Data/ GIS, Digital Library Projects, Electronic Exhibitions, e-Subject Guide, e-newsletters, E- conferences proceedings and Web search tools on a range of topic. The electronic books are helpful because of their easy portability and its feature of usage of the information. According to Dr.S.R. Ranganathan, in his fifth law Library is a growing organism. Library is not a store house of books; it is a knowledge center. Every reader visits the library with the intention to get the solution for his problem. Library should fulfil the needs of user community.

### **3.2 What is E-resources**

According to Wikipedia, electronic resources mean information which can be stored in the form of electrical signals, usually on a computer, or information available on the internet (khamkar, 2014)

An electronic product that delivers data, be it in text referring, to full text basis, electronic journals, usage collections, and other multimedia product. There are several forms and types 27

of electronic resources some of the popular one is electronic journal, full text articles, electronic books and other document sources. (sakhare&Divatankar)

### **3.3 Definition**

According to AACR2, 2005 Update, an electronic resource is: "(data and/or Program) encoded for manipulation by a computerized device. This material may require the use of a peripheral directly connected to a computerized device (e.g., CD-ROM drive) or A connection to a computer network (e.g., the Internet). " This definition does not include Electronic resources that do not require the use of a computer, for example, music compact Discs and videodiscs. According to Library and Information Technology Glossary " Term used to describe all of the Information products that a library provides through a computer network.... " According to Wikipedia, Electronic Resources means " Information (usually a file) which can Be stored in the form of electrical signals, usually on a computer; Information available on The Internet " According to Grad man glossary, " A publication in digital format which must be stored and Read on a computer device. There are two types: Direct access: these are physical objects Such as CD-ROMs, diskettes, computer tapes, and computer cards, containing text, images software etc. (AACR2, 2005)

### **3.4 Advantages of electronic resources**

- E-resources may be accessed over the Internet. The users need not physically visit the library. This is very useful for the users who reside in remote and far-flung areas. The users may download the articles and save them in their PCs.
- The same resource, i.e., article or journal may be accessed by many users at the same time.
- E-resources may be accessed from anywhere, anytime as per the convenience of the users.

- The users may search a large number of resources in one go through a single search interface.
- E-Resources also provide usage statistics which help the library staff in finding out the usage of the product.
- Articles/issues of journals appear online before their print version is available.
- Hypertext format and links of e- resources lead users to related content and articles.
- Electronic resources have audio, video and animation content which is not present in print format.
- The subscription of e- resources helps libraries in saving space.

### 3.5 Disadvantages of electronic resources

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

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

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- Use of e- resources entails reading on screen which is tedious and harmful too.

### **3.6 Need of E-Resources**

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

- a. To get access to an information source by the more than one user.
- b. E-Resources can be searched quickly.
- c. These can be found easily by the user.
- d. These resources can be stored in huge amount.
- e. Amount of time spent on the E-Resources use.
- f. Analyses the purpose of using e-resources by respondent
- g. Know different types of e-resources commonly used by respondents
- h. To collect, store, organize information in digital form.

### **3.7features of electronic resources**

Electronic resources are having very unique features. Some of the important and notable features of e-resources are as follows:

- I I. Electronic composition and transmission have led to fast production, and reviewing of product, thus users can access desired content within no times.
- II II. Large collections can be searched and retrieved simultaneously and instantly.
- III III. Electronic resources can facilitate multimedia and graphics and the content can be reproduced, forwarded and modified according to the requirements.
- IV IV. Many e-resources even provide the facility for translation of articles into languages within fraction of seconds.
- V V. Electronic resources can include sound, video, interactive three-dimensional models.

I VI. Electronic resources are accessible to anyone in the world regardless of geographical boundaries, if one has basic infrastructure.

### **3.8 benefits of electronic resources**

Access to e-resources brings many benefits to users, libraries and publishers. During the transition period, the eventual economic benefits cannot yet be known, but we have seen that early adopter libraries have more journals at less cost in the electronic environment. As with print journals, there are indirect and hidden costs with e-journals as well as long term costs and benefits that are difficult to estimate. Some libraries have management and graceful integration of e-resources and services while others have been devastated by problems arising from the transition to electronic formats. The reasons for actually embarking on the purchasing of electronic resources are generally accepted, because of the ease of usability, readability, affordability and accessibility. The following are the advantages of e-resources over the print media.

I I. Multi-access: A networked product can provide multiple points of access at multiple points in time (24 hours a day. 7 days a week) and to multiple simultaneous users.

II II. Speed: An electronic resource is lot quicker to browse or search, to extract information from, and to integrate that information into other material and to cross-search or reference between different publications.

III III. Functionality: E-resource will allow the user to approach the publications to analyse its content in new ways by click of the mouse on search mode.

IV IV. Content: The e- resources can contain a vast amount of information, but more importantly the material can consist of mixed media i.e. images, video, audio animation which could not be replaced in print.

I        V. Easily Searchable: Easy search ability is one of the core advantages of an electronic format and it is also easier to find information from e-resources, resulting into less wastages of time. Online access allows users to search information by subject or other bibliographical fields.

II       VI. Interactive Nature: The rapid turnaround time means that articles can be read, commented on by the readers, and amended much more quickly than can be done with print. The ease with which email can be sent, or forms can be filled adding to faster and greater feedback through Web.

III      VII. Accessibility

For any user, availability of information from the desktop computer means a significant increase in convenience, particularly to those who do not work within easy reach of the library but are keen to access the information. Moreover, several people can read an issue at the same time without any chance of missing the issues. Also, different layers of access can be given to different people with little extra effort, e.g. different levels of subscription allowing access to abstracts only, or full multimedia.

I        VIII. Hyperlinks

Hyperlinks are the mainstay of the hypertext format, connecting to many relating sources. Hyperlinks not only link to those they have cited, but with a bit of effort, they can be linked to those who have cited them.

I        IX. Remote Access

Facility of remote access to e-resources has removed the barrier of time and space. Users can search, download articles by sitting at their home or computer in office, avoiding the need to visit the library personally (Bharat Kumar, 2009). Environment Friendly 32

I X. Electronic resources are environment friendly, because no wastage of paper and danger of dust.

II XI. Value Addition

Rather than just recreate a print resource in exact format, which many of the commercial publishers are doing, advantage should be taken of all the possibilities of the Web to add value, for e.g. by using animation, virtual reality and interactive mathematical charts. Also a large amount of supporting data can be linked to from the article if the reader wants to look more deeply into the results.

I XII. Fast Publication and Easy Updating

Electronic journals and articles appear online much before the printed version is available and many e-journals published by the Emerald publisher are pre-published through Early Cite issues are made available before the official publication date. The content on e- 71 resources can be updated easily as compared to traditional type of sources.

I XIII. Saves Time

All the information is available at one place so, e-resources save time in retrieving information.

(xiv) Shelving Space

Online journals don't demand any library space. However, CD-ROM or DVD may occupy very little shelf space.

(xv) Risk Factor

In case of e-resources, there is no risk of loss, damage, theft, or misplacement. Electronic resources benefit users as they: 33



- i (i) Are available to users anytime, anywhere (24 x 7 X 365).
- ii (ii) Save users time through desktop access.
- iii (iii) Electronic resources can be accessed by several users simultaneously.
- iv (iv) Provide enhancements, supplements, search ability unavailable in the print environment.
- v (v) Are often on the web weeks before they are available in print formats.
- vi (vi) Can be read by more than one person at a time.
- vii (vii) Are generally suitable for adaptive technologies for visual impairment.

### **3.9 Types of E-resources**

#### **1. Electronic Journals**

Electronic journals or e-journals like newsletter, magazine, e-zine, webzine, are the journals prepared and distributed electronically. These publications are available over the internet and can be accessed easily by using different technologies such as www, Gopher, ftp, telnet, email or listserv. Several traditional journals are now being published both on the web and in print. Current issues or content lists for most of the journals are available on the web or distributed to subscribers as e-mail text messages. Internet-based electronic journals started to appear in the beginning of 1990. These journals were mostly delivered as an attachment to email while their back issues were mounted on anonymous ftp sites and users were required to download them from these ftp sites. The libraries and information Centre made them accessible through their gopher site. With the advent of in 1993, electronic publishing became more than a novelty. The web as a means of delivery of electronic information has grown steadily since then. As publishers' experiment with different publication modes and models, the very definition of a journal is undergoing change in the electronic environment. 34

New journals have evolved based on the graphic capabilities of the internet that is available only in electronic form.

## **2. Electronic Theses and Dissertations**

These constitute a handy source of information for further practices. A thesis contains record of an original contribution to the knowledge. Although a large number of doctoral theses are submitted to every university each year, they are not being used to their fullest potential because most libraries keep them in closed-access collections. Doctoral theses submitted to universities and academic institutions are originally created in digital format using word processing software packages like MSWord, Latex, Word Perfect, word Pro, etc. These documents are undisputedly highly valuable collections especially in digital format that qualify to be an important component of a digital library. Several universities and institutions have already implemented electronic submission of doctoral dissertations under the overall umbrella of an international digital library initiative called “Networked. Digital Library of Theses and Dissertations (NDLTD)”. Some of the important sites for electronic theses and dissertations are: Networked Digital Library of Theses and Dissertations <http://www.theses.org/> Academic Dissertation Publishers <http://www.dissertation.com/> Theses and Dissertations.

## **3. E-Book**

An e-book is also known as electronic book, digital book and e-edition. It is a book length publication which contains text of text, images, or both, and produced on published through, and readable on computers or other electronic device. An e-book is in digital form. E-book can also be defined as an electronic version of a printed book, but eBook's can and do exist without any printed equivalent. E-books are usually read on dedicated e-book readers or tablets using e-reader applications. Personal computer and many smart phones, tablet can also be used to 35

read e- books. As e-book formats emerged and proliferated, some garnered support from major software companies such as Adobe with its PDF format, and others supported by independent and open- source programmers.

#### **4. Online databases**

All in a comprehensive online database that is searchable from several access points for maximum flexibility. Online database is a regularly updated source of information representing virtually the entire publisher, distributor, and wholesaler marketplace. Each name, address entry provides full ordering and editorial access complete with Standard Address Number (SAN) and ISBN prefix. Input data is derived from information provided directly.

#### **5. Websites (www or world wide web)**

The web as a means of delivery of electronic information has grown steadily since then. Most E-resources are not freely available to everyone on the World Wide Web and they may not appear on search engines like Google. An E-resource can be e-book, e-journals or newspapers that has been made available in electronic format and it can be a bibliographic or full text database that allows us to search for relevant articles in our subject area.

#### **6. Computer databases**

Database is computerized record keeping system. The important thing is that a database allows storing data and getting it or modifying. There are two type of databases – analytical databases are primarily static, read only databases, which store archived, historical data used for analysis. Web pages are generated dynamically search parameters. While operational databases allow to modify that data. These types of databases are usually used to track real-time information. 36

## **7. CD-ROM**

The full form of CD-ROM is Compact Disk- Read Only Memory. It is a non-volatile memory. It is an optical disk capable of storing large amounts of data up to 1 GB, although the most common size is 650 MB. CD-ROMs are similar to audio CDs and the data can be stored and accessed from CD-ROMs in the same way. Discs are made from a 7 1.2 mm thick disc of polycarbonate plastic, with a thin layer of aluminium to make a reflective surface. CD-ROMs are popularly used for computer software, including video games and multimedia applications, though any kind of data can be stored.

## **8. E-newspaper**

An electronic newspaper is a self-reliant, reusable, and holds information electronically. The e-newspaper is very useful to all those who have computer or smartphone with internet facility. This kind of paper of is refreshable, and important news may be uploaded in the e-paper by the editor, and the user can read and download the news at any time. The e-newspaper is alternative of normal printed papers, through this e-newspaper user can receive the instant news at any. This kind of paper of is refreshable, and important news may be uploaded in the e-paper by the editor, and the user can read and download the news at any time. The e-newspaper is alternative of normal printed papers, through this e-newspaper user can receive the instant news at any time, it is available in all languages, the user can also get previous newspapers from the internet by data wise, so the readers need not wait for the newspapers, it is available in the internet at any time., (kavithanjajli,2019). 37

## 9. E-Zine

The online magazines disseminated through World Wide Web are called E-zine, which means electronic magazine and it is called as web-zine. This kind of articles is stored in the server and it will be accessed through computer network. Through bulletin board systems or other public network may publish this online magazine via internet. They can also download and the user can also give comment to the Authors for the particular article. (kavithanjaili, 2019)

### 3.10 DRAWBACKS OF ELECTRONIC RESOURCES

Electronic resources do have a downside also. The major drawbacks of e-resources are mentioned as follows:

- Excessive Information – One easily gets distracted or lost on a tangent, making it hard to determine when to quit searching for information in order to start writing.
- Connectivity Problem – For accessing e-resources, students heavily rely on Internet but many times, Internet connection goes down and they lose their connection, and feel at a loss.
- Authenticity – The quality of information is doubtful as many times no authorship is given so it is difficult to judge whether the information is valid or not.
- Volatile Information – Unlike print resources, information on Internet is volatile i.e. information once available on Internet may not be available next time when one visits. There is always an uncertainty about future access (Singh, Vajpi and Kumar, 2005).
- Cost – Additional cost is applicable as the library has to bear for Internet access and telecommunication charges.
- Restrictions – There are always restrictions of copyright, access, download, etc.

### Other drawbacks

- (i) Authentication issues drain institutional resources and user goodwill.
- (ii) The lack of physical permanence of e-resources leads to worries about how they will be available in future, and whether they can be adapted to new technology.
- (iii) E-resources that include graphics and sound are often very slow to access.
- (iv) The libraries have less control over access to electronic resources than over access to print resources.
- (v) User's desktop technology does not always keep up with e-resources technology.
- (vi) In order to use e-resources, users and librarians must have basic computer and networking skills;
- i        viii) Management of e-resources is somewhat different and difficult.

The e-resources have emerged in an alarming proposition in the last decade. Many types of e-resources have emerged with the advantages over traditional resources. As a result, these are increasingly being acquired in the university and college libraries. But at the same time technological advantages are so fast that with the emergence of new breed of e-resources, almost obsolete. It's not only e-forms get obsolete but also the infrastructure. Therefore, to maintain old forms as well as new forms of e-resources, library is required to maintain parallel infrastructure also, affecting the library budget. But in spite of all these limitations, it has become essential to keep a pace with the changing time to support research and development activities which are getting momentum with the use of e-resources. 39

### **3.11 Conclusion**

It is very familiar among the various fields of peoples. In fact, it is now hard to envisage a world without e-resources. The stipulation and use of e-resources is element of the complete system, to both the students, institutions and information professionals. The e-resources assist to deliver the sources to their users very fast, so the user time was saved. Nowadays e-resources have totally reduced the usage of paper material. This e-resources many users concurrently, these databases are most advantageous utilize to put in to the academic excellence and achievement of its user community. 40

## **CHAPTER 4**

### **LIBRARIES E-RESOURCES AT NATIONAL AND INTERNATIONAL LEVEL**

A national library is established by the government of a nation to serve as the pre-eminent repository of information for that country. Unlike public libraries, they rarely allow citizens to borrow books. Often, they include numerous rare, valuable, or significant works. Such as the Gutenberg bible. National libraries are usually notable for their size, compared to that of other libraries in the same country. Some national libraries may be thematic or specialized in some specific domains, beside or in replacement of the main national library.

The international library community has always treated information technology as a challenge, and that is one of the main reasons why the library's own core value must be constructed in China. Although this book aims to present international library practice, maintaining an international scope has been challenging.

#### **4.2 NATIONAL LEVEL LIBRARY**

##### **1. National Library of Canada**

A national library is a library specifically by the government of a country to serve as the preeminent repository of information for that country. Unlike public libraries, these rarely allow citizens to borrow books. Often, they include numerous rare, valuable, or significant works. A national library is that library which has the duty of collecting and preserving the literature of the nation within and outside the country, thus, national library are those libraries whose community is the nation at Large. 41



## **2. National library of Algeria**

A national library is a library specifically established by the government of a country to serve as the preeminent repository of information for that country. Unlike public libraries, these rarely allow citizens to borrow. The national library of Algeria has been in existence since independence in the 1960s and it was modelled after a large administrative library that was established in 1835 by the French colonial authorities. A new building, constructed in the 1990s to house the million or so volumes of the national library, also enabled the library to considerably develop its services. Algeria's scientific and technical information needs are ensured by two organizations, the center for technical and scientific information and technology transfer, the Algerian equivalent of the INIS network, and the national social and economic documentation center, established in 1971, which ensures the selection and indexing of automated documentation on the social and economic development of the country and the collection of statistical data.

## **3. National library of India**

The Calcutta public library came into existence on 21 st march 1836. The library was established for reference and lending, open to all, irrespective of nationalities, class, and colour on the self-financing principle. Later the Calcutta public library was merged with the imperial library was opened to the public in January in 1903. After independence of India, the national library came into being in place of imperial library by the "imperial library that is change of name Act" in 1948. The national library, Kolkata is the national library of India and the national repository. It is also a legal deposit library of India, where books published in the country are deposited under delivery of books Act, 1954. (national library of India, 2021). 42

#### **4. National library of south Africa**

The national library of south Africa is the agency of the government of south Africa which maintains a national library of all published materials relating to the country. The national library of south Africa (NLSA) is the custodian of south Africa's collective national heritage material and the national depository of published output materials in the country. The NLSA is mandated by the national library of south Africa act to collect and preserve published documents and make them accessible to all and to ensure that knowledge is not lost to posterity. (National library of south Africa). A large portion of the special collections are indexed online and are available via the national library of south Africa's OPAC (online public Access catalogue- <http://www.legaldposit.ac.za>). many of the manuscripts and illustrations can also be accessed via the national register of photos NAREF, as well as the national register of manuscript NAREM. (IFLA reference and information service blog).

#### **5. The national library board (NLB) Singapore**

The national library, Singapore is the flagship national library of Singapore. It is the country's largest public library. The national library board (NLB) offers access to a large number of electronic resources on-site at their libraries or from home. E-resources available are JSTOR, Oxford Bibliographies, E-journals, EBSCOHost ERIC (education resources information centre), PROQUEST Databases. To access these databases, all you need to do is to register for my library ID. Singaporeans, permanent residents and foreigners with FIN number can sign up as NLB members online at NLB's website. NLB has an one search-like function that allows you to search across some of their subscribed databases. (NIB E-Resources, 2021 43

## **4.3 INTERNATIONAL LEVEL**

### **1. CARLI (Consortium of Academic and Research Libraries in Illinois).**

CARLI was formed in July 2005 to serve the consortia needs of academic and research libraries in Illinois. There had been consortia existing in Illinois since the 1980s prior to the formation of CARLI. These were:

- • Illinois Cooperative Collection Management Program (ICCMP), formed in 1986, provided state-wide collection studies and grants.
- • Illinois Digital Academic Library (IDAL), formed in 1999 to provide centralised electronic resource licensing.
- • Illinois Library Computer Systems Organization (ILCSO), formed in 1980, provided the shared integrated library system Online which later became I-Share. CARLI took birth as a result of consolidation of these three consortia. Its mission is to create and maintain a rich, supportive, and diverse knowledge environment to facilitate teaching, learning, and research through the sharing of collections, expertise, and programs.

### **2. CONCERT (Consortium on Core Electronic Resources in Taiwan).**

The CONCERT was set up in 1990 to take advantage of the growing popularity of web-based full-text documents. It consists of members mainly from universities, colleges as well as research institutes in Taiwan. As the coordinator of CONCERT, Science and Technology Policy Research and Information Centre (STPI) tries its best to fully exploit the economies from group-purchase and resource sharing. In the year 2002, CONCERT leased 22 international database systems, partly funded by the Ministry of Education and National Applied Research Laboratories. 44

### **3. SANLIC (South African National Library and Information Consortium).**

SANLIC is a consortium of higher education and research libraries in South Africa. It works with a mission to provide high quality research materials to participating institutions at cost-effective rates. Its mission is to “facilitate, on a non-profit basis, affordable access to scholarly electronic information in support of the learning, teaching and research activities of its members. This is achieved mainly through collective negotiations with publishers and aggregators. It also promotes the use of high-quality, open access electronic information resources”. It offers access to e-journals, e- books and open access resources. It also publishes regularly its newsletter ‘SCANLiCTALK’ information its clientele about its activities and resources.

### **4. CURL (Consortium of University Research Libraries)**

The CURL is a Consortium of University Research Libraries in UK. Several activities of CURL are funded by the JISC. The CURL helps member institutions to build distributed and hybrid research library in their institutions with an aim to help researchers all over the world: i) to search, locate and request resources of all kinds in different formats, easily and quickly from their desktops ii) have quick and easy access to an increasing amount of electronic resources, both born digital and digitized; iii) have physical access to manuscripts, archives or printed items that have not been digitised and cannot be moved, wherever these are held; and iv) have other printed items from outside their own institutions delivered to them efficiently. The CURL’s mission is to increase the ability of research libraries to share resources for the benefit of the local, national and international research community. 45

## **5. EIFL (Electronic Information for Libraries)**

EIFL is a not-for-profit organization based in Europe to provide access to knowledge through a global network to developing and countries in transition in Africa, Asia, Europe and Latin America. Starting with providing access to e-journals libraries in Central and Eastern Europe in 1999; it has spread wings enabling access to knowledge for learning, teaching, research and sustainable development into 60 countries.

## **6. ICOLC (International Coalition of Library Consortia).**

ICOLC refers to International Coalition of Library Consortia. It is a Consortium of Consortia, and first met informally in 1997. It comprises over 200 library consortia across the world and the Coalition represents thousands of member libraries worldwide. The Coalition serves primarily higher education institutions by facilitating discussion among consortia on issues of common interest. Additional information about the ICOLC can be found at <http://www.icolc.net> 46

## **CHAPTER 5**

### **DATA ANALYSIS AND FINDINGS**

#### **5.1 Data analysis**

Table 1: 182194

##### **COLLECTION Books**

E-books	214
Print journals	80
E-journals	7941+
Databases	24
CD video	3401