CHAPTER I
INTRODUCTION

1.0 Introduction

Information is a basic thing for all human beings and it is as important to us as food, air, and rest. Information is the modern currency of business and is a power that can move the mountain. Hence, information has become the buzzword in the 21st century. Information plays a vibrant role in the socio-economic, cultural, scientific, industrial and technological development of any nation. Thus, Information is regarded as commodity, currency etc.

Information is more important for decision makers, policy makers, planners, technologists, scientists, doctors, lawyers, policemen and layman etc. Information is a livelihood for many people. One can imagine the importance and the role of information from the fact that in America most of the people (around 70%) are working in Information Service sectors. Users need and the requirements are also changed in the technology driven society. Information is not only available in one source but scattered in different forms as well. Hence, technology savvy users want everything to be available online (electronic form) with full text.

Electronic information resources play a predominant role in almost all sectors be it an industry, public or private, academic, and government organizations. Engineering corporate sectors are not an exception to it. People working in the corporate sectors are in need of information for a very short period
and in the most convenient form because of their busy schedule since they are involving in manufacturing activities and related activities right from the project stage to the marketing of final products. Hence, it is pertinent to know the different types of Electronic Information Resources, their usage and the benefit of the same to the engineering sectors. Electronic information sources are becoming increasingly important to the libraries of all types and sizes and more so in the Engineering sectors (NLAE, 2002)

Due to the advent of modern Information Technology there is a shift from the traditional book form to the electronic form in almost all the sectors. It is because of the advantages of the electronic information over the traditional book form.

The role of ICT in modern library and management has become so important that it is hardly possible to serve the next Generation library users without the application of the same be it a small or the big queries. In the same manner, the Social media too has carved its niche in extending the library services to their corporate counterparts. The librarians in this new knowledge world are needed to prepare to serve these next generation users by acquiring and adopting the required skills to fulfill the needs and requirements efficiently and effectively.

The proliferation of electronic information resources made the corporate sectors to find new ways to have the information at their fingertips within no time. The role of ICT in library management has become so important that it is hardly
possible to serve the new generation library users without the application of the same. The electronic information storage and retrieval revolutionized the total scenario of library services and its management. The transition to electronic information resources enables the users to have access over a vast collection of information. It is easy for those who are more acquainted with the computer to have control over the important database in their respective areas.

The users are finding e-resources more convenient because of their ease of use, time involved, and the accessibility without geographical boundaries. The overall benefits of e-resources compared to their print counterparts outweigh the usual practice of traditional use of library books and other documents.

Hence, the main purpose of the present study is to ascertain the use of electronic information resources by the engineers working in different corporate companies in the Gujarat state. Gujarat is one of the fastest growing states in India. The reasons are many viz. there are good number of business tycoons, stable govt., rich in resources and other facilities directly invite industrialists to establish their industries. As a result, it has been identified and placed on the industrial map of the world. It has all types of manufacturing industries covering all branches of Engineering. The size of Engineering sectors and its contribution to nation’s exchequer is very large compared to all other states. Considering its need, importance and the future growth aspect, it is pertinent to know the information need especially the Electronic Information Resources and how they access these resources thereby enhance their productivity is the need of this study.
1.1 Meaning and Definition of E-Resources
1.1.1 Electronic Resources

The rapid evolution of electronic resources, the Collections Policy Committee should review the following guidelines at least biennially to ensure that the Library's current and future research needs are met. This document is general by design so that it does not restrict the collecting of required materials and to allow the Library to make these resources available as technology changes. It also does not address questions of levels of cataloging (LCR 411) or cataloging priority (LCR 411-2).

The Library is committed to preserving its electronic resources just as it is to ensuring permanent access to its collections in other formats. When the Library collects both electronic and analogue versions of a resource, both versions are retained as permanent holdings of the Library. For both direct and remote access resources, the Library will endeavor to archive these resources following standard practices, guidelines and legal requirements. Furthermore, the Library will negotiate permission to archive electronic resources either upon collecting or for future archiving should the content provider no longer be able to provide access to the resource. For remote access resources, when permission to archive them is unattainable, the Library will only provide a link to the resource.

Examples of electronic resources include, but are not limited to: web sites, online databases, e-journals, e-books, electronic integrating resources, and
physical carriers in all formats, whether free or fee-based, required to support research in the subject covered, and may be audio, visual, and/or text files.

1.1.2 Definitions

1. An "electronic resource" is defined as any work encoded and made available for access through the use of a computer. It includes electronic data available by remote access and direct access (fixed media). In other words: remote access (electronic resources) refers to the use of electronic resources via computer networks. (AACR2, 2002 edition; glossary). Direct Access (electronic resources) refers to the use of electronic resources via carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

2. Electronic resources can be defined by using the Anglo American Cataloguing Rules – II definition for machine readable data file as “a body of information coded by methods that require the use of a machine (typically a computer) for processing”.

3. “Any electronic product that delivers a collection of data, be it text, numerical, graphical, or time based, as a commercially available resource” (Lee and Boyle, 2004).

4. International Coalition of Library Consortia (1998) defines electronic information as “A broad term that encompasses abstracting and indexing services, electronic journals and other full text materials, the offering of
information aggregators, article delivery services, etc”. Electronic information can be accessed via remote networks from information providers mounted by a consortium or one of its member libraries.

5. *Electronic information resources* are defined as being any publicly available information resources, which can be accessed via a personal computer. These include commercially produced resources such as bibliographic databases (accessed online or via CD-ROM), electronic journals and electronic books as well as resources that have been made freely available via Internet, whether specially to Higher Education Institutions (through government funding) or to the public in general (www.roehampton.ac.uk/customer/erpolicy.pdf).


A publication in digital format 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. Remote access: These have no physical item associated with them and are accessed via the user’s computer by sending a command to a computer server to download the file (www.lib.unc.edu/cat/localdocs/gradman/glossary.html).
**Information** resources are maintained in electronic, digital format, and they may be accessed, searched, or retrieved via electronic networks or any other electronic data processing technologies (e.g., CD-ROM) (GILS, 2004).

### 1.2 Need for the Study

In an industrial environment, people look for the most convenient way to fulfill their technical, commercial and managerial information need. To make them aware of the importance of Electronic Information Resources and the skills required to use the electronic Information resources is very much required as these resources have added advantages over the traditional sources of information. So, the purpose of the present study is to know the awareness and to identify the areas for effective usage of electronic information resources in engineering sectors (Wilson, 2002).

The way the libraries collect, process, store, retrieve and disseminate information has been changing constantly. This revolution is taking place in almost all the sectors and the corporate sectors are not an exception to this. Modern libraries are in a transition stage from manual to electronic system. Libraries and information centers are no longer self-sufficient but are linked through electronic network of various types. The advantages of technology have brought so extensive changes and it is not easy to assess their total effect. It is clear that libraries are in a state of fundamental transition and are innovated rapidly in the electronic environment. Traditional libraries are the storehouse of materials and knowledge mainly in the form of books and other printed materials.
As the volume of information is increasing, the traditional means of transmitting the same is also changing.

In this fast growing world information needs of learners and knowledge seekers are met through the plethora of sources. Electronic information resources play a prominent role in facilitating access to required information to the users in an easy and expeditions manner. Users can make use of electronic information resources right at their desktops without going to library.

It is expected that the following broad trends in the information services environment will influence access to electronic information resources:

- Search engines provide more efficient Internet search capabilities, allowing users to locate required information more easily and with greater precision;
- Many information sites will remain out of sight of search engines (the "deep web") and other mechanisms will evolve to locate this information;
- New layers of middleware such as improved authentication software will emerge, supporting activities such as e-commerce and other services requiring high levels of security;
- Issues of Intellectual Property Rights (IPR) on the web will become increasingly important and will be addressed through technological solutions;
- Web users will increasingly access information resources without intermediation by libraries or librarians;
• Portals as interfaces to information will be developed by a range of organizations, providing users with easy access to a defined range of useful electronic information intended to meet individual requirements;

• Commercialization of the web will continue, particularly in relation to business activities on the web. Conversely, there will continue to be an expectation by information users that many services will be free or charged at a low cost;

• Virtual reference services will become more prevalent and more sophisticated, reflecting the shift to the use of the Web and electronic resources. Reference services will increasingly be offered through the Web; and

• Collaboration will assume more strategic importance as a way of achieving similar goals across different sectors, and traditional information service providers will group in new and innovative ways (Fiedel & Green, 2003).

1.3 Statement of the Problem

The term usage means the extent of use of the electronic information resources. This study investigates the need and importance of electronic information resources in the engineering manufacturing sectors and Science & Engineering institutions and how they are being used by the engineers and management personnel including the patrons of Engineering Institutions. How do they fulfill their technical and other information need by way of electronic information resources in enhancing their areas of productivity? Are the traditional
means of information sources like books, periodicals and engineering documents necessary in addition to the electronic information sources or are they obsolete for them? Why and how do they get the required information and in what form? What makes them to look for an alternative information sources over the traditional form of sources? What are the different types of electronic information resources through which the personnel in engineering sectors and other study population quench their thirst of information need to fulfill their requirements. To find out the answers to all these questions is the crux of the problem. Hence, the problem, “Use of Electronic Information Resources in Some Selected Engineering Corporate Sectors: An Analytical Study with Reference to Gujarat State.”

Therefore the present study has been chosen for the research study because of the fact that the Gujarat State is one of the main Engineering Hubs and there is a dire need of providing more and more E-resources which helps engineers to execute the work efficiently, thereby increasing productivity at the maximum level.

1.4 Scope and Limitations of the study

For the present study, engineering sector is chosen and this is confined to Bharuch District. The district is one of the renowned Industrial Estates. This was the backward district and the Government of Gujarat has decided to improve it by Industrialization and giving more subsidized infrastructure so as to attract more and more industrial houses and come forward to invest heavily. The district has got innumerable natural resources like minerals, raw material, good transportation- road, sea harbours, / ports, airways, electricity, communication,
low cost lands, simple government procedure and the most important is the low cost labour coming from various states searching for the jobs of all type. Therefore, investors are motivated and inspired by all these facilities while it is much more costly comparatively with other states.

The industries in Ankeshwar Industries Estate, (G.I.D.C., Ankleshwar) is one of the biggest Industrial Estate comprising around 1600 industries ranging from Small, Medium, and Large scale of varied type, Engineering, Chemical-Pesticides, Dyestuff, Pigments Pharmaceutical, Automobiles, Instrumentation, Civil, Fabrication, Construction, etc. All the industries are engaged in manufacturing and exporting their products besides selling within India and also the industries are sharing the common information that help benefit mutually and increase their products and services. The products of one company are the raw materials for another and hence they save lot of money in transporting their goods within the Ankleshwar GIDC AREA. Therefore, more number of industries have been selected for the study purpose.

1.5 Objectives of the Study

The main objective of the study is to examine the impact of electronic information resources on the Engineers serving in the Engineering Corporate sectors of Gujarat State in general with special reference to Bharuch district.
The specific objectives of the present study are: to

1. study the adequacy of electronic information resources in engineering sectors of Gujarat state;
2. ascertain different information needs of the engineers and management personnel working in engineering sectors;
3. know the extent of awareness and the frequency of use of the different Electronic Information Resources by the engineers;
4. study the different purposes of using electronic information resources;
5. identify the problems faced by the engineers and management personnel in use and accessing of E-Resources;
6. provide solutions to the problems encountered by the engineers and management personnel; and
7. recommend suitable suggestions for the effective use of the Electronic Information Resources in engineering corporate sectors.

1.6 Hypotheses

1. The Engineers have shown a high degree of awareness about the electronic information resources.
2. The availability of electronic information resources leads to the improvement of productivity in engineering corporate sectors.
3. The Electronic Information Resources are more convenient form of resources for the engineering and management staff because they are easy for accessing and retrieving the required information.
4. The users need proper training, orientation and guidance on how to access and use the electronic information resources.

1.7 Methodology

For this study a questionnaire was prepared and distributed to the respondents to elicit the relevant data.

The data for the research may be collected through various methods viz. historical analysis, literature survey, questionnaire survey and personal interviews where ever possible. The historical analysis and literature survey help in collecting the textual data from both the published and unpublished sources. The questionnaire method is an important tool which can be used in soliciting information from the engineers of corporate sectors. Therefore, the data collected for the present study is collection of primary data through questionnaire method.

In the present study, the Engineers and the Management Personnel working in the Engineering Corporate sectors in the State of Gujarat constitute the target population. There are around 506 Engineering Industries in Gujarat including both heavy and light. A sample of leading industries shall be selected for this study purpose. The Engineers comprise the technical people having at least a degree in Engineering and minimum two years of experience. The management people comprise the non technical personnel having at least a degree in their respective field of work and a minimum two years of experience.
1.8 Data Collection

Data serves as the basis or as the raw material for an analysis. Without the analysis of factual data, no specific inferences can be drawn. The inferences based on imagination or guesswork cannot provide correct answers to research questions. The relevance, adequacy and reliability of data determine the quality of findings of the study, hence the importance of data for any study.

1.9 Questionnaire Survey

Looking to the nature of the problem, the most suitable method for data collection is the questionnaire method. A questionnaire is a written document, listing a series of questions pertaining to a problem under the study to which the investigator requires the answer. It may be defined as a data gathering device, containing a list of logically arranged written questions on a problem under investigation for which the researcher requires responses for testing the hypotheses. This survey has been undertaken with the help of a questionnaire designed for the purpose. While designing the questionnaire, care was taken to include both the closed and the open-ended questions. Multiple Choice Questions enhance the response, as they are easy to fill up. Hence they were included in sufficient numbers. Wherever necessary, interviews with a few users to interpret the questions to them and to collect the required data were also held.
1.10 Distribution of Questionnaires

The researcher tried several methods to distribute the questionnaire among engineers in engineering industries/corporates were approached in the companies having their libraries and were requested to fill up the questionnaire.

1.11 Sample Size

The sample was drawn from 34 engineering corporate sectors in Bharuch district mainly from Ankleshwar, Bharuch, Dahej, Jhagadia, Panoli. The Random Sampling Technique has been applied because the population size is vast. The sample size was limited to 10%.

1.12 Outline of the Chapters

The organization of the thesis is divided into six chapters

Chapter 1: gives why electronic information resources are important and includes need for the study, statement of the problem, scope and limitation of the study, objective of the study, hypotheses, methodology, Questionnaire survey etc.

Chapter 2: covers the review of related literature under various headings.

Chapter 3: deals with the Collection Development Policy, Management and Evaluation of Electronic Information Resources.

Chapter 4: Highlights the brief background of the industrial scenario and the profiles of the study population.
Chapter 5: Deals with the analysis and interpretation of the collected data through the questionnaire from engineers serving in the engineering corporate sectors as per the study population with regard to use of electronic information resources, their awareness and purpose of using electronic information resources, etc.

Chapter 6: The last chapter covers the summary of findings, suggestions, conclusion and areas of further research. At the end, a selected bibliography and appendices are given.

1.13 Summing Up

Technological innovation in corporate sector libraries has tremendously changed the ways in which library users find and use information today. Corporate libraries must employ the best practices of management to address the contradictions and solve the problems caused by such rapid and accelerating technological integration.

Brown (1996) indicates that “by the end of the next decade there could be a wide range of new information systems which are not yet even on drawing board”. The Electronic information represents an outstanding opportunity to meet the need of the research community and to stimulate among them new lines of exploration and work methods to pursue them.
References


