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# Digital Library Environment in Indian Research Institutions

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## Abstract

This paper mainly describes various aspects of digital library development and different types of reference services being provided in digital environment which include: (i) personalized services (ii) web-based reference and information services (iii) search engine services (iv) digital reference services for general public as well as academic community (v) co-operative digital library service. This paper highlights present scenario of digital library services in India. It outlines the initiatives taken by the UGC, India the INFLIBNET Centre, DELNET, IITs, RECs, National Research Organizations/ institutions of India in the digitization of libraries and information centers in order to provide digital library services. Further it suggests that in a developing country like India where resources are limited, funds are inadequate the library and information professionals should develop their skill and proficiency to meet the challenges of technological developments and changes emerging out of digital library services.

## Introduction

The digital library is an electronic or virtual library where information is selected, acquired, processed, organized, stored and retrieved in digital form. The developed countries have already digitized their libraries. The developing countries are in the process of digitization of their libraries. The users of digital libraries are the universal users who should have facility to access to all created and acquired digital sources of information in the form of electronic text, image, map, sound, video and multimedia. Thus the digital libraries are attributed to electronic databases and capable of handling large data and servicing users effectively in resource sharing environment.

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## Digital library infrastructure

A digital library has certain technological requirements such as:

- I. Locally developed database
- II. Local library system with adequate personal computers having LAN and CD-ROM Drives.
- III. Electronic mail service
- IV. Network connection to have access to other data bases
- V. Various functions to coordinate manage the entry and retrieve data.
- VI. Multimedia Kit
- VII. Well trained manpower
- VIII. Computer Hardware with Audio-Visuals, Video Conferencing Kit, Pentium Web Server, Laser Printer, Scanner, Barcode Scanner, Barcode Printer, Digital graphic printer and UPS.
- IX. Software and its accessories.

## Digital Library Projects

### Digital Library of India

The Indian Institute of Science (IISc), Carnegie Mellon University (CMU), the International Institute of Information Technology, Hyderabad (IIITH), and many other academic, religious, and government organizations in India, a total of more than twenty "Content Creation Centers," have become partners in the Digital Library of India (DLI). The DLI seeks to preserve Indian heritage that is contained in books, manuscripts, art, and music. Each centre brings its own unique collection. This digital library is also a test-bed for Indian language research. The DLI is a leader in worldwide efforts to make knowledge free. A pilot project to scan some 10,000 books was initiated at CMU and then followed up at IISc, IIITH, and other organizations. All the processes involved have been perfected. The vision is to preserve all the knowledge of the human race in digital form and make that content search-

able, independent of language and location, and to ensure that the cultural heritage of countries like India is not lost during the transition from paper to bits and bytes, as they were lost during a former transition of cultural content from palm leaves to paper.

So far, more than 289,000 books have been scanned, of which nearly 170,000 are in Indian languages. More than 84,000 books (25 million pages) are available on the DLI web site at the Indian Institute of science and more than 149,000 books (43 million pages) are available on the DLI web site at the International Institute of Information Technology. The link to other partner sites is also provided through a commonly accessible website.

Funding for the DLI comes from multiple sources. The Office of the Principal Scientific Advisor to the Government of India is funding the project at the Indian Institute of Science. The Ministry of Communication and Information Technology (MCIT) is funding the project at various DLI partner centers. The National Science Foundation (USA) is providing funding for scanners and software research and development through Carnegie Mellon University. The First Citizen of India, His Excellency Dr APJ Abdul Kalam, President, who himself is one of the contributors to this vision, has personally taken a keen interest in making the Rashtrapathi Bhavan one of the major centres of the DLI.

#### **Access to e-journals: Indian scenario**

##### **University libraries**

In the 21<sup>st</sup> century access to information and knowledge is a critical determinant of the success and sustain ability of a nation. It is a challenge to access the new information and communication technologies amidst the lack of basic infrastructure and facilities. According to a survey conducted by the University Grants Commission in India in the year 2001, 142 university libraries are equipped with computers and internet facilities and they are interlinked within the INFLIBNET. But the libraries having internet access do not all necessarily subscribe to electronic journals primarily due to enormous fees for access. The allocated yearly budget is utilized mainly to subscribe to the printed journals and to sustain the subscriptions without cutting down essential journals. Due to this, many uni-

versity libraries feel that the transformed electronic format is a burden for them and even if considered to be a necessary not a need they can satisfy probably a consortium model which facilitates the sharing of resources without requiring additional fees to access the electronic journals, will be an ideal solution, but is such a solution feasible? Will the publishers encourage such as a library friendly budget idea.

#### **Electronic Theses and Dissertation Project of INFLIBNET Centre**

INLIBNET hosts a bibliographic database 200,000 dissertations from about two hundred Indian universities going back to 1905. The Repository uses D-Space, which complies with the Open Archives Initiative (OAI) framework allowing publications to be easily indexed and searched by web search engines and other indexing services.

#### **V. V. Giri National Labor Institute**

The Archives of Indian Labour were created by the V.V. Giri National Labour Institute and the Association of Indian Labour Historians (AILH). The archive preserves documents, builds collections, and initiates research in labour history. The collections include documents from different organizations. Documents from labour movements are included, as well as personal accounts and memories of labour leaders and workers. The archive uses Greenstone, an open-source digital library system, to integrate text, audio, and video

#### **Indian Institute of Astrophysics**

The Indian Institute of Astrophysics has its origins in the Madras Observatory, which was created in the late 18<sup>th</sup> century. Today the Institute is a national research centre for physics and astronomy. Its repository includes dissertations from researchers associated with the Institute, as well as papers from the Bulletin of the Astronomical Society India beginning with volume 1 (1973), journal articles, and conference papers. Archival materials from the 18th, 19th, and 20th centuries have recently been added. These materials are manuscripts, photographs, annual reports, instruments and their descriptions. The repository uses D-Space.

#### **Raman Research Institute**

The Raman Research Institute Digital Reposi-

tory allows the Institute community to deposit pre-prints, post-prints, and other publications and organizes these publications for retrieval. It also contains the annual reports of Institute and newspaper clippings from its archives. The Repository uses D-Space.

### **National Chemical Laboratory**

National Chemical Laboratory is an interdisciplinary research centre focusing on polymer science, organic chemistry, catalysis, materials chemistry, chemical engineering, biochemical sciences, and process development. It partners with industry, and some 400 graduate students are pursuing doctoral degrees. About 50 Ph.D. degrees are awarded each year. The institute has the second largest number of papers in chemical sciences (ca. 430), files the largest number of patents, both in India (60) and abroad (60) and produces the largest number of PhDs in chemical sciences in India. The repository uses D-Space. There are currently 500 theses, project reports, and journal articles available.

### **National Institute of Oceanography**

The digital repository of the National Institute of Oceanography collects and preserves institutional publications (journal articles, conference proceedings, technical reports, theses, dissertations, etc). Some of the completed and ongoing projects are:

- Marine boundary layer characteristics during a cyclonic storm over the Bay of Bengal
- Variation of wave directional spread parameters along the Indian coast
- Study of Goa and its environment from space: A report on coastal sand dune ecosystems of Goa: Significance, uses and anthropogenic impacts
- The coastal regulation zone of Goa: Oceanographic, environmental and societal perspectives
- Marine pollution detection through biomarkers in marine bivalves. The repository uses D-Space.

### **Indian Institute of Technology, New Delhi.**

Digital library initiatives began in 1998 with an upgrade to a faster Internet connection. The high-speed Internet connection led to a number of digitized collections. IITs receive grants from

government bodies such as AICTE (All India Council of Technical Education) and the Ministry of Human Resources Development and Management (MHRD) to develop digital libraries. Online courseware has been developed and older volumes of journals have been digitized, among other projects. More than 500 dissertations are available in the repository. The campus has facilities for submitting material to the repository. More than 25,000 pages of journals were scanned and are available on the Institute intranet.

### **Indian Institute of Technology, Kharagpur**

The Central Library, IIT Kharagpur, created an electronic library in 1994, which is now called a digital library. Older documents have been digitized, and it has large number of electronic resources such as Ei-Tech index, Compendex, IEEE / IEE journals in full text, INSPEC, Current Contents, Chemical Abstracts, Biotechnology Abstracts, Agricultural Abstracts, Library and Information Science Abstracts, ASTM standards and ABI. The institutional repository collects, preserves, and disseminates research output. At present, access is restricted to the IIT Kharagpur campus LAN only and submission of documents to this repository is also limited to the IIT Kharagpur research community. The repository uses D-Space.

### **Indian Institute of Science, Bangalore**

The Institute uses e-Prints, an institutional repository of research output. The archive is maintained by the National Center for Science Information (NCSI) and it supports self-archiving in various file formats (PDF, Word, html, etc.) Around 5,000 articles are available.

### **Indian Institute of Technology, Bombay**

The repository has bibliographic information and abstract for dissertations beginning in 1965. The master's thesis database has bibliographic information and abstract from 1999 on. More than 3,000 full text theses and Dissertations are available in the ETD database. The repository uses Greenstone, open source software, which complies with the Open Archives Initiative (OAI) protocol.

### **Indian Institute of Management, Kozhikode**

The IIM-K institutional repository uses GNU E-Prints software, which was developed at the

University of Southampton. The community can archive preprints, post prints, and other scholarly publications. Anyone can access the archive, but submission of documents is limited to the IIMK research community. At present around 200 full-text documents are available in the repository.

#### **National Institute of Technology, Calicut**

“Nalanda” was initiated in 1999 and is one of the largest digital libraries in the country. It serves the campus with research and other academic information in science, engineering, and technology. The software used was developed by the institute itself. Nalanda is accessible from anywhere on campus. The repository contains theses and dissertations, course materials, articles, and annual reports.

#### **National Institute of Technology, Rourkela**

Formerly known as Regional Engineering Col-

lege (REC), this is one of the premier institutions for technical education in the country. NIT is a joint undertaking of Government of India and Government of Orissa. This Institutional Repository uses D-Space. At present around 343 documents are available in the repository.

#### **Librarian's Digital Library**

This repository is at the Documentation Research Training Centre, Indian Statistical Institute, Bangalore. It is aimed at librarians worldwide, and uses D-Space. It contains articles, theses and dissertations, presentations, multi-lingual documents, photographs, etc.

The INDEST-AICTE consortium also encourages open access through institutional repositories to its member institutions as given the table.

**Table1: Open archives Initiatives in India**

<b>S.No</b>	<b>Name of the Institution/ organization</b>	<b>Name of the institutional repositories</b>
1	Indian Institute of Science, Bangalore	e-prints @IISc
2	Indian Institute of technology, Bombay	Etd@ IIT Bomaby
3	Indian Institute of technology, Delhi	e- print &Etd@ IITDelhi
4	Indian Institute of Management, Kozhikode	Etd@IIM Kozhikode
5	Delhi University	DU E print Archive
6	NIT, Rourkella	D-space@netr
7	IIIT, Allahabad	GNU E prints
8	INDEST Consortium	<a href="http://www.eprints.iisc.ernet.in">http://www.eprints.iisc.ernet.in</a>
9	National Centre for Radio Astrophysics, Pune	<a href="http://www.ncra.tifr.res.in">http://www.ncra.tifr.res.in</a>
10	National Chemical Laboratory, Pune	<a href="http://dspace.ncl.res.in/dspace/index.jsp">http://dspace.ncl.res.in/dspace/index.jsp</a>



**Table 2: Initiative of Science Consortiums in India**

<b>S.No</b>	<b>Name of the consortium</b>	<b>Web site</b>
1	FORSA	<a href="http://www.iiap.res.in/library/forsa.html">http:// www.iiap.res.in/library/forsa.html</a>
2	VIC( Virtual Information Centre)	<a href="http://www.vic-ikp.info">http:// www.vic-ikp.info</a>
3	NISCAIR	<a href="http://www.niscair.res.in">http:// www.niscair.res.in</a>
4	INDEST-AICTE	<a href="http://www.incest.iitd.ac.in">http:// www.incest.iitd.ac.in</a>
5	IASB(Indian Academy of Science, Bangalore)	<a href="http://www.webwire.com">http:// www.webwire.com</a>
6	NPTEL( National programe on Technology Enhanced learning)	<a href="http://nptel.iitm.ac.in">http:// nptel.iitm.ac.in</a>
7	Open Access e-journals portal in India	<a href="http://www.openj.gate.com">www.openj.gate.com</a>
8	UGC-INFONET	<a href="http://www.ugc.ac.in">http://www.ugc.ac.in</a>
9	HELINET	<a href="http://jgate-helinet.inforindia.co.in">http://jgate-helinet.inforindia.co.in</a>

## Conclusion

Research Institutions are promoting digital libraries and sufficient funds providing form UGC, AICTE, NCTE ,CSIR and DST, They researchers keen reference from e-documents in relevant fields. In India UGC and INFLIBNET Centre have taken steps to develop a consortium where college, university and research libraries can join for subscription to on-line journals. Similarly procurement of e-reference sources on CDs can be made and on-line current awareness service of the content pages of the journals subscribed may be provided on the Intranet.

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<i>Indian Journal of Emergency Pediatrics</i>	4	4000	200
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# Nigerian Banks Uses of Information and Communication Technology (ICT) and Its Impact on Products and Services: Case Study of Some Selected Banks in Ebonyistate, Nigeria

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## Abstract

The study examined Nigerian banks uses of information and communication technology

(ICT) and its impact on their products and services: case study of some selected banks in Ebonyi

State, Nigeria. Through a triangulation method, a total of 16 bank managers were drawn from 16 banks out of the 17 bank managers of Nigeria banks that have branches in the state. Interview and questionnaire were used to gather data. The results obtained demonstrates that ICT has impacted significantly on Banking services, customers profits and the areas that need to be improved upon by the Nigerian Banks were also revealed. The study recommends that it is imperative for bank management to intensify investment in ICT products to facilitate speed, convenience, and accurate services. This is not for any other reason but for them to be more relevant in the 21<sup>st</sup> century banking system.

## Key words

Information Communication Technology (ICT), ICT Compliance, Banking, Banking Services, Banking System, Service Improvement, Nigeria.

## Introduction

Ebonyi State is one of the 36 states that make up the federation of Nigeria. The state was created in October 1, 1996 with Abakaliki as the capital. As a result of the new status of the area, economic and social development scaled up. The banking sector became one of the most outstanding in the area of development. The

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accelerated growth of the banking sector in the state was orchestrated by the reforms in the banking industry which led to the recapitalization of twenty five (25) banks and the withdrawing of the licenses of the others that could not meet the bench mark of N25 Billion as capital base (Muoneke, 2000).

The primary objective of the reforms is to guarantee an efficient and sound financial system. The reforms are designed to enable the banking system develop the required resilience to support the economic development of the nation by efficiently performing its functions as the fulcrum of financial intermediation (Lemo in Adeyemi, 2005). This development poses new challenges to the banks as competition stiffened. New strategies, approaches and policies become imperative.

The application of information and communication technologies (ICTS) to bank operations became one of the strategies adopted by many banks in the country to strengthen the industry. Oboh (2005) pointed out the three factors responsible for banks imbibing ICT empowerment of their operations and service delivery. These according to him are:-

- Greater pressure on banks to increase profits and shareholder value.
- Increased focus on cost reduction through improved efficiency in the way banks manage business risks and consequently the use of technologies,
- The need to retain existing and expand the customer base, and maximize profitability.

The above shows that ICT has a great role to play if banking sector is to meet the challenges. Its application has become a subject of fundamental concern and importance to all banks as a prerequisite for local and global competitiveness. Alabi (2005) maintains that ICT

will facilitate capital formation and promote economic growth which will enable the industry to operate in a safe and sound environment and information and communication technology (ICT) development has been the major facilitator of increasing the integration of global financial market in the banking system. Oboh (2005) and Adeyemi (2005) have all spoken extensively on the capacity of ICT to facilitate sound economic system in the financial sector of any nation. Agboola (2004) highlights some of the products which the introduction of ICT has promoted in the banking system such as Automated Teller machine (ATM), smart cards, telephone banking, etc. all these have made the industry one of the fastest growing sector of the economy.

In another development Villanculos and Moali (2003) outline the benefits of ICT for banks customers to include, better services and productivity, time saving, stability of the industry and automation of the services. In the same vein, Pennings and Horianto (1992) maintain that banks need quality services for their customers by adopting real-time online system which is a feature of ICT.

In an earlier study by Idowu and Adagunodo (2003) on the effect of ICT on the growth of the banking industry in Nigeria, it was found out that the introduction of ICTs into banking operations, has resulted in the safety of customers deposits and quality services. Similarly, Villanculos and Moali (2003) in their own study found that the use of ICTs in banking system had resulted in faster access to information, improvement in the quality of services, increased speed of work, speed in communication, and improved productivity. Another study by Agboola (2004) on the impact of computer automation on the banking services in Lagos, Nigeria also reveals that electronic banking has tremendously improved the services of some banks to their customers. In the light of the above, there is no doubt that use of ICT by some Nigeria Banks has metamorphosed and affected their operations, products and services. However, it is observed that there is limited research that focuses this very important issue. In a time like this, there is need for study such as this to further strengthen the use of ICT by the Nigeria Banks in order to increase their viability, efficiency and at the same time maximized their

profits.

## **Literature Review**

Information and Communications Technology (ICT) is a term that covers all forms of computer and communications equipment and software used to create, store, transmit, interpret, and manipulate information in its various formats (e.g., business, data, voice conversations, still images, motion pictures and multi-media presentation). ICT is a combination of 'Information Technology' and 'Communication Technology'. It merges computing with high speed communications link carrying data, sound and video (Alabi, 2005). Information Technology (IT) deals with the collection, storage, manipulation and transfer of information using electronic means. 'Communication Technology' refers to the physical devices and software that link various computer hardware components and transfer data from one physical location to another (Laudon and Laudon; 2001). Information and communication technologies (ICT) are the computing and communications facilities and features that various banks use to support banking services. On the other hand, Information technology (IT) comprises the knowledge, skills and understanding needed to employ information and communications technologies appropriately, securely and fruitfully in banking, employment and everyday life.

Various Information and Communication Technology devices have emerged to enhance the speed and quality of service delivery and radically change how banking services are being handled worldwide (Agboola and Saluwu, 2008). Shokan (2005) identified Electronic Fund Transfer, Electronic Fund Transfer at Point of Sale, Electronic Cheque, Electronic Letter of Credit, Electronic Card, Debit Card, Electronic Cash, Electronic Billing, Automated Teller Machine. Agboola (2002) summarises ICT products relevant to banks into three groups: Bankers automated clearing services, automated payment system and automated delivery channels. Agboola and Salawu (2008) explained these three groups as follows:

v Bankers Automated Clearing Services:

Automated Clearing Services involve the use of Magnetic Ink Character Reader (MICR) for cheque processing. MICR is a system that provides for encoding of cheques and documents with characters in magnetic ink so that they can be electronically read. MICR is capable of encoding, reading and sorting cheques for timely clearing.

- v Automated Payment Systems: Automated Payment Systems include products such as Automatic Teller Machine (ATM), Plastic Cards and Electronic Funds Transfer. ATM is a remote cash dispenser that assists customers to have access to withdrawal outside the banking hall. Electronic cards are microchips that store electronic cash to use for online and off line micro payments. They include credit cards, debt cards, and store value cards. Electronic fund transfer (EFT) is an electronic oriented payment mechanism. That is, an electronic tool that is used to effectively transfer the value of exchange process for goods and services, ideas or information from one bank account to another account in another bank (Shokan, 2005). Electronic Letter of Credit, Electronic Cheque and Electronic Cash fall under automated payment system
- v Automated Delivery Channels: These include interactive television and the Internet. They offer an excellent environment for banks to experiment with the delivery of Electronic Home and Office Banking (Bill, 1996). This technology provides for exchange of data between computer applications supporting the process of business partners by using agreed-to, standardized, data format. This device enables customers to carry out transactions with their banks through connection between the customer's terminals in their homes and/or offices and the bank's computer system. VSAT (Very Small Aperture Terminal) is a satellite communications system that serves home and business users. Customers with such terminals are able to contact the bank for any form of information required. Information on bank balances, deposits into and withdrawals from accounts may be gotten through this medium.

Application of ICT is capable of enhancing optimal performance in banking services if appropriately carried out (Agboola and Salawu, 2008). Proper queuing analysis will assist to determine the type, nature, extent and spread of ICT products required in banks. Optimal utilization of facilities might be achieved if the design is done based on clear understanding of how the service is to be measured. Such measurements include arrival rate of customers, service rate, traffic intensity, the average time a customer spends in line, the average time a customer spends in the system, average number of customers in the system and average number of customers in the queue. All these will assist to make decisions on the level at which information and communication technology can be applied for an optimal performance in banking operations.

As earlier pointed out, the importance of application of ICT into banking services in the 21<sup>st</sup> century cannot be underestimated based on the fact that ICT has turn the whole world into a global village. Despite this, there is limited research focusing this very important phenomenon particularly in a country like Nigeria. The need to make data available from the Nigeria context on the importance of bank compliance with ICT and its impact on their products and services at this moment is highly germane. This information will enable Nigeria banks compete with their counterparts around the world and will assist them to know what banks in developed world are doing to promote their services through ICT. This justifies the conduct of this study in a time like.

### **Objectives of Study**

The study pursued the following objectives.

1. To identify ICT facilities available in banks in the state.
2. To find out ICT – driven services available in these banks
3. To determine the impacts of these ICT facilities on the banks customers services.
4. To find out the effects of ICT on banks customer-base and profit level.
5. To find out areas of improvement on the maximization of ICT in Banks.

## Research Questions

The following research questions have been formulated to guide the study.

1. What are the ICT facilities in use by the various banks?
2. What are the banks services that have been affected by the adoption of ICT?
3. What is the impact of ICT on the customers' services in these banks?
4. How has ICT impacted on the customers level and the banks profit level?
5. What is the need improvement to maximize the use of ICT in Banks?

## Methodology

The study employed both the qualitative and quantitative methods in its approach. Qualitative research focuses on the qualitative aspects of human nature in order to describe, explain, predict and control behavior. According to Rubin and Babbie (2001), the qualitative method pursues a deeper understanding of the human experience, especially when observations and theories cannot easily be reduced to numbers. Quantitative research employs numbers (statistics) in order to describe the characteristics of the unit of analysis. The research describes variables and the relationship between these variables. Theoretical explanations and concepts are essential in the planning of the research design, since it represents the basis of variables and its interdependency (Neuman, 2003). For the purposes of this study, the researcher examined Nigeria Banks compliance with ICT and its impact on their services. The impact of ICT on the banking services will be highlighted by a qualitative approach, while an understanding of the services which ICT impact was attempted through both qualitative and quantitative.

According to De Vos (2002: 265), the concept of triangulation is sometimes used to designate a combination of qualitative and quantitative methodology. However, they cite Mouton and Marias (1990) who argued that the term triangulation refers mainly to the use of multiple methods of data collection with a view to increase the reliability of observation and not specifically to the combination of qualitative and quantitative approaches. Babie and Mouton (2001:275) explain

the advantages of triangulation to include: "overcoming the deficiencies that flow from one investigator and the potential for enhancement of the validity of the study findings". Polit and Hungler (1999:259) buttress this by pointing out that a researcher can be much confident about the validity of the findings when they are supported by multiple and complimentary types of data. Triangulation is used in the study to increase the reliability of information gathered from the bank managers on their bank compliance with ICT and its impact on their products and services at the same time to enhance the validity of the findings of the study.

## Design

The study adopted a Case Study research design. However, interview and Questionnaire' are involved to gather information from 17 bank managers selected across Ebonyi State of Nigeria. The term case study means different things to different people, and this is often a source of confusion and misunderstanding (Collis & Hussey, 2003). The case itself may take many forms, although the focus of inquiry is usually small in scale, as not only are case studies frequently characterized by micro level research but are also typically descriptive and qualitative in nature. As an approach to research, case study, however, has much to offer in terms of both theory and practice. The choice of case study in this research is based both on its own nature as well as the specific attributes of the research. Another important reason for employing case study in this research is that it provides a basis for the closer integration of theory and practice. Case study research is considered the most appropriate methodological tradition for use in this study, given that the purpose of the study which emphasises the context of impact of ICT compliance on Nigerian banks products and services. To gather accounts of different realities constructed by bank managers from various environments in the state both qualitative and quantitative methods are drawn upon: questionnaire and face to face interviews were adopted to gather information from the sample of the study.

Based on the above, two data gathering instruments were developed for the purposes of this study: An in-depth interview guideline was developed in order to adhere to the qualitative requirements of the study. In terms of the quantitative component of the study, a questionnaire was utilized. An initial in-depth study of relevant literature on the research topic was undertaken by the researcher. The information that was derived from the literature review on the one hand, and valuable experience gained in practice on the other hand, were combined in order to construct the guidelines for the in-depth interviews. The guidelines were generated by the researcher, pertained to specific questions that were covered during the interviews, and enabled the researcher to maintain standardization throughout. Subsequently, all the respondents were asked the same questions during the interviews. Open-ended questions were employed in order to elicit information about the phenomenon under study, and to provide an opportunity to the respondents for elaboration and freedom of expression. According to De Vos (2002, 302) the guidelines for the semistructured interview "provides the researcher with a set of predetermined questions" and guides the researcher's thinking about the content of the interview that needs to be covered. Rubin and Babbie (2001) indicate that structured strategies to questions are aimed at ensuring that respondents answer the same questions in the same sequence. As a result, the efficiency with which responses can be compared is maximized. In-depth interviews, administered by the researcher in a semi-structured, open-ended manner, were conducted with 16 respondents in separate interview situations. The respondents were adequately oriented towards the purpose and confidentiality of the interviews.

Questionnaire was used to collect preliminary data and later a face to face interview was conducted for all the 16 selected bank managers to gather in-depth information on the impact of ICT on their bank's products and services. The questionnaire items were adapted from the works of Villanculos and Moahi (2003) and Agboola (2001). Response to the questionnaire follows a likert type format of five point rating starting from Strongly Agree = SA to Strongly

Disagree = SD.

The items in the questionnaire were in line with the content of what is being measured thereby ensuring the content and the face validity of the instrument. The reliability of the questionnaire was determined via a test-retest reliability method of two weeks intervals. The reliability co-efficient via Cronbach alpha return an  $r = 0.87$ . This indicates that the instrument is highly reliable and can adequately help to achieve the objectives of the study. The survey included question items to establish whether or not individual bank was using ICT to carry out their day to day banking activities, the types of ICT facilities available in those banks, etc.

### Population

The target population of the study is the bank managers of all the banks that have branches in Ebonyi State, Nigeria. There are 25 consolidated banks in Nigeria out of which 17 have their branches in different parts of Ebonyi State. The study was carried out at Abakaliki the State capital where all the 17 banks under study have their main branch offices. Out of the 17 banks, 16 Branch managers were selected. These constitute the population of the study.

### Procedure

The questionnaire was administered directly by the researchers on the respondents in their various offices. This was filled and returned the same day to the researchers. The prompt response by the respondents ensured 100% returned of the instrument. At the return of the filled questionnaire by each respondent, an arrangement was made on the time for the face to face interview. Eventually, agreement was reached with each respondent on the time of the interview. The interview exercise covered 16 days, a day for each of the respondent. This was because the selected banks were far from one another.

Just like the questionnaire administration, the interview exercise took place in the respective office of the respondents. Permission was sought from the respondents to allow recording of their responses. This was granted by 15 respondents while one respondent resented arrangement for official reasons. In this regard, the questions asked were based on two themes: impact of ICT

on products and services and improvements that need to be made.

### Data analysis

Structured data collected through questionnaire were subjected to percentage and frequency count statistical analysis. On the other

hand, interview data were analysed thematically. The first research question was answered by the questionnaire administered while the other three research questions were answer by the interview conducted. The results are presented as follows.

## RESULTS

**Table 1: ICT FACILITIES AVAILABLE IN THE BANK**

FACILITIES	NO OF BANKS
ATM	15
Internet Banking	16
SMS Banking	2
Mobile Banking	2
Computers	16
Telephone Banking	3
E- Banking	3
Online Banking Services	16

As indicated in the table above, all the sixteen banks that took part in the study have ICT facilities like Internet banking, computers, and online banking services. ATM facility was indicated to be available in 15 out the 16 banks. Moreover, telephone banking was available in 3 banks so also e-banking was available in three

banks. Other results revealed that SMS banking was available in 2 banks and Mobile banking was as well available in 2 banks. These results suggests that its only three ICT facilities Internet banking, Computers, and online banking that are popularly available in all the participating banks.

**Table 2: BENEFITS AVAILABLE TO BANK THROUGH ICT APPLICATION**

		SA	A	D	SD
a.	Facilities accurate record keeping	16	01		
b.	facilities convenient business hour	14	03		
c.	Access account at any location	15	02		
d.	Improves quality of service	16	01		
e.	Enhances faster services	16	01		
f.	Increases speed and easy communication	14	03		
g.	Reduces cost of operation	14	02	01	
h.	Improves productivity	13	03	01	
i.	ICT fasters fund transfer	14	03		
j.	Reduces customer complaints	13	03	02	
k.	Enable customers access account any time	12	03	02	
l.	Links together branches	14	03		
m.	Reduces interpersonal relationships	12	03	02	
n.	Increases the number of customers for the bank.	13	02	01	01
o.	Leads to increase in profit margin	14	03		
p.	facilitate inter-banking services	14	03		



Table 2 above contained items on various impact of ICT on banking activities. The results revealed that all the 16 bank managers strongly agreed to all the ICT impact items in the table. This indicates that banks compliance with ICT has impacted on almost every area of banking services in Ebonyi state of Nigeria.

### **Impact of ICT on Bank Products and Services**

Research question 2: What are the banks services that have been affected by the adoption of ICT? To answer this research question respondents were asked to identify the various banks services that have been affected by the adoption of ICT in their banks and to indicate how ICT has affected them. It was indicated by all the respondents that services mostly affected by ICT include customer services in terms of saving and withdrawing. It was explained by some of the respondents that before the introduction of ICT the earlier a customer can finish transaction in the banks was fifteen minutes. Now the longer a customer can wait in the banks is as lower as two to three minutes that is if they are withdrawing through cheques or teller. Customers who does not use cheques for withdrawing money has the option of using ATM which is swifter than using cheques. It was further stated that ICT has now make it easier to get customers statement of account across to them unlike when they have to wait for weeks before getting it by post. Though, statement of account were still posted to customer, however, customers have opportunity of requesting their statement by phone call, email, or requesting for it over the counter; which does not take time before it is provided by computer. It was also gathered that banks nowadays need not to run after customers to recover loan since their mobile phone numbers, email and others are now with the banks. Banks just call such customers reminding them the time for repayment of their dues or debt. It was explained that before, cashier usually spent long hours trying to balance daily transactions in the ledger. This exercise caused some cashier to leave banks as late as 10- 11pm. The introduction of ICT has changed this story. Cahiers now leave banks as soon as banks closed because the technology is now making it easier for them to balance account on time.

Research question 3: What is the impact of ICT on the customers' services in these banks? It was reflected from the interview report that formerly, customers complained of time they remain on queue in the bank before they were attended to. Additionally, they now find it easier to get information about their account and transactions. The flexibility of transaction was also pointed out by the respondents. It was explained that customers can now withdraw in any branch of a particular bank they are using either by Cheques or by ATM. This is also similar to saving. They can now save in any branch of a particular bank they are using. The issue of safety and security was also pointed out. Customers need not carry huge amount of money with them again before they do business. ICT has made it easy for payment to be made to a customer in another location where the business is transacted.

Research question 4: How has ICT impacted on the banks profit level? To answer this research question, respondents were asked to indicate how ICT has impacted banks profit. It was indicated by the 15 out of the 16 managers that their banks profit has drastically increased. Compared to the time everything was manually done. Now banks have more than enough to do business and to lend to customer who seek for loan. The long hour customers have to be on queue before they can be attended to is no more. This now afford banks opportunity of attending to many customers within a short period of time and this has led to increase in the profits by most banks. Part of the statement of emphasis is "ICT now allows us to reach out to many of our customers in both remote and urban area and this has greatly impacted our profits".

### **Improvement that need to be made**

**Research question 5:** What is the need improvement to maximize the use of ICT in Banks? On this issue, it was emphasized by the respondents that though ICT has impact greatly on banking activities on the part of both the customers and the banks, the fact still remains that not all banks have compliance with ICT. Even among those banks that are now using ICT, not all their workers are skilled in the use of the technologies. Most customers as well do not have the knowledge of how these

technologies work. It is not funny that some customers do not know how to use ATM. More so, some are afraid that ATM open their account to fraudulent people. Based on the foregoing, it was suggested that there is need for more education on the part of banks and the customer to improve their knowledge of ICT. Not these alone, respondents suggest that banks that are yet to possess most of these technologies should try to acquire them. Aside of banks helping their workers who does not have knowledge of ICT, they can as well help their customers. It was explained that they can do this by setting a day of the week to enlighten customer on how they can use what technologies in the banks to transact business.

### Discussion

The study examined Nigerian banks uses of information and communication technology (ICT) and its impact on their products and services using selected banks in Ebonyi State, Nigeria. The results obtained have demonstrated that ICT has impacted significantly on Banking services, customers and profits. The areas that need to be improved upon by the Nigerian Banks were also revealed. These findings have been corroborated by previous research results. For instance the study by Idowu and Adagunodo (2003) on the effect of ICT on the growth of the banking industry in Nigeria, reported earlier that the introduction of ICTs into banking operations, has resulted in the safety of customers deposits and quality services. Similarly, Villanculos and Moahi (2003) finding that the use of ICTs in banking system had resulted in faster access to information, improvement in the quality of services, increased speed of work, speed in communication, and improved productivity lend a good credence to the present findings on this study. Another study by Agboola (2004) on the impact of computer automation on the banking services in Lagos also revealed results that support the findings of this study by stating that electronic banking has tremendously improved the services of some banks to their customers.

It is not claimed in this study that Nigeria banks have got there. There is still a long way to go. Going by (Agboola and Salawu, 2008) report, the new generation banks appeared to be more efficient in utilising ICT to enhance

performance. The traffic intensities in 50% of the old generation banks where ICT was not efficiently utilised were between 0.89 and 0.95 as against the theoretical limit of 0.80 thus making the queue of infinite length. The traffic intensity for all the new generation banks was less than 0.8. On the average, customers spent 23.01 minutes in the old generation banks as compared to 7.50 in the new generation banks. Similarly, average number of customers in the system in the old generation banks was 8.39 as compared to 2.56 in the new generation banks. In the light of the above, the attention of all Nigerian Banks is hereby drawn to the findings in this study. This is to make them understand that applying ICT to their day to day activities is not only profitable but also rewarding. The report that only new generation banks in the country appeared to be more efficient in the use of ICT to enhance performance is not good enough. Therefore, old generation banks as well need to emulate this gesture. Taking banking activities and banking sector to utmost height should be seen as priority at this digital era. The reason is for Banks in Nigeria and other African countries to be able to compete with the banks in the developed world where the use and application of ICT is being well implemented.

### Conclusion

The study concluded that banks should incorporate ICT into their strategic plans for effective performance in payment and delivery systems. Adoption and allocation of ICT should be based on proper analysis to determine the type, nature and extent of products required for effectiveness and efficiency. If at present there is any Nigerian Bank whether new generation or old which as neither implemented nor has plans to implement the application of ICT to their banking operation, the time is now. It is imperative for bank management to intensify investment in ICT products to facilitate speed, convenience, and accurate services. This is not for any other reason but for them to be more relevant in the 21<sup>st</sup> century banking system.

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## Appendix

### List of Banks Operating in Ebonyi State

1. Intercontinental Bank
2. Access Bank
3. First City Monument Bank
4. United Bank for Africa
5. Spring
6. Fidelity Bank
7. Diamond Bank
8. Oceanic Bank
9. Guaranty Trust Bank
10. Eco Bank
11. Bank PHB
12. Union Bank
13. First Bank Plc
14. First-land Bank Plc
15. Zenith Bank
16. Skye Bank

## Appendix II

### List of Consolidated Bank in Nigeria

1. Access Bank Plc.
2. Afribank Plc
3. Diamond Bank
4. Eco Bank Nigeria
5. Equatorial Trust Bank
6. First City Monument Bank
7. Fidelity Bank
8. First Bank Plc
9. First Inland Bank
10. Guaranty Trust Bank
11. IBTC-Chartered Bank
12. Intercontinental Bank
13. Nigerian International Bank
14. Oceanic Bank
15. Platinum Bank
16. Skye Bank
17. Spring Bank
18. Stanbic Bank
19. Standard Chartered Bank
20. Sterling Bank
21. United Bank for Africa
22. Union Bank
23. Unity Bank
24. Wema Bank
25. Zenith Bank

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# Role of Law in Library and Information Centres

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The paper highlights role of 'Law' in general with particular reference to Indian Library and Information Centres. It describes concept, purpose and objectives, types of Law and their application in various areas of in Library and Information Centres. It also point out several barriers in application of Law in Libraries and finally suggest application of Law in scientific manners in Library and Information Centres to achieve their objectives in a better way.

## Key Terms

Law, Library, Information Centers, India

## Introduction

Law has a wide role in the universe which functions on certain principles. Each entity of the universe is governed by Law directly or indirectly. Law has wide impact on all walks of life. It is needed to function the offices, home, army, playground, factory, institutions, organizations, including Library and Information Centres. The knowledge of Law is necessary for all categories of persons such as engineers, managers, teachers, students, politicians, farmers, sci-

entists, librarians, technologists, children, women, and even ordinary person irrespective of caste, creed, color, sex and geographical boundaries. The context of law may differ person to person in different circumstances. In fact, knowledge of law is essential for all categories of people on account of changes i.e. social, cultural, economical, political, geographical, technological etc. taking place which are affecting life style of people in terms of human needs. Maslow (1943)<sup>1</sup> identified five categories of human needs hierarchical order which are affecting human needs.

These needs are

1. Physiological needs: Life support material
2. Safety needs: Security protection stability
3. Social needs: Love affection, friendly contracts
4. Esteem or Ego needs: Prestige, self respect, recognition
5. Self actualization needs: Developing one own potential to the highest level

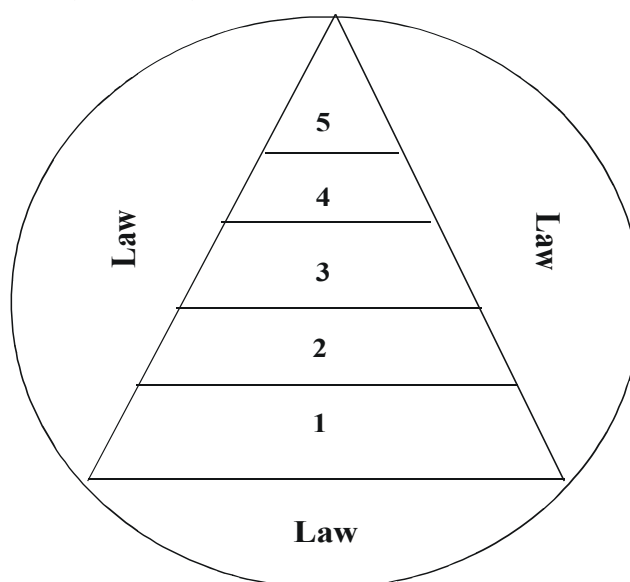


Fig. 1. Role of Law in Human Needs.

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These needs of the people are fulfilled in a hierarchical order from physiological to self actualization needs. Law plays an important role in fulfilling these needs in the best possible manner.

## 2. Concept of Law

Soanes and Stevenson (2007)<sup>2</sup> define law (i) A system of rules recognized by country or community for regulating the actions of its members and are enforced by the imposition of penalties. (ii) A rule defining correct procedure or behavior in a sport. (iii) A statement of fact deduced from observation, to the effect that particular natural scientific phenomenon are always occur if certain conditions are present. (iv) The body of divine commandments as expressed in the Bible and other religious text.

Biswas (1982)<sup>3</sup> define law as a synthesis of

order and justice. Under article 13 of the Constitution of India, law requires any ordinance, order, bye-law, rule, regulation, notification, custom, or usage having in the territory of India the force of law. As per the Constitution of India article 13 (3), a law includes an ordinance issued by President or Governor. In wide context, law includes rules, principles, statutes, ordinances, acts, standards, policies, guidelines, canon, code, traditions and customs, recommendations of the committees/commissions, professional associations, etc. In short, any systematic study for justice is law.

## 3. Types of Law

It has been observed that there are several categories of law. Therefore it is categorized on the basis of certain attributes, such as area, period, content, institutions, and discipline.

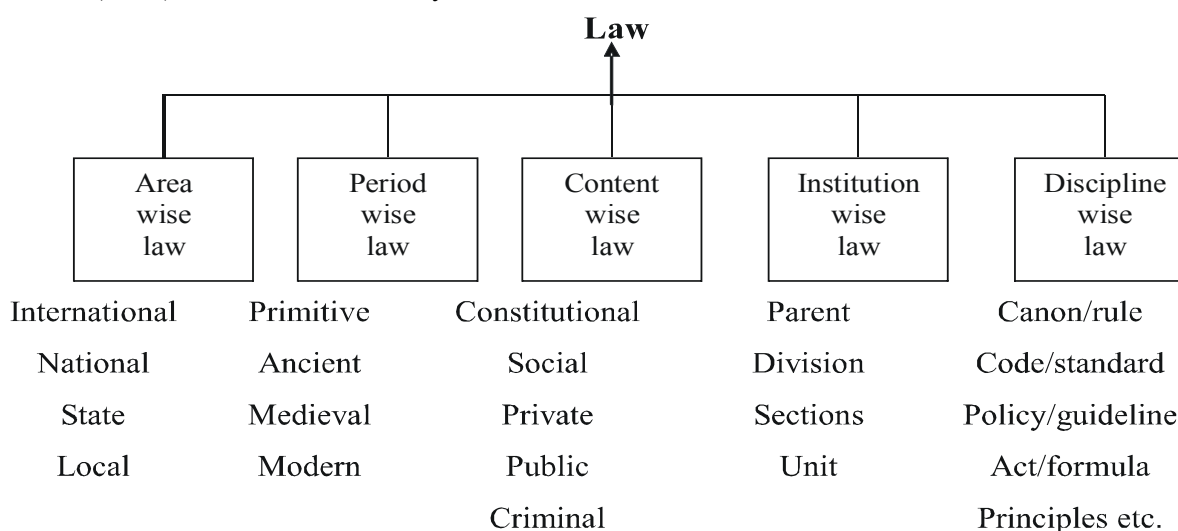


Fig. 2. Types of Law

## 4. Purpose and Objectives of Law

The main purpose of law is to provide justice to the people and the organization. The purpose of law in Library and Information Centers is to provide justice to library staff, users, collections, systems etc. It has the following objectives:

- \* Proper organization and management of library
- \* Scientific utilization resources of the library
- \* Maintain law and order in libraries
- \* Acquisition of library material in a balance way

- \* Provide better services to the users of the library
- \* Liaison among the library authorities, staff, and users.
- \* Protect the rights of the users, staff and authorities
- \* Doing justice with library users, staff, authorities and system

## 5. Impact of Law on Library and Information Centres

It has been observed that there is a wide impact of different forms of law on libraries directly

or indirectly. These are as follows:

- \* Fundamental Laws: Ranganathan (1988)<sup>4</sup> propounded Five Laws of Library Science i.e. (1) Books are for use (2) Every reader his/her book (3) Every book its reader (4) Save the time of reader (5) Library is a growing organism. These laws are applicable in the entire field of librarianship.
- \* Rules: Anglo-American Cataloging Rules (AACR) for cataloging of documents.
- \* Code: Classified Catalogue Code (CCC) for cataloging of documents.
- \* Canon: Canon of Cataloging used for cataloging principles.
- \* Formula: Staff formula introduced by Dr. S.R. Ranganathan and University Grant Commission formula for assessing staff position in libraries.
- \* Principles: Henry Foyal's fourteen principles of managements applicable in the management of libraries.
- \* Standards: International Standard Bibliographic Description (ISBD).
- \* Policy: National Policy on University Libraries, Collection Development Policy for Libraries.
- \* Minutes: Library committee with regard to purchase, finance, and grievances; academic; executive committee etc.
- \* Acts: Information Technology Act 2000, Copy Right Act 1954, Right to Information Act 2005, Library Legislation Acts etc.
- \* Scheme of Classification: Dewey Decimal Classification Scheme (DDC), Colon Classification (CC) etc for classification of documents.
- \* Recommendations of Committees/Commissions/Professional Associations: Dr. S.R. Ranganathan Committee 1957, Radhakrishnan Education Commission 1948, Kothari Education Commission 1964. The National Knowledge Commission 2006, Pay Commissions setup by government of India, Indian Association of Special Libraries and Information Centres (IASLIC), Indian Library Association (ILA) etc. for growth and development of Libraries and Information

Centres.

- \* Miscellaneous: Fundamental rights of the citizens, Basu (1993)<sup>5</sup> as mentioned in the Constitution of India under Article 19, are (i) Right to equality (ii) Right to particular freedom (iii) Right to against exploitation (iv) Right to freedom of religion (v) Cultural and education rights and (vi) Right to constitutional remedies.
- (ii) Tradition and Customs of the Nations/Institutions: Holidays on birthday or foundation day of the Institutions etc.
- (iii) General orders (GO) of the Ministries such as Ministry of Human Resources Development.
- (iv) Service Manuals: Swamy's Handbook for Central Government Employees. Nabhi's Reference for Central Government Employees.
- (v) Ethics: Professional ethics

## **6. Legal Sources of Information for the Libraries**

There is a long list of legal sources of information which may useful for the libraries directly or indirectly. The important legal sources of information are listed below:

### **Acts**

Library Legislation Act, Technology Act, Copyright Act, Right to Information Act, Parent Institutions Act,

### **Recommendations**

Education/Pay/Knowledge Commission, Professional Associations, Workshop/Seminar/Conferences on libraries.

### **Minutes**

Academic/Executive Council, Purchase/Finance/Adhoc/ Enquiry / Disciplinary Action Committee etc.

### **Disciplines**

Law, Rule, Principles, Canon, Formula, Standard, Code of classification and cataloging, Policy/Guidelines, Methods and Techniques, Professional ethics etc.

### **Decision of the Courts**

Lower/Higher/Supreme Court of the Country.

## **Fundamental Rights and Duties of the Citizens**

As mentioned in the Constitution of India.

### **Literature**

Published/Printed/Non-printed material in the form of books and journals, reports, CDs, DVDs, and Web Resources available on internet.

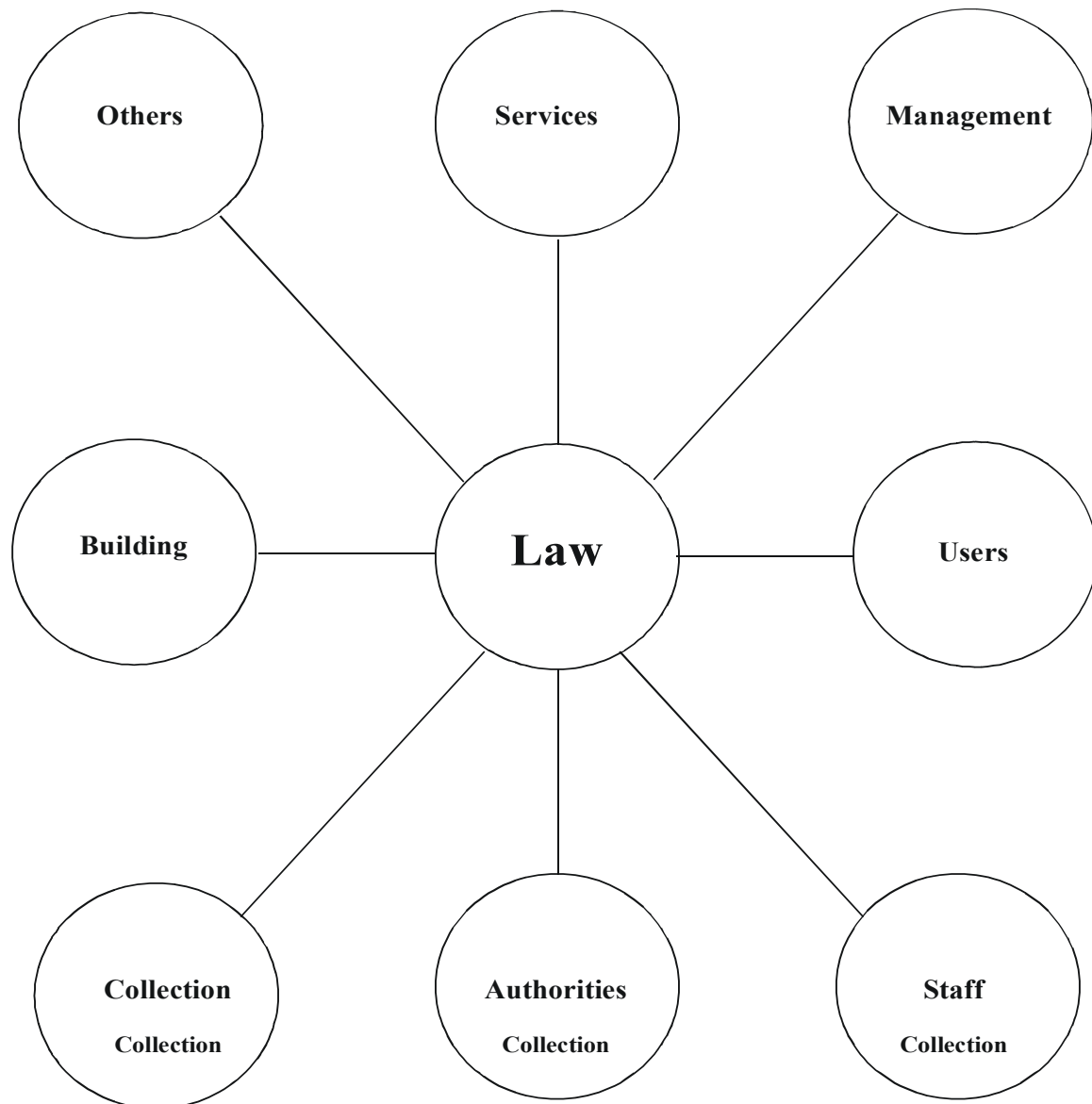
### **Miscellaneous**

Traditions and customs of the Institutions/

Nations, general orders of the Ministries of the State/Central Government etc.

## **7. Areas for Application of Law in Libraries**

There is a wide application of law in the entire field of the libraries. These areas may be grouped in following categories i.e. library building, fittings and furniture, document collection, staff, users, services, management and other remaining areas.



**Fig. 3 Areas for Application of Law in Library and Information Centre.**



### **7.1 Library Building, Fittings and Furniture**

- Construction of building, in terms of reading room, stack area, area for public catalogue, room for library staff, computer lab etc.
- Fitting of fans, air conditioners, lift, computers etc.
- Chairs, tables, display racks, file cabinet, catalogue cabinet etc.
- Safety and security of library buildings, fittings and furniture,

### **7.2 Library Document Collection**

- Acquisition of printed/non printed material
- Preservation, conservation, repackaging, binding of the material etc.
- Legal binding of publishers/suppliers for the quality and quantity of the document.

### **7.3 Library Staff**

- Appointment, promotion, transfer, demotion, deputation, and retirement of the staff.
- Facilities i.e. leave, education, conveyance, medical, accommodation, extra duty and other allowances etc.
- Professional development, in terms of attending conferences, workshop, seminar, refresher courses, writing articles etc.
- Rights and duties of library staff towards staff, users, authorities, and systems.

### **7.4 Library Users**

- Physical facilities i.e. reading seats, light, air and congenial atmosphere of the library.
- Enrollment of users, education to the users regarding utilization of resources of the library.
- Number of document issued/return, fine in case of loss of books and over due charges, disciplinary action in case of violating library rules.
- Rights and duties of library users towards authorities, building, collection, institution etc.

### **7.5 Library Authorities**

- Rights and duties of the Vice-Chancellor/Registrar/Finance officer, Proctor, Librarian/Director/Chief Information Officer etc.

on every aspect of library and information centres

- Formation of committees in respect of purchase, finance, utilization, disciplinary action, grievances, enquiry, library etc.
- Assessment of performance of staff of the library for promotion
- Liaison with staff, students, users, authorities of the libraries for better functioning of the library

### **7.6 Library Services**

- Technical services: Translation, indexing, classification, cataloguing, abstracting, reprographic etc.
- Reader services: Circulation, reference, current awareness, selective dissemination of information, bibliographical, consultation, inter library loan etc.
- Delivery of document/piece of information manually/electronically
- Extension services: Organization of exhibition of books and photographs and conducting lectures etc.

### **7.7 Library Management**

- Management of financial resources: Income and expenditure on various items such as books, journals, computer, and staff salary.
- Management of personnel resources: Recruitment of personnel, division of work, performance report, training in I.T. etc.
- Management of document resources: Acquisition, processing, storage, dissemination of information
- Direction of higher authorities to the subordinate staff and highlighting the problems of the division/sections to the higher authorities for smooth functioning of the library.

### **7.8 Other Aspects**

- Proper maintenance of the statistics on usage, finance, staff, collection and other material of the libraries.
- Auditing of library in terms of income and expenditure on various aspects such as books, journals, computer, furniture, and staff.

- Publicity of the library in terms of collection, services and achievements in the society
- Maintenance services such as cleanness of the library, proper light, air, water, sanitation in the library
- Opening hours/number of working days of the library during the year etc.

## 8. Barriers/Limitations in Application of Law in Libraries

It has observed that each organization wish to implement law to the spirit of law but sometimes in certain circumstances it is very difficult to implement the law in toto. These conditions are as follows:

- Controversial document which hurts the feeling of other community i.e. 'Satanic Verses' by Salman Rushdi and 'Lajja' by Taslima Nasrin, these documents hurted the Muslim community;
- On one hand, Fundamental Rights of the people such as Right to Information Act and on the other, rights of the authors such as Copy Right Act, Intellectual Property Right Act;
- Unawareness of the law among the people which become the hurdle to get justice in the organization in terms of better collection, services, facilities of the libraries;
- Misinterpretation of law (Misuse of law) by the peoples of organization in their own interest which causes injustice for the deserving candidates;
- 'Lack of will power'. Sometimes due to psychological weakness of the officer, the law is not implemented in the libraries to the spirit of law. Ultimately this is harmful for the organization in terms of justice to the users, staff, and services in the library;
- Involvement of the nasty politics in organization is also harmful in many respect in the libraries in terms of appointment, promotion, and demotion of the staff, delegation of powers by the Head of the division/sections, purchasing of library materials and services provided to the users etc.

## 9. Conclusion

India is a sovereign, socialist, secular and democratic republic country. The constitution of India ensures its citizen justice - social, economic and political; liberty of thought, expression, belief, faith and worship; equality of status and of opportunity; and fraternity assuring the dignity of the individual and unity and integrity of the nation.

Library and Information Centres are playing a crucial role in the growth and development of nation directly/indirectly by providing better services to the members of the society. Law is powerful weapon in providing justice in any system/organization. In fact in absence of proper implementation of law, the Library and Information Centres can not function in proper manner. Therefore the following strategies may be adopted to execute law in the Library and Information Centres to achieve their objectives in a better way.

- Rules for libraries should be framed either keeping in view of human behaviour or natural law (Justice).
- Creating awareness about law among libraries, staff, users, and authorities; organization of meetings; and bringing out news letters/bulletin.
- Permission for consultation of controversial document only to academic/research purpose not to general readers.
- Maintaining the balance in the fundamental right of the people and rights of the authors by providing a photocopy/microfilm/CD of the rare book/manuscripts and other documents to the users keeping in view the interest of the organization.
- Preparing a comprehensive staff manual in terms of acquisition of document collection, services, staff, buildings, users etc. for smooth function of library
- Either appointment of legal advisor in the library or giving a preference in appointment of library staff having legal background keeping in view immense role of law in libraries

(vii) Execution of law in library to the spirit of law with strong willpower and discourage the nasty politics in the libraries

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# RFID Technology for Better Library Services

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## Abstract

[This paper describes on RFID technology, i.e. what is RFID Technology, what are the objectives of this technology, its history, how does the system works, what are the basic requirements to implement this technology, current uses of this technology, what are the application areas in library functions and so on. This paper also describes on advantages and drawbacks of RFID System. Finally an effort also made to compare the two technologies- RFID and barcode in a very lucid language.]

## 1. Introduction

RFID, stands for Radio-Frequency Identification, is an automatic identification method, relying on storing and remotely retrieving data using devices called RFID tags or transponders and presently used in various field like passports, transportation payments, product tracking, automotive, animal identification, inventory system, libraries, human implants, hospital and health-care and so on.

As we are facing the increasing demand of the users, it becomes inevitable to adopt modern technology for better and prompt library services. RFID is one among the modern technologies, has been started to use by many libraries to replace the barcode technology. RFID has so many advantages over the barcode technology.

## 2. Rfid

RFID is a generic term for technologies that use radio waves to automatically identify people or objects.<sup>1</sup> Actually, it is made by small electronic devices that consist of a small chip and an antenna. The chip and the antenna together are called an RFID tag or an RFID

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transponder. The antenna enables the chip to transmit the identification information to a reader. Then the reader converts the radio waves reflected back from the RFID tag into digital information that can then be passed on to computers that can make use of it.

## 3. Objectives

The main objectives of introducing RFID Technology in a library are as follows:

1. To eliminate the difficulties experienced in barcode technology.
2. To improve operational efficiency and reduce human error.
3. To save the time of the users by simplifying patron self check-out and check-in of document.
4. To establish high-speed inventory and identifying system.
5. To prevent theft of document.

## 4. History

RFID is a proven technology that's been around since at least the 1970s. Mario Cardullo's U.S. patent 3713148 in 1973 was the first true ancestor of modern RFID, a passive radio transponder with memory. But the first patent to be associated with the abbreviation RFID was granted to Charles Walton in 1983 (U.S. patent 4384288)<sup>2</sup>. And it was first proposed in the late 1990s as a technology that would enhance workflow in the library setting.

## 5. HOW DOES AN RFID SYSTEM WORK?

An RFID System consists of a tag made up of a microchip with an antenna, and an interrogator or reader with an antenna. The reader sends out electromagnetic waves. The tag antenna is tuned to receive these waves. A passive RFID tag draws power from the field created by the reader and uses it to power the microchip's circuits. The chip then modulates the waves that the tag sends back to the reader,

which converts the new waves into digital data.

## **6. Types of Rfid Tags**

RFID tags are of three types viz. passive, active and semi-passive. Passive RFID tags have no internal power supply. It draws power from field created by the reader, whereas active RFID tags have their own internal power source, which is used to power the integrated circuits and broadcast the signal to the reader. On the other hand semi-passive tags have also their own power source but the battery only powers the microchip and does not broadcast a signal.

## **7. Scanning of Information From Rfid Tag**

Like barcode technology, RFID does not require line of sight to read the information stored on RFID tag. RFID tags can be read as long as they are within range of a reader. It means that RFID reader has required just to pass away to the RFID tags to read the information. Hence it is a big advantage of RFID, over the barcode technology because barcodes is line-of-sight technology where scanner has to "see" the barcode to read information stored on the barcodes.

## **8. Basic Requirements to Implement the System**

For implementation of the RFID System following equipments and parts are required

1. RFID Transponders or RFID Tags which may be passive, active or semi-passive depends upon the need and that has been programmed with information regarding the material on which it attached with.
2. RFID Reader or Scanner to read or scan information from the RFID tag attached with the objects. RFID scanner may be fixed within the scanning range or portable to carry them every where in the premises.
3. A Host Computer depending on the requirements and system.
4. Library Management Software to run the system.
5. User Database to keep details record of the users.
6. Documents Database to maintain the status, whether it is issued to patron or not, and past transaction history of the document.

7. Counter Station for circulation process.

8. Anti-theft Detection Gate with Closed Circuit Camera to prevent theft of the document by automatic alarming the bell and at the same time captured a photo of the patron by CC Camera.

## **9. Current Uses of Rfid Technology**

### **9.1 Passports**

Now RFID tags are being used in passports issued by many countries. Malaysia is the first country in the world, issued RFID passport in 1998 followed by United States in 2006. The chips embedded with the card will store the same information that is printed within the passport and will also include a digital picture of the owner.

### **9.2 Transportation Payments**

Many countries like France, South Korea, Malaysia etc. have been introduced RFID technology for easy and faster transportation payment service.

### **9.3 Product Tracking**

Now RFID technology is also used for product tracking in supply chain system which dramatically simplified this process.

### **9.4 Automotive**

Microwave RFID tags are used in long range access control for vehicles. Since the 1990s RFID tags have also been used in car keys. Without the correct RFID, the car will not start. Now Ford, Honda, and several other manufacturers use RFID-equipped ignition keys as anti-theft measures.

### **9.5 Animal Identification**

Implantable RFID tags or transponders can be used for animal identification.

### **9.6 Inventory System**

Introduction of RFID technology had brought a dramatical change in inventory system. Major benefits of using RFID include the reduction of labour costs, the simplification of business processes and the reduction of inventory inaccuracies.

### **9.7 Other Uses**

RFID also used in human implants, hospitals and healthcare to track patients and high-value

assets, as well as ensure patient safety. Schools and Universities are used this technology in monitoring system. Another use of RFID is in driving license that bears the license holders personal information and stores data regarding traffic violations, tickets issued, and outstanding penalties.

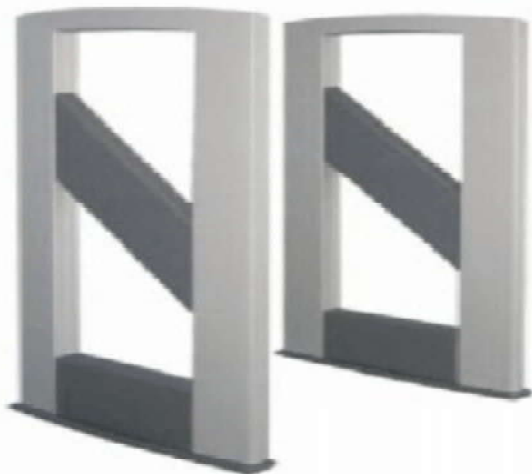
## **10. Rfid Technology for Libraries**

RFID is the latest technology to be used in library theft detection system. Unlike EM (Electro-mechanical) and RF (Radio Frequency) Systems, which have been used in libraries for decades, RFID-based systems move beyond security to become tracking systems that combine security with more efficient tracking of materials throughout the library, including easier and faster charge and discharge, inventorying and material handling<sup>3</sup>.

## **11. Application of Rfid Technology for Library Functions**

RFID Technology may use for the following

### **Anti-theft Detection Gate**



## **11.2 Support Library Circulation**

### **11.2.1 Phase Action**

Using RFID tags replace the barcode in circulation process. Reading book's accession number from RFID is faster than from barcode to borrow and return the book.

### **11.2.2 Phase Target**

1. No line of sight needed.

library functions known as four phases of library RFID Management System.

### **11.1 Library Security System Only**

#### **11.1.1 Phase Action**

1. Using RFID tag replace EM Security strip

#### **11.1.2 Phase Target**

1. Radio Frequency Detection
2. Replace the EM Anti-theft system to avoid the high volume EM field harm human body and without false alarm.

#### **11.1.3 Equipment & Parts Needed**

Anti-theft Detection Gate - Detect the RFID tag on book and check EAS (Electronic Article Surveillance) Status, system alarm when the EAS status is on.

1. Security processing station - Turn on or off the EAS setting of the chip.
2. RFID tags

2. Allows to check-out and check-in several items simultaneously.
3. Performing both identification and anti-theft in one single operation.

#### **11.2.3 Equipment & Parts Needed**

1. Counter Station.
2. New integrated library system functions-read from RFID and set the EAS status.



## Counter Station



### 11.3 Patron self check-in / check-out

#### 11.3.1 Phase Action

Let patron do the check-out and check-in process of books.

#### 11.3.2 Phase Target

1. Benefit to librarian

- \* Speeds up book check-in / check-out
- \* Frees staff to better service patrons.
- \* Better space planning

#### 2. Benefit to patrons

- \* Easy to use: Books can be read in any orientation.
- \* Reduces queuing time.



- \* Provides patron privacy.

#### 11.3.3 Equipments and Parts Needed

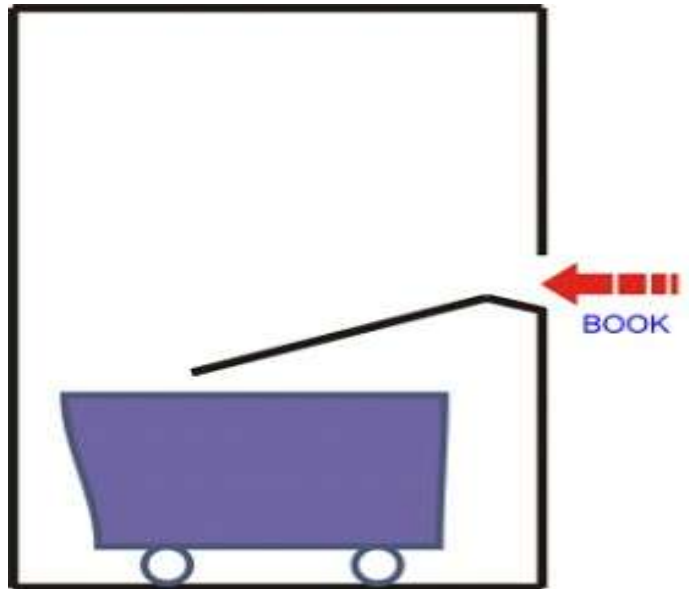
1. Self check station - Perform patron self check-out and check-in process and turn off or turn on the EAS status.
2. Book Drop - Indoor or outdoor after patron drop in the book into this station, book's id is checked and turned on the EAS simultaneously.
3. Remote Book Drop - Long distance away from library, Acquire better protection of the Book-drop.
4. Sorting station - Sorting the return books automotive or manual.

## Patron Self Check out / in Station





## Book-Drop (Return Station)



### 1.4 Smart and Quick Inventory

#### 11.4.1 Phase Action

1. Search and Inventory by reading the RFID using portable reader and portable computer

#### 11.4.2 Phase Target

1. Quick inventory

2. Look up the misplaced material.

3. Search for certain material

#### 11.4.3 Equipment & Parts Needed

1. Portable RFID reader
2. Portable Computer - Notebook PC or PDA
3. Inventory & Searching Software.

### Portable RFID Reader



## 12. Advantages of Rfid Systems

Rapid charging and discharging process.

1. Simplified patron self-charging / discharging.
2. Highest degree of reliability.
3. High-speed inventorying is a unique advantage of RFID system.

4. Automated materials handling.

5. Long tag life is another advantage of RFID system.

6. To read or scan information from the tag there is no any requirement of contact or line of sight with the RFID scanner.

7. Ability of performing both identification and anti-theft in one single operation.

### **13. Drawbacks of Rfid**

1. Lack of global standards.
2. RFID systems can be easily disrupted.
3. Reader collision occurs when the signals from two or more readers overlap.
4. RFID tag is unable to respond to simultaneous queries.
5. Tag collision also occurs when many RFID tags are present in small area.
6. Illicit tracking of RFID tags is possible by any person.
7. RFID tags are difficult to remove from the consumer products.
8. RFID tags can be read without our knowledge
9. Implementation of the system is costly.

### **14. Is Rfid Better than Using Barcodes?**

RFID tags and barcodes both carry information about products. These two are different technologies and have different applications, which sometimes overlap. The major differences between the two are as follows:

- \* Barcodes are line of sight technologies which require a direct line of sight to the printed barcode. On the other hand RFID readers

do not require a direct line-of-sight to the RFID tag.

- \* RFID tags can be read at much greater distances than barcode.
- \* RFID readers can read RFID tags much faster than the barcode.
- \* More longer tag life than the barcode.
- \* RFID tags are typically more expensive than barcode, whereas barcodes are less expensive than the RFID tags.<sup>4</sup>

### **15. Conclusion**

RFID is a very faster and speedy technology which has so many advantages over the barcode technology. The difficulties which are we experienced in barcode technology that can easily be overcome if we introduced this new technology in a library for better service. In the context of library, RFID is obviously better than the barcode technology. But to implement this technology in our country, the main hindrance is lack of funds, because RFID is relatively expensive technology.

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# Use of Internet by the Scientists of CAZRI: A survey

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## Abstract

The use of Internet by the scientists and research fellow of Central Arid Zone Research Institute, Jodhpur (Rajasthan) was assessed on the basis of the results of a questionnaire survey in CAZRI, Jodhpur. Further, it also attempted to assess frequency of use, location where used, search engine accessed; purpose of use etc. The study revealed that the respondents accessed Google search frequently (100%) followed by Yahoo (85.29%). It was also observed that equally (97.06%) respondents used Internet for education and research. The strong desire of respondents is that library initiate various functions and services like e-portals, on-line information/abstracts retrieval along with internet.

## Key words

CAZRI, Scientist, Internet, Use, User Studies, Survey

## Brief account of CAZRI

The Central Arid Zone Research Institute (CAZRI) came in to existence on October 1, 1959. The Institute is a constituent of the Indian Council of Agricultural Research (ICAR), New Delhi. The Institute conducts multi-disciplinary research to seek solutions to the problems in hot arid zone of the country,

## Introduction

Internet is a 'network of networks', linking computers using the protocol of TCP/IP, allowing us to share the information, which is stored in some other computer machine located elsewhere remotely. Internet is now a huge source of academic, research and general information. Internet facilitates the sharing of information by millions of people and institutions all over the world. It is like a global library that

every one can access at any time. It is a global venue where every one can present their knowledge and information. Earlier library served information in traditional media whereas computers link the information in digital media. In this way Internet is a library that transcends space and media. Internet has become one of the most effective media for selection, collection, storage, management and dissemination of information in the gamut of knowledge. It works round the clock and connects every nook and corner of the globe. It is one of the important services of the information storage and retrieval process, which has reached millions of people. Both scientific and non-scientific communities make use of this knowledge to a large extent in their socio-economic research. Keeping in view, the multi dimensional features and application of Internet a comprehensive attempt has been made to assess use of Internet by Scientist in Central Arid Zone Research Institute, Jodhpur, Rajasthan. CAZRI is an institute having multi discipline area for research, therefore, a study was undertaken at this institute to find out the use of Internet for various research and other activities.

## Objective

To find out the use of Internet for various research, education and extension activities among the scientists and research fellows of the institute.

## Previous Studies

Studies have been conducted on the use of Internet by various workers. In a study conducted at two U.S. Universities, major percent (92%) of faculty have used e-mail for scientific communication Chu (1994). Alexander (1995) conducted a study on use of Internet listservs as post teleconference support to faculty at Community colleges and Two-year institutions and found that 47% of community college teleconference participants accessed Internet and 30% know how to use e-mail.

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On a survey, Perry (1995) found that (55%) respondents have been using Internet for less than one year and 25% of that group had used Internet for less than six months, while 17.9% have been using the Internet for 13 to 18 months and an equal number of respondents have used it for more than two years. When they were asked to rate the difficulty they found in the use of Internet, the majority (57%) of them felt that it was somewhat difficult. Another comprehensive Study of Zhang (2001) on scholarly use of Internet based electronic resources showed that e-mail was the most frequently used tool. All respondents indicated that they used e-mail at least once in a week, while 93.6% of them used it almost every day. Web browsers were the second most frequently used Internet tool. Nearly 94% of respondents used web browsers at least once in a week. Next to e-mail and web browsers, mailing lists and Internet search engines are third and fourth most frequently used Internet tools.

Leah and Takis (2003) discussed the results of a survey on how college students react to information on the Internet. The Internet is revolutionizing research methods at colleges and universities around the world. The Internet has gained a primary place in research methods, and it is vital that students become able to critically evaluate the information it provides. Several solutions have been suggested to determine accuracy in Internet research. A six question survey was developed which was administered to students of 180 Wellesley College, Wellesley, Massachusetts, during the 2000-2001 academic year. Students' responses to this survey helped explain how college students, from different backgrounds, class years and majors, react to information on the Internet. Participants in this study were students from the "Computers and the Internet" class. Students were told the purpose of the survey was to understand how students conduct searches. The findings were remarkable. Regarding students reliance on the Internet, it became apparent that students are very eager to use the Internet. The finding emphasizes the importance of teaching good Internet research skills, as students rely so heavily on the Internet. Students consider the Internet a primary source of information.

Birdar and Kumar (2005) conducted a study on Use of Internet by Physicists in Universities of Karnataka state, and found that majority of responded 87.83% (166 out of 189) used the Internet, while 82.5% of respondent used e-mail to communicate scientific information. The study gives an indication of purpose of use of Internet and showed that research scholars and faculty members used the Internet to full extent for research & teaching.

Franz (2006) present analysis looks at how scientists use the Internet for informal scientific communication. It investigates the relationship between several explanatory variables and Internet use in a cross-section of scientists from seven European countries and five academic disciplines (astronomy, chemistry, computer science, economics, and psychology). The analysis confirmed some of the results of previous U.S.-based analyses. In particular, it corroborated a positive relationship between research productivity and Internet use. The relationship was found to be nonlinear, with very productive (nonproductive) scientists using the Internet less (more) than would be expected according to their productivity. Also, being involved in collaborative R&D and having large networks of collaborators is associated with increased Internet use. In contrast to older studies, the analysis did not find any equalizing effect whereby higher Internet use rates help to overcome the problems of potentially disadvantaged researchers. Obviously, everybody who wants to stay at the forefront of research and keep up-to-date with developments in their research fields has to use the Internet.

Manimekalai and R Amsaveni (2006) revealed that the use of Internet is an inevitable part and there is increasingly centered effect on the part of Government, Education Ministry to fulfill the special needs of the students. The extent and pattern of usage of the Internet amongst students in Annamalai University is the primary focus of this study. This study investigates the relationship between motivational variables (intrinsic and extrinsic), demographic variable and the Internet usage activities (messaging, downloading, browsing and purchasing). The finding also shows that

perceived usefulness is an important driver of Internet usage.

Lohar and Kumbar (2008) conducted a survey at Jawaharalal Nehru National College of Engineering Library, Shimoga (Karnataka) to find out the use of CD-ROMS and Internet resources and services. The study also covers the impact of these resources on the student academic work/study. Also describes the problems faced in using the electronic resources. Hence, A survey of 110 undergraduate and post-graduate (BE) Students of different disciplines was conducted through questionnaire. Finally, it is concluded that the main intention using CDs and Internet resources and services has been the academic interest of the student community.

Sharma (2008) examined the status and use of the Internet in Punjab Agricultural University and Haryana Agricultural University. A well structured questionnaire was distributed among the 200 teachers and research scholars of both the agriculture universities under study. Findings of this study show that Internet is being heavily used for e-mail and research purpose and also highlight purposes and frequency of use of the Internet by the teachers and research scholars, their method of locating, accessing and using information on the net. The study also discusses the problems that are preventing wide use of the Internet in both the universities.

Riahinia and Azimi (2008) conducted study among 80 respondents and found that there is a significant relation between academic females' use of the Internet and their social ranking. As social ranking increases the use of the Internet grows. The findings also revealed that as users navigate more through the Internet they would find more hidden threats and vague content.

### **Methodology**

The study comprised of scientists and research fellows of Central Arid Zone Research Institute, Jodhpur and restricted to the use of Internet facility. Data was collected using questionnaire as an instrument from different divisions/sections of the institute. 90 questionnaire were distributed among the user, out of which, 68 duly filled questionnaire were received back. The method of questionnaire was based upon survey. The questionnaire comprised of six questions and

performa of the same is presented in appendix-A. The statistical analysis was carried out on the basis of the data received as the response of questionnaire.

### **Analysis of Data**

The analysis was done on the basis of percentage. The rating expressed by all the respondents in each category, all of these response has been presented in tabulation along with percentage of their totals and the results of the same has been discussed below:

#### **(i) Frequency of Use**

Table 1 revealed that the frequency of use of Internet facility diverges widely in all the groups. Most of the respondent used Internet facilities daily (94.12%) followed by at least once a week (48.53%), at least once a fortnight (36.76%) and at least once a month (39.70%) whereas (29.47%) respondent used the facility rarely. Most of the scientists are daily user of Internet because lease line facility is available in the Institute.

On the basis of over all study (35.94%) respondent of all the category reported "Much" use internet daily followed by (30.30%) indicate "More" use internet at least once a week, while (46.15%) at least once a fortnight and (51.85%) at least once a month reported "Very less" use of internet facility. While (80%) respondent reported "Very less" that they are rarely use Internet facility. According to above table higher percentage given by the respondent over "Very less" in terms the rarely user of Internet facility because Internet is gamut of knowledge and respondents use these sources for their day today information so they are use these sources with much emphasis on daily.

#### **(ii) Location where used**

Data regarding place of Internet use is presented in the table 2 and it clearly indicates that the majority of respondents availed the facility of Internet at their office desk (94.12%) followed by equal percent (85.29%) at institution library and home. As per the table shown most of the scientist are like to surfing Internet at office desk because connectivity of net is given to almost every scientist. While (82.35%) respondent reported that they are availed the facility of Internet at computer centre and only

a few (70.58%) reported that they are availed the same at cyber cafe. As per the percentage shows respondent are not much like to surf Internet at cyber cafe. It is observed that the findings of the present study are almost in line with the findings of (Biradar and Kumar, 2005). From the study significant difference could be found regarding place of Internet use between respondents. Large Number of Scientist reported that they used Internet at the Office desk as well as at the home. It is also found that respondent not so much like to use Internet at commercial places.

### **(iii) Source of information**

As table 3 demonstrates, significant difference could be found regarding locate information from the web among respondents. The table illustrates that (69.12%) respondent locate information from the web through URL followed by (36.76%) from Portal while (35.29%) from pathfinder.

It can also be seen from the over all that (34.04%) respondent "Regularly" locate information from URL followed by "Frequently" (28%) from portal while (33.33%) respondent "Rarely" locate the same from pathfinder. As per the percentile shown most of the respondents locate information through URL for their day today need and also use portal and consortia to locate information for their specific satisfaction of their subject need.

### **(iv) Search engine accessed**

Respondents were asked to indicate which search engine they are accessing frequently for information. As shown in table 4 (100%) respondent accessing google search engine frequently followed by yahoo (85.29%), while (50%) accessing MSN. The Google search engine is mostly used because it is fast in access, regularly updated and links are provided to web sites in the world (Asemi, 2005).

Other search engine is not so much popular but when we are talking about Indian Search engine there are two search engine first India123 (51.47%) and second Indiatimes (36.76%) search engine also access by respondents.

### **(v) Frequency of use e-mail**

The most important and most often used facility is e-mail, which revealed its use mainly for scientific communication among resarchers. The responses summarised in the table 5 shows that (47.06%) respondents "frequently" used e-mail for scientific communication followed by (22.06%) "Regularly" and "Occassionaly" used the same. The results indicate that over all (100%) respondents used e-mail for communication.

### **(vi) Purpose of use**

The major objective of this survey is to identify the purpose of Internet use by the scientific community. Thus the survey respondents were asked to indicate the purpose of Internet use. The data given in table 6 gives an indication of purpose of use of Internet and it shows that equally (97.06%) respondents used Internet for education & research and browsing literature followed by browsing e-journals with (83.82%) and (82.35%) respondents used Internet for search latest innovation & technology change.

It can also be seen from the table that the respondents used Internet for browsing abstracts from research journals. Only (63.24% of respondents reported that they used it for entertainment & sports. Since all the respondents are working in the research environment, their foremost priority to use Internet for education & research.

### **Conclusion**

The survey finds that majority of scientists and research fellow indicated that they used Internet for education & research, browsing literature and also they have shown attractiveness of electronic mail as a mode of communication. Their strong desire is to initiate various library functions and services like e-portals, online information/abstracts retrieval along with Internet. Hence library should offer a variety of services to the scientific community with the use of the latest gadgets of information technologies.

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# Reading Habits in the Information Technology Era:

## A Study of B. Ed. Students

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### Abstract

The present paper is an output of a study carried out to know reading habits of Bachelor of Education students. The structured questionnaire is used to obtain the data from the selected sample. The results shows that three fourth of respondents read newspaper daily and 13.9% respondents read newspaper occasionally. Only 10.2% respondents read magazines daily and 43.5% read these occasionally. About half of the respondents (48.1%) read general magazines whereas 44.4% respondents read magazines relating to various Competitions. As much as 50.9% respondents read competitions books and 30.6% read fiction/poetry books. A thumping majority of respondents (70.4%) read for knowledge and 15.7% read for Information. More than one third (39.8%) respondents frequently use their institutional library and 29.6% respondents occasionally use their institutional library. The respondents with more %age of marks in the Matric read according to a scheduled time plan as compared to the students who scored less percentage of marks in 10<sup>th</sup>. The female respondents have been found devoting more time for studies during the exams days as compared to the male respondents. The chi-square value of Gender X Frequency of use of internet is 11.853, degree of freedom is 3 and P is .008, which shows a high significant difference. More than three fourth i.e. 76.9% respondents' favorite search engine is Google and 18.5% respondents prefer Yahoo as search engine.

### Keywords

Information Technology, Reading Habits, Users' Survey.

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### Introduction

Reading is an art of interpreting the printed tools and written words. Reading is a quick association of the eye movement with the words. A person who can have more quick association with words and eyes, he can read more rapidly, that is why we call a person slow reader or fast reader. Reading depends upon habit formation and constant practice. Good habits of reading can be injected by motivating the students and by guiding them to read interesting content matter to widen their interest in reading. Reading is primarily an intellectual activity and reading habit is a sort of attribute of a human being. Like other habits, the habit of reading in an individual develops during the course of time. Psychologically, habit is a product of learning. Good readers are good planners too. Reading is a source for the achievement of developmental task because it gives knowledge, esthetic enjoyment and a supply of substituted experience that is merely in exhaustible. It is important for the professional staff of a library to know about the reading habits and information needs of clientele being served<sup>1</sup>. The developments in the field of Information Technology have influenced the behaviour of library users and certainly there is an impact of IT on the reading habits of students. The present study is an attempt to know the reading habits of B. Ed. Students in this era of Information Technology.

### Objectives

The major objectives of the study are as under:

- \* To know the habits of reading newspaper, magazines and books among the Bachelor of Education students
- \* To identify the type of magazines and books they read
- \* To know the reasons for reading, favorite place of reading and style of reading

- \* To know whether they read in a planned or not
- \* To know the time devoted for studies
- \* To know the use of internet, favorite search engine and favorite e-mail service provider

### **Scope**

The study is delimited to the Bachelor of Education students of Satish Public College of Education, Rewari and Sardar Patel College of Education, Farrukhnagar, Gurgaon, Haryana. The total strength of both the colleges was selected as the sample for this study.

### **Literature Review**

Sever and Branse (1991)<sup>2</sup> examined the nature of Israelis' reading habits during the past 20 years. Important social factors, influential during this period, have been the spread of education, acculturation of immigrants, the establishment of a network of public libraries, and, perhaps most pronounced, the rapid acceptance of television and video as popular media competing with reading for people's leisure time. Sakota (1993)<sup>3</sup> reported the results of a survey carried out by Tokyo Municipal Library into the reading habits and requirements of Asians in Japan. 112 people, mainly students, were questioned. Asian residents used libraries heavily, especially smaller branch libraries which rarely had foreign language materials. They felt libraries were important to them. There was demand for both Japanese language and foreign materials. Foreign residents have a right to participate in Japan's cultural life and libraries should help them.

Shekhawat (2006)<sup>4</sup> conducted a study on reading habits of engineering students at BITS, Pilani. The study shows that the most important purpose of reading by the students is to update their knowledge and information. 75% of postgraduate students read newspaper daily and 18% students read occasionally where as 7% students read newspaper rarely. In undergraduate students 64% students read newspaper daily and 36% students read occasionally. Total 15% students don't read books other than textbooks but 85% students read books other than textbooks. In total 86% students don't read religious books but 14% students read religious books. Kaushik and Khanchi (2007)<sup>5</sup>

revealed that as much as ninety respondents (57.69%) read newspaper daily and fifty-two respondents (33.33%) read newspaper occasionally. A majority of respondents (58.33%) read general magazines, 14.73% respondents read magazines on films, 16.67% respondents read magazines relating to various Competitions. More female under-graduates have been found reading Novels/ Poetry/ Stories books, whereas more male have been found reading religious and competitive books. The female under-graduate students have been found devoting more time for reading at home (during normal college days as well as during exam days) as compared to male under-graduate students. The use of internet by rural under-graduate students is very low, which is matter of great concern for us as librarians. Only sixteen respondents out of one hundred fifty six use the internet.

### **Methodology**

A structured questionnaire containing the questions relating to various aspects of reading habit was designed and used to collect the data. The questionnaire was distributed among the respondents in their classrooms during the vacant periods. Every question was explained to the students for their better understanding and the students were asked to fill their questionnaire on the spot. Total one hundred fourteen questionnaires were distributed and received back. However six questionnaires were found unusable, as these were not filled up properly. Rest one hundred eight questionnaires were coded and inputted in MS-Excel. This data is then analysed with the help of SPSS 7.5 for windows. The results are presented in the next paragraph along with certain important tables.

### **Results**

The interpretation of the data received is being made under various subheadings: -

#### **Reading Newspaper**

Newspaper is the most common source of information. It does not only contain the news but also publish articles on various topics pertaining to health, education, entertainment, employment, etc. The students at college and university level are expected to read newspaper for upgrading their general knowledge and keeping themselves aware of current affairs. The

results of the present study shows that 74.1% respondents read the newspapers daily, 13.9% read these occasionally and 12% read these rarely. Therefore we can say that respondents have a good habit of reading newspaper. While comparing the respondents on the basis of their

affiliation to the college, no significant difference is found. The chi-square value is found .792 with the degree of freedom of 2 and probability (P) level more than .05. The Gender and marks in 10<sup>th</sup> also does not have significant effect on the habit of reading newspaper by the respondents.

**Table 1**  
**College X Reading Newspaper**

			Frequency of Reading Newspaper			Total
			Daily	Occasionally	Rarely	
Satish Public College of Education	Count		47	7	7	61
	% within College		77.0%	11.5%	11.5%	100.0%
Sardar Patel College of Education	Count		33	8	6	47
	% within College		70.2%	17.0%	12.8%	100.0%
Total		Count	80	15	13	108
		% within College	74.1%	13.9%	12.0%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.792(a)	2	.673

### Reading Magazines

Those who missed the newspapers need not to worry as Magazines are such a source of information that provides the weekly or fortnightly or monthly capsules of general news. Hence reading magazines is also expected from these students. It is found that only 10.2% of respondents read magazines daily, 43.5% read these occasionally and 44.4% read these rarely. There are 1.9% respondents who mentioned that

they never read the magazines. Hence we can say that the habit of reading magazines is poor among the respondents. The chi-square value of College X Reading Magazine is 3.161 with a degree of freedom of 3 and P level more than .05. Once again there is no significant effect of college on the habit of reading of magazines by the respondents. The other two variables viz. Gender and marks in 10<sup>th</sup> also do not have significant effect.

**Table 2**  
**College X Reading Magazines**

			Frequency of Reading Magazines				Total
			Daily	Occasionally	Rarely	Never	
Satish Public College of Education	Count		7	23	29	2	61
	% within College		11.5%	37.7%	47.5%	3.3%	100.0%
Sardar Patel College of Education	Count		4	24	19		47
	% within College		8.5%	51.1%	40.4%		100.0%
Total		Count	11	47	48	2	108
		% within College	10.2%	43.5%	44.4%	1.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.161(a)	3	.367

### Kind of Magazines

The magazines on the basis of their contents can be classified into various categories like General, films, competitions, sports, women's, etc. The different groups of people read different

kind of magazines. It is indicated from the results that 48.1% of respondents read General magazines, 44.4% respondents read Competitions magazines, only 4.6% and 2.8% respondents read film magazines and other

magazines respectively. It shows that at this juncture of life the respondents are very much serious and cautious about their career. The chi-

square value of College X Kinds of Magazines is 1.129, degree of freedom is 3 and P level is higher than .05, which shows a non-significant difference.

**Table 3**  
**College X Kind of Magazines Read**

		Kinds of magazines				Total
		General	Films	Competitions	Others	
Satish Public College of Education	Count	28	2	29	2	61
	% within College	45.9%	3.3%	47.5%	3.3%	100.0%
Sardar Patel College of Education	Count	24	1	19	3	47
	% within College	51.1%	2.1%	40.4%	6.4%	100.0%
Total	Count	52	3	48	5	108
	% within College	48.1%	2.8%	44.4%	4.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.129(a)	3	.770

### Reading Books Other Than Textbooks

Nowadays it is popular that Teachers are limited with the curriculum, students are limited with textbooks and parents are limited with the scores (%age of marks) of their children. Reading books other than the textbooks is very important in students' life. The results indicate that 96.3% respondents have mentioned that they read the books other than their textbooks. Only 3.7% have mentioned that they do not read other books. Hence the popular saying seems to be proved wrong as far as the responses of the respondents are concerned.

### Kind of Books Read

Now it is interesting to note that which kind of books respondents used to read. Almost half of the respondents i.e. 50.9% read competitions books, 30.6% read fiction/ poetry books and 10.2% respondents read religious books. There are 8.3% respondents who read biographical books. The chi-square value of College X Kind of books is 2.847, degree of freedom is 3 and P level is more than .05. Once again there is no significant effect of college, Gender and marks in 10<sup>th</sup> on kind of books read.

**Table 4**  
**College X Kinds of books Read**

		Kinds of Books				Total
		Religious	Biographical	Competitions	Novels/ Poems/ Stories	
Satish Public College of Education	Count	8	4	33	16	61
	% within College	13.1%	6.6%	54.1%	26.2%	100.0%
Sardar Patel College of Education	Count	3	5	22	17	47
	% within College	6.4%	10.6%	46.8%	36.2%	100.0%
Total	Count	11	9	55	33	108
	% within College	10.2%	8.3%	50.9%	30.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.847(a)	3	.416

### Reasons for Reading

Every individual has his own reasons for reading. The study indicates the various reasons for reading by B. Ed. students under study. It is found that a thumping majority of respondents (70.4%) read for knowledge, 15.7% read for

Information and 11.1% read for entertainment. Only 2.8% respondents have their other reason for reading. The chi-square value of college X Reasons for reading is .709 with a degree of freedom of 3 and P level more than .05, which is non-significant.

**Table 5**  
**College X Reasons for Reading**

			Reasons				Total
			Information	Entertainment	Knowledge	Other	
Satish Public College of Education	Count		10	7	43	1	61
	% within College		16.4%	11.5%	70.5%	1.6%	100.0%
Sardar Patel College of Education	Count		7	5	33	2	47
	% within College		14.9%	10.6%	70.2%	4.3%	100.0%
Total		Count	17	12	76	3	108
		% within College	15.7%	11.1%	70.4%	2.8%	100.0%

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	.709(a)	3	.871

### Reading Style

Students have different reading styles. Some have lip reading style and some have the other like silent reading, loud reading, etc. The result of the present study shows that three fourth (75.9%) of respondents have silent reading style,

18.5% have lips reading style and 4.6% have loud reading style. Hence the students with loud reading style need to change their style as this style is not suitable while reading in a library. The chi-square value of college X Reading Style is 1.806, degree of freedom is 3 and P is non-significant.

**Table 6**

**College X Style of Reading**

			Reading Styles				Total
			Silent	Loud	Lips	Other	
Satish Public College of Education	Count		48	3	10		61
	% within College		78.7%	4.9%	16.4%		100.0%
Sardar Patel College of Education	Count		34	2	10	1	47
	% within College		72.3%	4.3%	21.3%	2.1%	100.0%
Total		Count	82	5	20	1	108
		% within College	75.9%	4.6%	18.5%	.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	1.806(a)	3	.614

### Use of Library

Use of a library is also an indicator towards the reading habits of an individual. Library use is very important in developing of reading habits. It is a well thought assumption that more the library is used, more reading habit is developed. The responses related to library use by the respondents indicate that 39.8% respondents frequently use their institutional

library, 29.6% respondents occasionally use their institutional library and 19.4% respondents most frequently use their institutional library. Only 11.1% respondents rarely use their institutional library. It is a good indication that the coming teachers have a habit of using a library. The chi-square value of college X Use of Library is 5.372, degree of freedom is 3 and P is more than .05 (Non-significant).

Table 7

## College X Use of Library

			Frequency of Library Use				Total
			Most Frequently	Frequently	Occasionally	Rarely	
Satish Public College of Education	Count		14	28	14	5	61
	% within College		23.0%	45.9%	23.0%	8.2%	100.0%
Sardar Patel College of Education	Count		7	15	18	7	47
	% within College		14.9%	31.9%	38.3%	14.9%	100.0%
Total	Count		21	43	32	12	108
	% within College		19.4%	39.8%	29.6%	11.1%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.372(a)	3	.146

## Favorite Place for Reading

Some students prefer to read in library, others may prefer to read in hostel and some other may prefer at any other place like home, park, garden, fields, etc. The place for reading contributes a lot in the concentration on reading. Everyone must read at the best place for him/her. The study indicated that majority of respondents' favorite place of reading is home.

As much as 20.4% respondents' favorite place of reading is Library and 13.9% respondents have given their preference to other places like parks, gardens, etc. Hostel is not found as favorite place of reading as only 6.5% respondents have shown their preference to hostel. The chi-square value of college X Favorite Place of Reading is 1.066, degree of freedom is 3 and P level is more than .05, which indicate a non-significant difference.

Table 8

## College X Favorite Place for Reading

			Favorite Places				Total
			Library	Hostel	Home	Other	
Satish Public College of Education	Count		13	5	34	9	61
	% within College		21.3%	8.2%	55.7%	14.8%	100.0%
Sardar Patel College of Education	Count		9	2	30	6	47
	% within College		19.1%	4.3%	63.8%	12.8%	100.0%
Total	Count		22	7	64	15	108
	% within College		20.4%	6.5%	59.3%	13.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.066(a)	3	.785

## Planned Time Schedule

Those who are much disciplined, act according to a planned time schedule. The planned time schedule is the mantra for time management. Through the time management people take best out of the same 24 hours from which the other can not get their best. Hence it is important for students also that they should chalk out their time schedule for reading. The results of present study shows that two third of

the respondents i.e. 66.7% do not read according to a scheduled time plan whereas only one third (33.3%) read according to a scheduled time plan. The chi-square value of Marks in 10<sup>th</sup> X Reading according to a scheduled time plan is 10.469 with a degree of freedom of 3 and P equal to .015, which shows a significant difference. We may note that the more students with more %age of marks in the Matric read according to a scheduled time plan as compared to the students who scored less percentage of marks in 10<sup>th</sup>.

**Table 9**  
**Marks in 10th X Scheduled Time Plan**

				Total	
		Yes	No		
> 60%	Count	6	28	34	
	% within V3	17.6%	82.4%	100.0%	
60 to 69%	Count	16	26	42	
	% within V3	38.1%	61.9%	100.0%	
70 to 79%	Count	11	18	29	
	% within V3	37.9%	62.1%	100.0%	
80 to 89%	Count	3		3	
	% within V3	100.0%		100.0%	
Total		Count	36	72	108
		% within V3	33.3%	66.7%	100.0%

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	10.469(a)	3	.015

#### Time Devoted for Studies

Students are supposed to devote most of their time for studies. It depends upon a number of factors that how much time a student can devote for studies. The time devoted for studies also differ during the normal college days and during the examinations. The study found that during the normal college days, 63.9% respondents devote 2 to 5 hours daily on their studies, 31.5% devote less than 2 hours daily and only 4.6% respondents devote more than 5 hours daily. During exams days the time devoted for studies is expected to be more as compared to the normal college days. The results also support this. It is found that during exams days 68.5% respondents devote 6 to 10 hours daily, 16.7%

devote less than 5 hours daily and 13% devote 11 to 15 hours daily. Only 1.9% respondents devote more than 15 hours daily during exams days. The chi-square value of Gender X Time devoted during exams days is 13.891, degree of freedom being 3 and P is .003, which shows a high significant difference. The female respondents have been found devoting more time for studies during the exams days as compared to the male respondents. The chi-square value of Marks in 10<sup>th</sup> X Time devoted during exams days is 20.848, degree of freedom being 9 and P is .013, which shows a significant difference. Again the respondents with higher marks in 10<sup>th</sup> have been found devoting more time on studies during the exams.

**Table 10**  
**Gender X Time Devoted during Exam days**

			Time Devoted				Total
			> 5 Hrs	6 to 10 Hrs.	11 to 15 Hrs	15 to 20 Hrs	
V1	Male	Count	14	28	3		45
		% within V1	31.1%	62.2%	6.7%		100.0%
	Female	Count	4	46	11	2	63
		% within V1	6.3%	73.0%	17.5%	3.2%	100.0%
Total		Count	18	74	14	2	108
		% within V1	16.7%	68.5%	13.0%	1.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	13.891(a)	3	.003

**Table 11**  
**Marks in 10<sup>th</sup> X Time Devoted During Exam days**

		Time Devoted				Total
		> 5 Hrs	6 to 10 Hrs.	11 to 15 Hrs	15 to 20 Hrs	
> 60%	Count	6	23	5		34
	% within V3	17.6%	67.6%	14.7%		100.0%
60 to 69%	Count	6	32	4		42
	% within V3	14.3%	76.2%	9.5%		100.0%
70 to 79%	Count	6	17	5	1	29
	% within V3	20.7%	58.6%	17.2%	3.4%	100.0%
80 to 89%	Count		2		1	3
	% within V3		66.7%		33.3%	100.0%
Total	Count	18	74	14	2	108
	% within V3	16.7%	68.5%	13.0%	1.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.848(a)	9	.013

### Use of Internet

The biggest invention of the 20<sup>th</sup> century is the computer. With advancement in communication and networking technology, internet becomes the indispensable source of information. A huge amount of literature in various formats is available on internet. The use of internet in research and education has increased during the last decade or so. Nowadays even students are expected to use internet. It is revealed that 57.4% respondents use internet whereas 42.6% respondents do not

use it. The frequency of using internet also varies. The results indicate that 53.7% respondents occasionally use internet, 26.9% respondents rarely use internet and only 18.5% respondents daily use internet. There is only one respondent who never use internet. The chi-square value of Gender X Frequency of use of internet is 11.853, degree of freedom is 3 and P is .008, which shows a high significant difference. The male respondents have been found using internet more frequently as compared to the female respondents.

**Table 12**  
**Gender X Frequency of Use of Internet**

			V24				Total
			Daily	Occasionally	Rarely	Never	
V1	Male	Count	8	31	5	1	45
		% within V1	17.8%	68.9%	11.1%	2.2%	100.0%
	Female	Count	12	27	24		63
		% within V1	19.0%	42.9%	38.1%		100.0%
Total		Count	20	58	29	1	108
		% within V1	18.5%	53.7%	26.9%	.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.853(a)	3	.008

There are various search engines which helps the internet users in finding the required information. The B. Ed. Students were asked to mention their favorite search engine. The results indicate that more than three fourth i.e. 76.9% respondents' favorite search engine is Google, 18.5% respondents prefer Yahoo and 3.7% like

rediff. Only one respondent likes Gopher. Electronic mail (E-mail) is the cheapest and quickest means of communication for long messages. The results show that 78.7% respondents use e-mail but 21.3% respondents do not use it. Yahoo mail is the favorite e-mail provider of 78.7% respondents, 8.3% like



Indiatimes, 9.3% prefer Rediffmail and 3.7% respondents favor Hotmail.

### Conclusion

The results of the study clearly indicate that Information Technology have an impact on the reading habits of respondents. Now they are not restricted to documentary sources but they also use the online digital sources. The variety of sources of information has grown due to the developments in the field of Information Technology. The emergence of internet has made possible the easy accessibility of remote digital resources. The use of internet, e-mail and interest in various search engines clearly indicate that with the development of information technology the reading habits of B. Ed. Students have been influenced.

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# An Overview of e-journal Evolution

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## Abstract

Electronic journals have now been recognized as major link in scholarly communication. The Timely publication, ease delivery, in corporation of multimedia contents, hyper linking and search facilities etc. are some of the features which have attracted interest of both library and scholarly communities. The article deals with importance, definition, evolutionary, trends and access of E-journals. It discusses along with advantages, the burning issues and challenges to the present and future library and information professional.

## Keywords

E-Journals,Issues,Pricing,Archiving

Access, Library

## Introduction

Electronic journal form a large part of the collection of a library. Collection management related to e-journals involves a number of issues, such as technology requirement, access regulations, access mechanisms-via publisher or aggregator-and cataloging to make the library patrons aware of the E-journals.

Access to electronic journals is provided by

either publisher themselves or aggregators. Most e-journals provide access to their journals from their websites usually if a library subscribes to the print version of a journal, access to its electronic version is available either at no cost or for a small additional fee; the price of the online – only version may be slightly lower than the cost of print version.

## History of E-Journals

A significant trend during the 1990s was the creation of web-based electronic journals. The 1994 Directory of Electronic Journals, News Letter and academics discussion lists listed approximately 35 electronic publications 'Created for the web reading / distribution'-a number that had increased to about 140 in the 1995 directory. Counting publication available through gophers or list serves all most 350 journals was available in the web or through webs links in 1995. Reportedly the initial the refereed library and information science journals on the www was the Olive Tree, published by the school of library science at the University of the Arizona and the first issued in January 1995.

Growth of electronic publication listed in the directory of electronic journals, news letters and academic discussion lists:

Year	Journals / Letters	News	Discussion lists
1991	110		517
1992	113		769
1993	240		1152
1994	443		1785
1995	675		2480
1996	1689		3118

This figure may partially reflect the directory expended coverage rather than the absolute number of electronic journals and discussion groups, although the genuine growth in the

numbers is indisputable.

## What is Electronic Journals?

"Any Journals that is available over the internet can be called an 'Electronic Journals' (E-Journals). In some cases, print equivalents exist; in some cases not. Some electronics journals are freely available other have charging mechanisms of different types. Some are issued by established

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publishers; others are produced from an individual academic's office. As with print journals, the quality and relevance of journals can vary considerably. "

Electronics Journals may be defined very broadly as any journals, Magazine, e'zine, webzine, news letters or type of electronic serial publication, which is available over the internet. Within this broad definition the titles can be electronically access using different technology such as the World Wide Web (WWW), Gopher, FTP, and Telnet, E-Mail or listserv of course virtually all – modern electronic journals are mostly available via the way. In order to be included in journals collection electronics journals must be available via the World Wide Web and must fall within the guide line presented bellow: This guideline is not presented in order of importance and it is the responsibility of the subject specialist to apply them in an appropriate manner. Not all guidelines apply to all titles.

### **Selection Issues**

Five fundamental selection issues for electronic journals exist:

- 1) What does 'selection' of an electronic journals mean?
- 2) Who will do the selection?
- 3) What selection procedure is used?
- 4) How are titles that are candidates for selection identified?
- 5) What selection criteria will be used?

Selecting electronic journals to five actions:

- Placing a paid subscription
- Signing a license agreement
- Accessing a title on a pay-per-use basis
- Including a title in library's gopher
- Providing access through a WWW site

### **Procedure of Acquisition**

An MIT subgroup on electronic journals, appointed in 1995, identify five specific acquisition functions for fee-based, later generation electronic journals:

- Determining the price
- Negotiation with the vendor

- Completing the license agreement
- Encumbering the fund
- Recording the order

In addition to these five steps, one might add three more

- Verifying the title can be accessed
- Communicating with the vendor if it can not be accessed (the Electronic equivalent of claiming)
- Preparing an invoice for payment

In January 1994 6 University Libraries (17 percent responding to the question) reported they acquired electronic journals through the same procedure as print ones, 20 ( 57 percent ) used a modified form of the normal acquisition procedure, and 8 (23 Percent) used separate procedure developed specifically for electronic journals.

There are two approaches for acquiring E-journals:

1. Individual library approach: every library differs from one another according to its collection, information need of users, working methods, sources of finance processing of information etc.
2. Consortia approach: It is more particle than another approach toward the subscription of E-Journals. It is a marketing strategy of commercial publisher to get continuous longer commitment form a group of libraries for their journals.

### **Process of accessing**

Different publisher have different policies when it comes to providing access to electronic journals some publishers are willing to provide libraries with both bibliography information and full text for local stores. This is done either by regularly sending CD-ROMs to the library or by the making the Material available via and FTP archive from which a library can download the files. Some publishers have their own sites at which end-users can access both bibliographic information and full-text. In this type of access publisher gives the user a user name and password. Another possible way to provide access to electronic journals is through the website of the intermediary.

Another way to provide end-users with access to electronic journals is by including links in the library catalogue. These links are added to the journal description. In most cases a link brings user to the list of issue of the journals that are electronically available on a site of a publisher or intermediary. Access is thus provided at the level of the journal. This solution is of course only possible when the OPAC of a library has a web interface.

- Interface is user-friendly
- Articles have hyper-text link to additional data-Mail address, Full Text of material cited, etc.
- Site provides indexing or other types of subject access to the journal's content.

### **Electronic journal archiving/Preservation**

#### **Who does the archiving?**

1. Electronic journals publisher: many publishers do the archive the electronics journals they publish. The problem here is that many observers feel the publishers can not be depended upon for permanent archiving.
2. Library: Libraries could do the archiving themselves traditionally.
3. On co-operative regional or national bases: During the last decade there has been more talk than action about co-operative collection development on the part of libraries. As variation on this theme there may be significant potential for co-operative archiving of electronics journals.

#### **Which Electronics Journals should be achieved?**

Not every print journal has enough enduring contribution to scholarship to warrant preservation through binding. Likewise an electronic publication might not have enough scholarly merit to justified permanent archiving. Consequently part of the collection management responsibility in regards to electronics journals evolves deciding which journal should be archiving and which should not be.

#### **What format should be use for archiving?**

Archiving can be done in a variety of formats including paper disk, micro format, CD-ROM,

Optical Media or on a computer. The details of which archiving method is the best for a particular journal and a particular situation is beyond the scope of these articles.

### **Advantages of electronic journals ·**

#### **Speed**

Articles can be put on the Web as soon as they are ready, without having to wait may be months for a space in a journal issue. The American Chemical Society put articles on their Web site "as soon as publishable" which can be up to 11 weeks before print. This all means that the information is much more up-to-date than can be achieved with paper.

#### **Easily searchable**

Search ability is one of the core advantages of a digital format, also argue that the easier it is to find research, the fewer duplicated experiments there will be, resulting in less wasted time. However, raises the problem of information overload, with information easier to find, there will be much more to read and keep up-to-date with.

#### **Interactive**

The rapid turnaround time means that articles can be read, commented on by the journal's readers, and amended much more quickly than can be done with print. The easy with which e-mail can be sent, or forms filled in means that there can be much greater feedback through the Web.

#### **Accessible**

Anderson worries that with information converted to digital formats, scholars in Third World countries will be disadvantaged, however and all argue that it is far cheaper for these researchers to get one computer with Internet access than to subscribe to many journals, so electronic journals will be a tool for "further breaking down the barriers to democratic research". For any researcher, availability from a desktop computer means a significant increase in accessibility, particularly for those who do not work within easy reach of the library. 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.

## Links

Links are the mainstay of the hypertext format, and should be exploited. Not only can papers link to those they have cited, but with a bit of effort, they can be linked to those that cite them. describes how in Electronic Transactions on Artificial Intelligence they concentrate on the bibliographic part of publishing, providing current, specialized bibliographies for each of their topic areas. Considers "the intrinsic value of the links [to be] nearly as great as the content itself".

## Added value

Rather than just recreate a print journal 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 example 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 wanted to look more deeply into the results. It gives the example of a "living article" which could show the results of an ongoing experiment, frequently updated.

## Inexpensive

This is a hotly debated point, with claiming that a 70% saving over print costs can be made, while Whisler argues that only a 20% saving can be made as distribution costs are a low proportion of the final journal price, and even that saving will be eaten up by extra costs caused by new features.

## Flexibility

sees e-journals being able to evolve quickly as they are not tied to a format, printer or distribution network.

## Disadvantages of electronic journals

### Difficulty reading computer screens

The main disadvantages of digital information are the limitations of the computer monitor. This leads to problems with reading, particularly over four or five screens, annotation and portability. Although the ideal would be to read information from the screen, I think that with printing facilities, this ought not to be a huge constraint on the development of e-journals, because at the moment most people photocopy library copies of journals before taking them away anyway.

## Often not included in indexing and abstracting services.

## Archiving

The main considerations for archiving of electronic journals are: (i) should the publishers or libraries archive the digital data? (ii) whose responsibility would it be to upgrade old data to newer formats? and (iii) if the publisher goes bust, or the editor of an independent journal gets bored or leaves their institution, what will happen to the archives? Without satisfactory answers to these questions, the role of the scholarly journal as an archival record will be compromised.

## Perishable citation

Once printed, the details of a paper journal remain constant, thus finding them again is straightforward, and however web sites change their URLs or frequently disappear altogether.

## Authenticity

Clarke worries about the "malleability of content in electronic form" and are concerned about establishing the source and authority of material in general, although I think that e-journals will only survive if they can convince readers of their credibility.

**Search engines ignore PDF files, which is the format that a large proportion of e-journals use, particularly those which are direct copies of print versions.**

## Conclusion

An E-Journals are very useful to user , students and researchers for the future study. It is very easy for access on line and do the subscription on line. So no need of extra

Work to access, subscribed only payment of the journals is very costly but today some ugc also takes some steps for the government institute to give the access of E-Journals UGC Infonet).

Also you can build your library or the institute to the one of the top in the world using the latest technology and services using e-journals, e-books etc.

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# SAMARPAN TRUST

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The Head Quarter of SAMARPAN TRUST is situated at Delhi, which is a national capital of India. The Trust was established on 14.10.2004 and was registered under Indian Trust Act 1882 with registration number 15737/4. The trust is also registered under Income Tax Act 12AA vide certificate No. DIT (E) 2004-05/5-4276/04/3 dated 8.4.05 & 80G vide certificate No. DIT (E) 2006-2007/S-4276/2539 dated 21.11.06.

THE SAMARPAN TRUST is a Social Service Organization which keeps a broad humanitarian out look on reaching out to the people irrespective of Caste, Creed and Gender. The Trust has carried out several developmental activities, sensitization programmes, awareness sessions and trainings to fulfill the objectives of sustainable developmental in a professional and scientific manner along with team work. Recently the organization aiming at self reliant and empowered Communities in east Delhi and Shahjahanpur and Budaun Districts of Uttar Pradesh.

The Samarpan Trust running two charitable dispensaries one at Delhi, where we running a DOT's centre as per RNTCP guidelines and another is at Shahjahanpur, U.P, which was started on 1st of August, 2008. The trust has started a school (i.e. Pushpanjali Handicapped School) especially for physically handicapped children in Budaun district of U.P. on 1st July, 2008.

More than four years of dedicated service and successful implementation of a large number of developmental as well as welfare activities especially for the marginalized poor and backward sections of the urban and rural population, increased support and participation from people's part have made THE SAMARPAN TRUST a name synonym with urban and rural development.

Our staff works with the communities at the grass roots, living with them, learning from them and working with them to find solutions to the issues of poverty and neediness. Accountability and credibility are integral to our relationship with donors. Internal and external audits ensure that everything we receive from our donors is fully accounted for.

Support a child through SAMARPAN TRUST's Child Sponsorship Programme and change the world in which he/she lives. A gift of Rs.600 every month address issues that promote the overall development of a child, including his/her health, education, clean drinking water and income generation programmes for his/her family.

### Some of the children you can sponsor.

There are thousand of children waiting for someone like you. You could be their only hope. There are just a few of our children who desperately need a sponsor. You can also view more children at [www.samarpantrust.org](http://www.samarpantrust.org)



☐ **Yes! I want to sponsor a needy child today. Here is my sponsorship gift!**

Please send my sponsored child's photograph and story right away.

☐ Rs.600/- every month ☐ Rs.1,800/- every 3 months ☐ Rs.3,600/- every 6 months

☐ Rs.7,200/- every year.

☐ **I will not be able to sponsor a child right now.**

But there is my gift to support a child's education.

☐ Rs. 1000/- ☐ Rs. 2000/- ☐ Rs.5000/- ☐ Rs. \_\_\_\_\_/-

☐ I wish to make my gift by Draft Dd.

In the name of Samarpan Trust-payable at delhi.

**When you decide to sponsor a child you will receive:**

\*A picture and the story of your sponsored child. \*your sponsored child's Annual Progress Report to show you his/her progress. \*The information about you will be published in all of our 12 journals circulating around the world. \* Tax benefits under Section 80 G. \*A unique opportunity to build a relationship through cards and letter. \*An opportunity to personally visit and interact with your child.

### Personal Details

Name \_\_\_\_\_

Address \_\_\_\_\_

Pincode \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_ Nationality \_\_\_\_\_

All contributions to Samarpan Trust tax deductible under Sec-80 of It Act

Samarpan Trust is a registered Trust the India Govt.Act-1882

### SAMARPAN TRUST

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# Indian Journal of Library and Information Science

## Paper Submission Instructions

Journal paper submissions should be forwarded via email to the Editor ([wisindia@vsnl.net](mailto:wisindia@vsnl.net)). The length of a paper is typically in the order of 15–30 journal pages. Manuscripts should use 12 point Times or Times New Roman fonts, double line spacing and in MS Word format. Paper should include title of the article, abstract and author information on the manuscript together with a signed declaration that the theme is of his own, and paper has not been published anywhere or not under consideration for publication. **Authors are required to use the Vancouver publication style. Author should include 3-5 Key Words and 10-15 references.** The style of references should be used as under. The photographs and figures should be sent as saved with their links.

### Journal article:

Ansari Mehtab Alam, Kamal Mohd. Research on “Meningitis’: a Bibliographic Study. *Ind J Lib & Info Sci*, 2008; 2: 5-12.

### Magazine:

Gakhar Isha. Eco-friendly Bags in Fashion. *Women on the Earth*, 2008; 2: 28-28.

### Newspaper:

Parmar Vijaysinh. All this family got was their son’s head, *Times of India*. 2008; July 29.

### Book:

Benjamin Lewin. *Genes VI*. New York; Oxford University Press, 1997

### Book chapter

Fisher M. Nosocomial. Infection and Infection Control. In Jenson H, Baltimore R. *Pediatric Infectious Diseases*. 2<sup>nd</sup> Ed, W.B. Saunders Company; 2002: 1221.

### World Wide Web:

Jutta M. Joesch et al. *Does Your Child Have Asthma? Filled Prescriptions and Household Report of Child Asthma*. Elsevier. [http://www.jpmedhc.org/article/S0891-5245\(06\)00129-5/abstract](http://www.jpmedhc.org/article/S0891-5245(06)00129-5/abstract) (August 21, 2008).

### Guidelines for Figures

The size and resolution guidelines below must be followed in order for electronic images to be of sufficient quality to be published in the *Journal*.

**Photographs** (halftones) and radiographs (either color or black and white) will be accepted in electronic form if the image is a minimum of 4 inches wide (any height) and a minimum resolution of 300 ppi/dpi. We can accept electronic files for photographic images in the following file formats: Adobe PhotoShop TIFF, EPS, JPEG. If JPEG settings are used on a digital camera, please ensure that the image resolution is set high enough to meet the 300 ppi requirement (the default setting on most cameras is 72 ppi). The photographs and figures should be sent as saved with their links.

**Illustrations** (black and white line art), charts, and graphs are often recreated in the *Journal* office. Digital images must be a minimum of 4 inches wide (any height), and the resolution must be 1200 ppi/dpi. We can accept electronic files for illustrations in the following file formats: TIFF, EPS, JPEG, PDF. The output software must be either Adobe PhotoShop, Adobe Illustrator, or Adobe Acrobat (for PDF images). For hard-copy submissions, we can accept laser and inkjet prints (600 ppi or higher print resolution is preferred).

**Forms** (figures that reproduce questionnaires, flow charts, or other primarily-text material) should be submitted as data-processing (text) documents if that is practical.

If you have any questions about the technical guidelines, please contact the us on e-mail: [wisindia@vsnl.net](mailto:wisindia@vsnl.net).

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**IT'S WORKING AND PROMISING.....STILL WE DON'T USE  
THAT WHY? COME ON WAKE UP AND FIGHT FOR  
WRONGS.....**

**Government of India has an online Grievance forum at <http://www.pgportal.gov.in>**

Can you imagine this is happening in INDIA?

The govt. wants people to use this tool to highlight the problems they faced while dealing with Government officials or departments like

- 1) Railways
- 2) Posts
- 3) Telecom (incl. Bharat Sanchar Nigam Limited (BSNL) & Mahanagar Telephone Nigam Limited (MTNL)
- 4) Urban Development (Delhi Development Authority (DDA), Land & Development Office (L&DO), Central Public Works Department (CPWD), etc)
- 5) Petroleum & Natural Gas
- 6) Civil Aviation (Air India, Airports Authority of India, etc)
- 7) Shipping, Road Transport & Highways
- 8) Tourism
- 9) **Public Sector Banks**  
Allahabad Bank, Andhra Bank, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, Indian Bank, Indian Overseas Bank, Industrial Development Bank of India Ltd, National Bank for Agriculture and Rural Development, Oriental Bank of Commerce, Punjab & Sind Bank, Punjab National Bank, Small Industries Development Bank of India, State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of India, State Bank of Indore, State Bank of Mysore, State Bank of Patiala, State Bank of Travancore, Syndicate Bank, UCO Bank, Union Bank of India, United Bank of India, Vijaya Bank.
- 10) **Public Sector Insurance Companies**  
GIC of India, Life Insurance Corporation of India, National Insurance Company Ltd, The New India Assurance Company Ltd, The Oriental Insurance Company Ltd, United India Insurance Company Ltd.
- 11) National Saving Scheme of Ministry of Finance
- 12) Employees' Provident Fund Organization
- 13) **Regional Passport Authorities**  
Regional Passport Office, Ahmedabad Regional Passport Office, Amritsar Regional Passport Office, Bangalore Regional Passport Office, Bareilly Regional Passport Office, Bhopal Regional Passport Office, Bhubaneswar Regional Passport Office, Chandigarh Regional Passport Office, Chennai Regional Passport Office, Cochin Regional Passport Office, Coimbatore Regional Passport Office, Dehradun Regional Passport Office, Delhi Regional Passport Office, Ghaziabad Regional Passport Office, Goa Regional Passport Office, Guwahati Regional Passport Office, Hyderabad Regional Passport Office, Jaipur Regional Passport Office, Jalandhar Regional Passport Office, Jammu Regional Passport Office, Kolkata Regional Passport Office, Kozhikode Regional Passport Office, Lucknow Regional Passport Office, Madurai Regional Passport Office, Malappuram Regional Passport Office, Mumbai Regional Passport Office, Nagpur Regional Passport Office, Patna Regional Passport Office, Pune Regional Passport Office, Raipur Regional Passport Office, Ranchi Regional Passport Office, Shimla Regional Passport Office, Srinagar Regional Passport Office, Surat Regional Passport Office, Thane Regional Passport Office, Trichy Regional Passport Office, Trivandrum Regional Passport Office, Visakhapatnam
- 14) Central Government Health Scheme
- 15) Central Board of Secondary Education
- 16) Kendriya Vidyalaya Sangathan
- 17) National Institute of Open Schooling
- 18) Navodaya Vidyalaya Samiti
- 19) Central Universities
- 20) ESI Hospitals and Dispensaries directly controlled by ESI Corporation under Ministry of Labour

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