49th ILA CONFERENCE

RESPONDING TO USERS' NEED IN CHANGING INFORMATION LANDSCAPES :

SOJOURN OF LIBRARIES FROM PALAM-LEAF TO PALMTOP

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49th
All India
Library
Conference

Bundelkhand
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- Year's Work in Indian Librarianship 1987. Written and Edited by T S Rajagopalan. 1988. Rs 250 US $ 40.

- 32nd All-India Library Conference-Seminar Papers on Quality in Libraries, Anantpur, January 3-6, 1987, Edited by C P Vashishth. Rs 400 US $ 40.

- Continuing Education for Librarian. Paper for the All-India Seminar held on February 12, 1984 at Pragati Maidan, New Delhi. Edited by J L Sardana. Rs 200 US $ 40.

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SOJOURN OF LIBRARIES FROM PALAM-LEAF TO PALMTOP

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FOREWORD

Everybody in the modern world experienced the ups and downs of computer-communication industry. Psychologically it is viewed as visual fantasy and communication convenience across the world made the industry to grow very fast and once the fantasy is full-filled the aggressiveness of the inadustry has come down. At the same time if the computer-communicatioan industry is viewed in the pyramid of hardware-software-knowledge-ware, knowledge-ware was constant, whereas hardware was fairly stable, software crashed down (particularly in commercial application).

What we have seen in the computer-communication is that room size computer became, desk top, desk-top to notebook, notebook to palm-top, which means in a way we see miniaturization for the portability of the system for the convenience of the people. If one looks at convergence of computer and communication, the bandwidths have been increased in race with the processing power of computer. Further to it the wired communication became wireless application called WAP technology.

All these developments are after all the tools for communication and storing convenience, but information remain constant.

In the knowledge-ware, the value addition to information searching, enriching information by addition of graphic become the order of the day, linking bibliographic data to full text, remote access to information without movement. Information location became static and the access becomes dynamic.

We will have to watch and see what more convenience people expect and what more values can be added. However IT has threatened existence of many professionals including the surgeons and other medical community, it may not remove anyone.

49th Annual Conference of the Indian Library Association is a landmark which paves the way for prospective and retrospective interaction among the professionals. ILA is a body of synergic professionals working and operating together, draw good consensus in cooperation, acting together as in co-action. The goal of this synergic

action is to accomplish a larger or more difficult task than can be accomplished by individuals working separately. It is well established that the end justifies the means, in that principle ILA is providing means for Librarians to prepare the professionals in reaching their identified ends.

ILA is trying to create the crossroads where the members can meet and brain storm their professional interest and relationships that could lead better deal of professional advancement. I wish the 49th Annual conference a grand success and hope that the deliberations will give a great insight to the professionals to be vibrant and proactive in their actions and services.

(Dr.C.R.Karisiddappa)
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University Librarian
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PREFACE

Libraries are established to satisfy the documentary and information needs of the users. To combat the impact of information explosion, the library professionals have developed new tools and techniques. Information technology is one of the most current tools, which has brought revolutionary changes in management of documents and information. The trend had slowly shifted from document delivery to information delivery, immaterial whatever the physical media may be. Factual, updated, relevance are some of the characteristics that are considered while supplying the information to users.

The support for the research from organized sectors had created increased demand for nascent micro-thought. The enhanced research output had also resulted in formation of new subjects. To satisfy the user's varied informational demands, the Libraries and Information Centres (LICs) have devised variety of services such as SDI, CAS. These services are provided by the libraries both on demand and in anticipation.

In the context of severe competition, the new dimensions are added to the services. They are quality consciousness, customer satisfaction, optimum use of the resources etc. To enhance availability and accessibility to wider informational resources in the context of limited financial resources, the LICs are opting for consortia approach. Even the document delivery and resource sharing had gained the prominence in the LICs agenda.

Let there be any number of tools and techniques, every thing revolves around the user and satisfying his informational needs. The combination and permutation of new media, innovative ideas, pressure on optimal use of resources, convergence of technologies, varied experiences of the LICs, internet technologies have created new era in information world. In the context of information / knowledge society, the libraries have gained prominence as they play a vital role in information provision. The dynamic information environment is pushing back all the identified theories relating to users, which in turn raises the demand for fresh studies and research in the areas relating to users. Therefore, the Indian Library Association felt that

the need for the present theme, which deals with convergence of two important concepts namely, **users** and **changing information landscapes.**

The theme has been further divided into four sub themes, to enable the professionals to present their ideas, experiences. The professionals have also made fresh research studies in this and related areas. The volume consists of papers written by the professionals, and the discussion on these papers at the Conference is likely to provide an opportunity for sharing their experiences and ideas. The discussion at the Conference will contribute in shaping the new techniques in information handling, which in turn may provide complete satisfaction to the users. The rich contributions from the professionals in the areas relating to users will go a long way in achieving the stated objectives of LICs and this Pre-conference Volume with abundant thoughts will be a rich addition to the library literature.

Prof. N.Laxman Rao

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CASE STUDY OF THE COLLEGE LIBRARY TO FIND OUT THE USERS WITH SPECIAL REFERENCE TO BOOK ISSUE DATA

Kiran Dhandore

INTRODUCTION

Books lead you from darkness to light. Library is a vital educational service center and a social institution to educate the present and future generations. The college library which is an Academic Library is used by the college students, research scholars, teachers and some citizens.

The reading habit of the readers has a record in the daily issue register which gives the details of the books issued with respect to various subjects.

The college library has a manual daily issuing register, as the library is partially computerized. The library maintains a record regarding the number of students who use the library facility for book borrowing, at the same time which books have more borrower record. college has approximately 5000 students and more than 30% -40% of them use the library per day, at issue counter section, Reading room, Reference section and in terms of overnight book facilities, etc. which initiates for this case study.

METHODOLOGY

The sample was drawn from the Gogate Jogalekar College library's patron book issue record. Although faculties and the students are extremely active library users than the external students. Based on past experience, the issue data is collected by our library staff.

The methodology for the study is statistical and data based book issue data per day per subject has a separate register, mai by our library.

The data has been collected for the book issue during la

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years as a continuous process for library decision making. For the study the data has been analysed from Jan 2002 to Dec 2002. The result of the case study will be useful and vital for any academic library and the librarians to think on the policies they had been implementing.

Using a fixed method for calculation and analysis, the month wise book issue data is taken for consideration. The holidays are ignored for the perfection in the analysis. In return the data was collected at the end of each month. The book issue data per subject per day details for the most usable books for each subject. It is self explanatory and making difference between the most and the least books issued for a particular subject, and to find out the users need and to collect the feedbacks through

1. Questionnaires.
2. Discussions.
3. Readers forum.
4. Suggestion boxes, etc.

SPECIMEN OF DAILY DATE ENTRY SHEET

Month / Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	to	31
Subject																		
Marathi																		
Hindi																		
English																		
Urdu																		
Sanskrit																		
Physics																		
Chemistry																		
Botany																		
Zoology																		
Maths																		
Commerce																		
Accountancy																		
History																		
Psychology																		
Sociology																		
Politics																		
Economics																		
Geography																		
Foundation																		

Reference

The analysis of the issue data by taking factors like subject books issued on each day then each month and next the data analysis per year. This analysis has given a way to think the annual users of the library; the most used books for a particular subject and vice versa.

To increase the reading habit among the students the book exhibitions were organized in the library on several topics. Library staff has taken great effort is organizing such exhibitions; book exhibitions were open to all students for two days.

The statistical analysis is made on the basis of daily book issue register.

Our library staff makes the regular entries for each book issued for a particular subject. We use brown charging system for the purpose of the book issuing. At the time of issuing to make one entry on the book card it takes approximately one minute only for the entry purpose. (The time for searching the book without demand slip and the books kept ready by demand slip is excluded). Taking the main 20 subjects which are studied for UG's and PG's and their daily turnover data is the core area for my case study.

OUTCOME

Annual book issue data 2002 made it clear that in year 2002 (191days book issue entries) we have issued 25958 books. Students have effectively used nearly 50% of the total library holding.

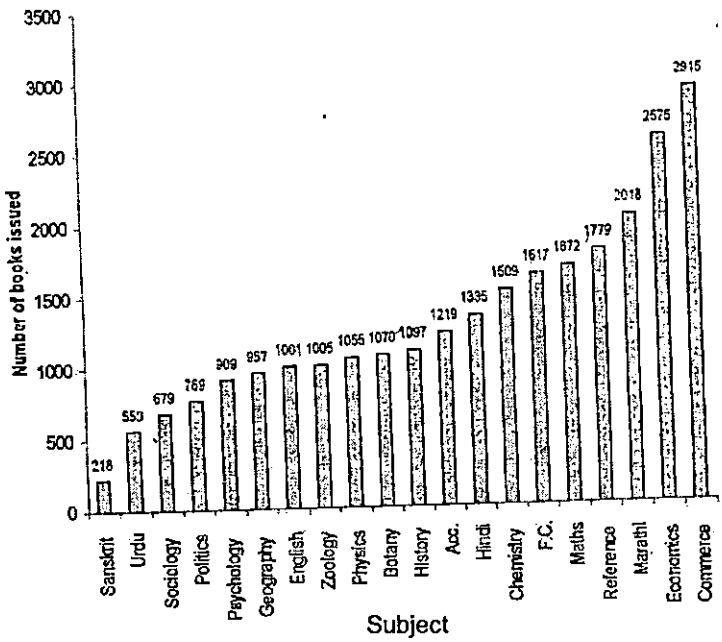
Our college library (close access) has different issue days for each faculty as below,

Faculty (total UG & PG Students Appx.)	Issue days
Arts (1037)	Tuesday and Friday
Commerce (844)	Monday and Thursday
Science (441)	Wednesday & Saturday

All the PG's have Saturday as an extra issue day.

The above figure in the bracket indicates the number of students appeared for the final examination. If we take this figure in total then the findings

Total Books Issued (Year 2002)



a) Total students are 2322 and the book turn over for the year 2002 is 25958 books. Then the calculation shows at an average book reading is 11.17 per student for the year 2002.

b) For the year 2002 we have spent more than 432.63 Hrs on book entry purpose.

c) Library staff spends 9.5 Hrs. per day (from 7.30 am to 5.00 pm) on book issuing and entry purpose.

The 20 subjects and the turn over for the same subjects have given the findings as,

d) In the year 2002 the ratio shows that books on the Sanskrit subject have been least for issuing and Commerce has the most for issuing.

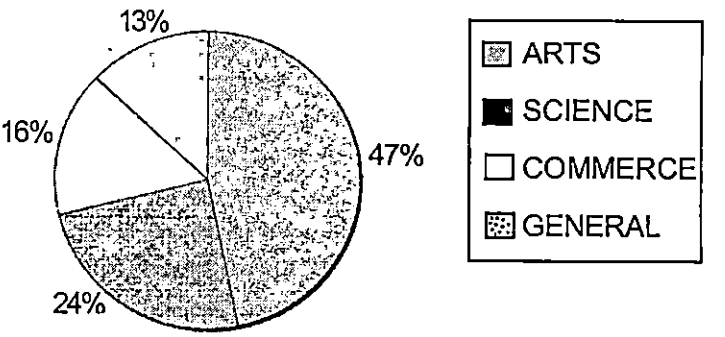
e) The data shows the maximum book issue for the subject Commerce at an average 15.26 books per day followed by the subject Economics at an average 13.48 books per day.

f) The books issued on the Marathi language are at an average 10.57 per day which is the highest average among the other books on languages.

g) The books on the subject Mathematics have more issuing at an average of 8.75 which is supposed to be the highest turn over in science faculty.

h) The average book turnover for the compulsory subject Foundation course is 8.47 per day, which is not satisfactory ratio. Because the total number of students is 1713 for this subject, it should be at the top in turn over.

STREAMWISE BOOK TURNOVER



i) The stream wise book turnover in the year 2002 shows that the students from Arts faculty have used 47% library books followed by 24% by the Science faculty students, 16 % by commerce faculty students and the 13% by the general readers who read general books. This is due to the number of students are more at arts faculty, ultimately this faculty has many subjects. It depends on the choice of the student for the subject.

FEEDBACK METHODS

1. Questionnaires:

To find out the weaknesses of library system ignore the stronger side of the library service consider only the lacking side~the questionnaires can be used putting certain questions so that our goal would be achieved.

2. Discussions:

Discussions with the students (Representatives) with respect to the library services, methods and the demand should be considered, to find out the users need.

3. Readers forum:

Continues reading generates a reading culture throughout the year. This culture would be very useful from the reader's point of view, if given a common platform to talk on the books. This platform is known as The Readers Forum, to boost the reading habit among the students.

CHANGING PERCEPTIONS AND NEEDS OF USERS IN INTERNET ERA

Madhuri Bhatia
Rakesh Goswami

ABSTRACT

Today information seekers are no longer satisfied merely with in house conventional printed sources. The key concept of today's user perception is that they need a one stop shop to satisfy their information needs. They are more and more becoming dependent on internet based latest sources and services. Since the user are aware of the use of internet potential their demands and expectation from libraries have grown tremendously. Internet has improved the user access not only to wide variety of information sources but also expert in the field, joint collaboration for research project or publications. All this is done through the internet services such as E-mail , Bulletin Board Services , Discussion forums etc. This paper deals with expectations of users in internet era from a Library.

INTRODUCTION

Users needs have always been the focal point of library services. Today information seekers no longer are satisfied merely with in house conventional printed sources. The key concept of today's user perception is that they need a one stop shop to satisfy their information needs. This can be done through Internet. In a digital world, surfing may be fun, but it is also time consuming. The user will expect the librarian to guide them to access the resources within the library as

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well as outside its physical or virtual bounds to satisfy his demand for authentic information.

INTERNET

Internet is the jargon, which has been coined from the words 'interconnection', and 'network'. Hence Internet can be defined as network of computers, usually made up of different kinds and varied technologies which are put together in such a way that they appear as a single network. It is the global computer and communication system linking millions of users. A user having Internet access can communicate to another user on Internet anywhere in the world just like one communicates with the help of ISD telephone call. A tremendous amount of information can be accessed through the Internet from anywhere in the world, that is why Internet is also known as 'Internet Super Highway'.

HISTORY OF INTERNET

In the year 1957, Department of Defence (DoD) of the United States formed the Advanced Research Projects Agency (ARPA) to look after all the R&D projects going around the US. In the year 1969, the DoD moved a step forward to develop a network to make connection with all the R&D organizations, institutions and universities, which are engaged in research funded by Ministry of Defence through the Computer Media. This network was known as ARPA net (Advanced Research Projects Administration Network). The aim behind the development of this network is the sharing of information between the agencies and to share the software and hardware that they could not afford. After getting huge success, the network has broken into two parts. One is the MILNET, which manages all the military affairs. During the 1970's other networks like BITNET, and the USENET (National Science Foundation Network) was formed which constitutes all the works. At that time, the backbone speed of NSFNET was 56 Kbps only. The NSFNET allows the universities and research institutions to link up with its super computer. In 1992, WWW (World Wide Web) was released and NSFNET upgrades its backbone to 44736 Mbps and is growing day by day. This growing web gave birth to internet.

SERVICES IN THE INTERNET

E:mail

E:mail is the most commonly used services of internet. E:mail facilitates communication with people all over the world. Today one

can send mail to anyone connected to internet wherever he is, almost instantaneously. It has become the life blood of internet with millions of messages exchanged across the globe daily. Internet provides several E:mail programmes, many of them is free of charge, subject to certain terms and condition of usages. This facility are in reality, put on by computer firms like Microsoft networks, Netscape communicator, hotmail, Lycos mail, yahoo, India mail etc.

Bulletin Board services

A bulletin board is a medium for posting and discussing announcement and message of interest to a community of online users. The bulletin Board for Librarians (BUBL) is an interactive system. BUBL and the National information software and services Bulletin (NISSBB) are available on Joint Academic network of UK. These services disseminate professional information on open Bulletin Board that can be read and commented by user in the field. Electronic publishing, conducting surveys, exchanging users' research findings, mailing lists etc are some of the applications of BBS.

Discussion forums

Many discussion forums also known as discussion list are available specially for LIS professional . The operation of discussion forums is automated and controlled, using a computer programme. Subscription is generally free and by sending an E:mail to the list server, the services are automatically directed to the E:mail box of the requester. PACS-L (Public access computer system- L) discusses the application of libraries for LIS professionals. PACS-L review and current cites gives the latest information on the use of technology in libraries. In addition, listservrs are used by professionals for subscribing or unsubscribing from mailing lists. The special library association, the American library Association and other Associations support electronic conferences (e-conferences). Some discussion lists provide current awareness by including hundreds of abstracts in the subject field on a daily basis. These groups are helpful when one wants to locate, an article or important document which is out of print. These facilitate both for getting information and also supplying to others when needed.

Electronic journals

Internet has become an effective medium for publishing electronic version of current journals, Electronic journals are accessible much faster than printed documents.. Major publishers are using Internet

and web as a global way of offering their journals to the international community. Delivery of electronic journal is faster, cheaper and saves a lot of printing, paper, storage and transportation costs. The trend of publishing electronic journal is growing day by day.

Online Public Access Catalogue (OPACS)

Internet provides access to the online catalogues of worldwide academic, research, and public libraries which can be accessed via Telnet, Gopher, and WWW. Some of the examples are: OPACs of British Library, Library of Congress, Online Computer Library Centre,. The access to OPACs from outside the library is increasing due to Internet.

Reference Services

A large number of reference sources like encyclopedias, dictionaries, manuals handbooks, directories, yearbooks, atlases, maps etc. are available in the internet .

INTERNET ACCESS TOOLS

Internet provides various tools to access, communicate and transfer information These tools are used to access databases, send E-mail, read news, download files and variety of other applications. The following are the important tool of the net:

Usenet

Usenet is an international meeting place where people gather to discuss the day's event and keep up with the current trends. It is a distributed action of computers that exchange messages via set of agreed upon protocols called newsgroup. These groups discuss with each other various problems related to their subject areas and communicate among them.

Telnet

Telnet is a utility which allows users to log on to another system and use various services available on that host. It can be used to access many library OPACs, bibliographic databases and other CDROM and online databases.

File transfer Protocol

File transfer protocol is a tool to copy files from one computer to another scattered across the Internet. It can be used to transfer files, data articles, software and other useful information from Internet.

Archie

Archie is a collection of servers which can easily search for information at different anonymous FTP sites on the Internet and makes that information available to users. All these servers pool information together into a huge global database which is updated periodically.

Gopher

Gopher is menu driven application that allows one to hop around the globe looking for information in various libraries or servers. Archie helps in finding information but Gopher actually gets the needed information available and put it on the computer screen.

Veronica

Veronica is a search tool which allows one to quickly scan most gopher servers in the entire gopher surface for particular files or directories.

Mosaic

Mosaic is a web browser which provides an easy way to access audio, video, text and graphics.

Wide Area Information System

WAIS is a Client server-based method of text oriented information searching and retrieval system. If a search is made on a keyword or topic, a WAIS server scans Internet libraries and gives a master index providing links to all the sites closely related to the topic.

World wide web

World wide web or WWW or web is the most popular and highly used service on the internet. Web is a client server-based distributed hypertext multimedia information system. The use of Web has changed the way people access, organize, use and publish information on the internet. The major features responsible for the rapid growth and widespread acceptance of web are:

* It is a multimedia information system
* It is highly interactive embedded with hypertext links
* Web is global in nature which allows unrestricted dissemination
* Web has achieved a degree of user-friendliness in interface

Internet Search Engines

The huge growth of heterogeneously organized information resources on the internet is making it very difficult for anyone to search, locate and timely access the required information. There are some programs that help the searcher to browse /surf the net websites and locate and timely access the required information.

6 CONCLUSION

The role of the library is highly revolutionized in internet era. The internet provides wealth of information. Today user has no geographical limitations and can have access to required information available anywhere in the world. To have access to huge information resources, libraries have to provide intensive training in searching methods of various Internet databases as for the effective utilization of global electronic products and services. Now libraries can set up website and provide a wide range information pertaining to library sections, functions, collections, staff membership, rules, services etc to the local as well as non local users. Online user education programme can be provided to users through libraries home page. Guide for databases and other information material on the internet should be prepared and made available to library user to retrieve required information timely.

In future Internet revolution will give us fascinating scenario. When users will no longer depend on the use of key board and mouse for interaction but will be able to draw upon the richer modes and of human communication.

1. The new system will be able to record and respond to user preferences for particular information and services via Internet.
2. There will be constructed individualized information services as useful personalized agents offered over the net.
3. It will be possible to use the Internet to provide users with automated information for briefing that ought of be helpful to them.
4. People will be able to access the Net from multiple devices with varying capability i.e. a device independent Internet.
5. Users will be able to take their information and documentation with them anywhere, any time, any place, and able to access the Internet.

Thus in view of the facts cited above one can very well see users' needs and perception of library use has already been changed in internet era and can visualize further changes which will bring the use of internet.

CHANGING PERCEPTIONS AND NEEDS OF USERS IN INTERNET ERA

Ch. Ahrarul Hasan Jawaid*
and Dr. U.C. Sharma**

ABSTRACTS

It is the same as it has been for the centuries back, when the concept of library was simply a store house, whether books, bangles, and mud-pots or iron goods etc. but it never fulfill the actual requirement of libraries, because it was a private collections in the private houses of Rajas and Maharajas, without proper management. Actually the libraries are the essential educational institutions, particularly during the printed media; which does not fulfil the requirement for the present Internet Era. Now we often say that the libraries are in the information business, that they select, organize, retrieve, transmit and preserve information. It is true, but these are the activities of the library, not the mission. The primary role of the library, irrespective of the support education, by any means, today the best source are the Information Technology under electronic media. We find each year, the body of knowledge that is born digital and exists solely in electronic format and will continue to grow. So does the risk of it disappearing forever, due to technological obsolescence or just plain neglect.

HISTORY:- WHAT IS INFORMATION

The meaning of information by different sources are advice, counsel, data, facts, inside story, instruction, intelligence, knowledge, message and news[1]. Knowledge acquired in any manner, facts,

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data, learning, Lore[2]. Numerouns other definitions exit. Wellisch (1972) collected thirty nine [3].

Documentation is non almost a pass term in English, but was once a common near synonym, as is informatics, a more recent term of Russian origin (1958). Care should be taken in translating the French and Spanish phrases *sciences de l'information and ciencias dela information*, as these have the meaning mass communication and media studies[4].

Information science-discipline that deals with the processes of storing and transferring information was fully based on printed materials; today it attempts to bring together concepts and methods from various discipline such as library science, computer science, linguistics, cybernetics, and other technologies in order to develop techniques and devices to aid in the handling-that is the storage, control and retrieval of information under information technology [5].

In early date (300 BC), the knowledge was an Idea-the product of thinking, reflecting and imagining etc [7]; then Memorization-the knowledge, or perhaps better called cultural wisdom, has always been made kinetic in peoples lives through consultation. The priest, the lawyer and the doctor have all sought to solve the personal problems of individuals rather than give them a lecture about their concern lastly the Preservation of Knowledge it has become a permanent feature during the course of printed media, as well as during the age of electronic media that is electronic revolutions and new modes of communication were deployed. The adoptive control organisms and mechanisms of biology and electronics led to the cybernetic model[8]. Before, cybernetic the reprographic method were used for preservation in the libraries. Unlike different methods used earlier for paper and printing, for examples, stone and clay, papyrus, silk skin, and leaf & bark of tree.

PURPOSE AND NEED FOR TODAY

The printed media have its own value till the late nineties in India as well as in the world. Readers had to run from pillar to post, for finding the literature either from the market, or book stall at the railway plate form, book fairs or on footpath for old magazines etc. For acquiring knowledge every one had to face number of problems, for example (I) books are not available in the library, whether issued, lost or damage etc (2) books are out of market and out of print; (3) in class room, the teachers are on leave for few days;

(4) Means, we have to wait for literature, the above point clearly shows that the knowledge was restricted to the class room or we

had to run, to acquire the knowledge at particular points of allocation and time. Even in India, the libraries were not approachable to all. The imperial library (1935-1948) under British rule at Calcutta; was renamed in 1948 as National Library of India and on 1st Feb. 1953, it was declared open to the Nation by the then education minister, Mr. Maulana Abul Kalam Azad and the enactment of delivery of books Act (Public Library) came in 1954 [8]

The IT revolution have changed the whole infrastructure and scenario of the world, in every field and aspects of the knowledge. In India Aug. 15th 1995, was the turning point for the information technology, when the Internet was introduced by the then Prime Minister.

WHAT IS THE INTERNET AND BACKGROUND

The Internet is a collection of interlinked computer networks, or a network for networks. Currently it connects over one billion or more with different computers and the rate of increase in use and new subseribers is growing every minutes in the world. The Internet provides global connectivity via a mesh of networks, based on TCP/ IP and Open Systems Interconnection (OSI) protocols; Historically, the Internet was essentially an academic network, but business use is growing very fast (irrespective of the type), so that the Internet is no longer merely an elite network for communication between eminent research centres, but is also accessible to universities and colleges, small business and libraries throughout the world. The Internet offers a gateway to a myriad of online databases, library catalogues and collections, and software and document archives, in addition to frequently used, store-and-forward services, such as User Net-News and e-mail[9]

Now the knowledge is not restricted to the printed media, and the reader have also changed their habit for getting the required literature. *Knowledge is now behind you, you are not behind the knowledge* 'that is ubiquitous'. We are heading towards the world, in which technology enables education to be conveniently accessible and in a highly personalized world, in which corporate sponsored highly professional education reduces the demand for traditional college education and a world in which the important service such as education is acknowledge and is appropriately supported in a revised social context, which places new emphasis on the public sector. Many universities may change as virtual university and as a result of Information Technology[10].

CONCLUSION

Here in India, many librarians face a critical shortage of support for computer services. During this difficult times, when librarians are trying to make best use of existing resources, many do not have access to technology or guidance on computer usage policies.

The most obvious change is the impact of network information technology on library services. Whether it is building a infrastructure networking, a virtual collection or a virtual reference desk, digital tools greatly expand library services and open new possibilities to serving 21st century learners.

Here we live in a society where learning is not confined to the classroom but is ubiquitous, we can best extend the learning process through innovative collaboration, which is emerging as the strategy of the 21st century, and collaboration is another may to build public value.

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"INFORMATION NEEDS AND THE USE PATTERN OF JOURNALS IN ECONOMICS IN THE UNIVERSITY OF JAMMU LIBRARY : A USERS' SURVEY"

Raj Rani

ABSTRACT

Knowing users' views is necessary to evaluate the library services. A survey has been conducted on the "Information needs" and "Use Pattern" of various categories of users utilizing the journals in economics in the University of Jammu Library system. I have analysed the data received and made certain suggestions for further improvement of the system.

INTRODUCTION

The key to the development of individual and society is information. Our society is gradually changing into information society, which according to Prof. William Martin, is " a society in which quality of life as well prospects of social change and economic development depend increasingly upon information and its exploitation". Since information is considered as an important resource for socio-economic development of society, value added information service can only provide the conformance to the requirements of the users and user satisfaction.

Library techniques are serving as a spring board from which researchers are diving to the ocean of knowledge for seeking more advanced techniques to cope with rapidly emerging requirements for more subtle and detailed access to information. As the areas of enquiry grow more specialized, research becomes more complex and the consequent library problems increase. So knowing users' view is necessary to evaluate the library service, readers' interest and readers'

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expectations. Through users' survey we can identity their information requirements and reading interests and what should be done to make effective use of library resources. In the developing countries need for such studies is necessary in order to have optimum utilization of minimum available resources.

Journals are considered to be a major source of communication of nascent thought. they are considered the notochord of any library's collection and have become indispensable for research in any field. The information contained in journals is almost up to date than that appear in book form. In fact, without journals it is difficult to ensure the growth of any research discipline.

The present survey about the use of journals in the field of economics in the University of Jammu library system takes into account cross sections of researchers–Teachers and Research Scholars and M.Phil students.

METHODOLOGY

The study is made using survey method and it is based on primary data. For data collection the questionnaires were circulated among various users personally. Analysis has been made on the basis of the response of the users.

OBJECTIVES

The main objectives of this study are :-

1. To evaluate the information needs of the users in the selected area and to see whether the journals concerning this field available in the University of Jammu library system are adequate to support the research programme of the University;
2. To determine which journals are most frequently used and their use pattern;
3. To find out inter-disciplinary interests of the users;
4. To assess the satisfaction of the user regarding the collection and services;
5. To make certain suggestions.

ANALYSIS OF DATA

The total strength of users and their response is as under.

Table 1 - Number of Users and their Response.

S.No.	Category of Users	No. of Users	Response
1.	Professors	4	3
2.	Readers	3	3
3.	Lecturers	4	4
4.	Research Scholars	31	25
	Total	42	35

It is clear that about 42 questionnaires were circulated and 35 questionnaires were received from them. The response of teachers is 90.90% whereas response of research scholars is 80.64% (table -1)

ADEQUACY OF JOURNAL COLLECTION

The respondents were asked whether or not the number of journals being subscribed in their field by University of Jammu library system is adequate. While analysing, the users have been divided into two categories viz. Teachers and Research Scholars. Table -2 indicates the adequacy of journal collection. The figures in parenthesis in the table shows the percentage as well.

Table 2 - Adequacy of the Journal Collection Reported by the Users

S. No.	Category of Users	No. of respondents	Adequate		Inadequate
			Completely	Partially	
1.	Teachers	10	0(0%)	1(10%)	9(90%)
2.	Research Scholars	25	2(8%)	3(12%)	20(80%)
	Total	35	2(5.71%)	4(11.43%)	29(82.86%)

The analysis of table -2 shows that 82.86% of the users are not satisfied with the number of journals subscribed in their field. Only 11.43% of the users have mentioned that journals are partially adequate while only 5.71% of the users have indicated that these are adequate. List of journals subscribed by University of Jammu library in the field of Economics is given in Appendix-I.

JOURNALS DEMANDED ON INTER-LIBRARY LOAN

The users were also asked to furnish the information whether they have ever requested for any journal/journals on Inter Library Loan. the information gathered is tabulated in the following table:

Table 3 - Journals demanded on Inter Library Loan

S. No.	Category of Users	No. of Respondents	Request for Inter Library Loan		Obtained	Not obtained	Time taken	
			Yes	No			One month	More than one month
1.	Teachers	10	2(20%)	8(80%)	1(50%)	1(50%)	1	——
2.	Research Scholars	25	3(12%)	22(88%)	2(66.67%)	1(33.33%)	1	1
	Total	35	5(14.29%)	30(85.71%)	3(60%)	2(40%)	2	1

Table -3 shows that 14.29% of users have ever asked for the journals on inter library loan and out of them 60% of users were provided with the journals requested by them on inter library loan which means occasionally the library has been successful in acquiring the journals on inter library loan.

JOURNALS SUGGESTED FOR SUBSCRIPTION IN THE FUTURE

The users were asked to give their suggestions regarding the addition of journals to the library in the future. The information supplied by them is shown in table –4.

Table 4 - New Journals Suggested for Subscription

S.No.	Category of Users	No. of Respondents	No. of respondents to this question	%age
1.	Teachers	10	10	100
2.	Research Scholars	25	15	60
	Total	35	25	71.43%

The list of journals suggested by the users under study is given in Appendix –2.

USE OF JOURNALS ON INTER-DISCIPLINARY SUBJECTS

The development of knowledge and Research in inter-disciplinary subjects leads to the publication of journals in inter-disciplinary fields. The users were asked whether they consult various journals on inter-disciplinary subjects. They were also asked to provide the names of journals which they consult on inter-disciplinary subjects. The information supplied by them is tabulated in the following table:

Table 5 - Use of Journals on Inter-disciplinary subjects

S. No.	Category of Users	No. of Respondents	Use of Journals on inter disciplinary subjects		%age of users who use
			Yes	**No**	
1.	Teachers	10	8	2	80
2.	Research Scholars	25	5	20	20
	Total	35	13	22	37.14

Only 37.14% of users in the subject under study use various journals on inter-disciplinary subjects (Table- 5)

SUBSCRIPTION OF JOURNALS BY THE USERS

The users were asked if they subscribe any journal of their own, or otherwise, receive any journal as a member copy from societies/ associations. The information collected is given in the following table.

Table 6 - Acquisition of Journals by Subscription/Gratis by the Users

S. No.	Category of Users	No. of Respondents	Yes	No	%age of users who subscribe or receive them as gratis
1.	Teachers	10	8	2	80
2.	Research Scholars	25	2	23	8
	Total	35	10	25	28.57

ACCESS OF JOURNALS ON INTERNET

Internet serves as an important tool in the world of information. Lot of scholarly information is available on Internet. Electronic journals are available on various Internet service providers. It reduced the budget problem to a great extent. We can browse or retrieve all the issues of the available electronic journals through the networks.

From the data collected it was found that only 10% of the users of the Department of Economics access the journals on Internet. The reasons stated by the respondents who don't access the journals on Internet are lack of computer literacy and non-availability of Internet facility in the department. Almost every teacher and research scholar has suggested that Internet facility should be provided in the departmental library.

SUGGESTIONS AND CONCLUSIONS

Even though the study is based on limited data, an attempt has been made to derive certain conclusions and to make suggestions for making the use of journals in Economics more effective.

1. It was found from the analysis that journals subscribed by the University of Jammu library in the field of Economics are inadequate and there is need to procure more journals. The users have suggested a long list of journals to be subscribed in the field, so it is expected that university authorities will

provide sufficient funds for the procurement of a few important journals, if not all.

2. Most of the research needs of the scholars can be effectively met if inter library loan facilities are created in the University. It is suggested that the users need awareness programmes in an extensive way to meet their information requirements.
3. The users have suggested that some important journals may be acquired by air mail. The quick transmission of knowledge is conditioned by the time interval between the publication of a particular article and researchers' access to it. This interval can be shortened if the university library procures research journals by air mail.
4. To utilize the resources on Internet to its maximum, it is necessary to make the users well-versed in the surfing and browsing on the net. Short term courses or workshops and training programmes should be conducted. This will help the users to know various developments and searching techniques for accessing the desired information.

   University of Jammu has acquired VSAT connectivity from ERNET India housed in the Department of Computer Science. There is one laboratory room located in the Department of Computer Science with several nodes which is providing centralized Internet facility to research scholars, teachers and administrative personnel of the university. Dhanvantri Library of the university is also providing Internet facility. This facility should be extended to all the departments of the University through campus networking, so that more and more teachers and research scholars can make use of it.

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APPENDIX - I

LIST OF JOURNALS SUBSCRIBED BY UNIVERSITY OF JAMMU IN THE FIELD OF ECONOMICS

1. Agricultural Situation in India
2. American Economic Review
3. Econometrica
4. Economic Development and Cultural Change
5. Indian Economic Journal
6. Indian Economic Review
7. Indian Journal of Agricultural Economics
8. Indian Journal of Economics
9. Indian Worker
10. I.M.F. Staff Papers
11. International Trade Journal
12. Journal of Human Resources
13. Journal of Political Economy
14. Kurukshetra
15. Margin
16. Monthly Commentary on Indian Economic Conditions
17. Oxford Economic Papers
18. Review of Economics and Statistics
19. Sankhya

APPENDIX - II

LIST OF JOURNALS SUGGESTED FOR ADDITIONS IN THE CURRENT SUBSCRIPTION LIST OF ECONOMICS BY THE USERS

1. Chronicle
2. Darpan
3. Demography India
4. Economic and Political Weekly
5. Foreign Trade Bulletin
6. Foreign Trade Review
7. Gender Technology and Development
8. Indian Journal of Agricultural Economics
9. Indian Journal of Labour Economics
10. International Financial Statistics
11. Journal of Canadian Studies
12. Journal of Econometrics
13. Journal of Economic Perspectives
14. Journal of Economic Theory
15. Journal of Economics
16. Journal of Health Economics
17. Journal of Human Resource Development
18. Journal of Infrastructure Systems
19. Journal of International Economics
20. Journal of Monetary Economics
21. Journal of Rural Development
22. Man and Development
23. Manpower Journal
24. Monthly Economic Review
25. Non-profit and voluntary sector quarterly
26. R.B.I. Bulletin
27. Review of Economic Studies
28. Rural Sociology
29. Yojana.

I. 6

LIBRARIES' RESPONSE TO PARADIGM SHIFTS IN HIGHER EDUCATION IN INDIA: SOME ISSUES

K.C. Ramakrishnegowda
R.H. Walmiki

ABSTRACT

The paper traces the conceptual changes that have been taken place in the Indian higher education system, causes for the changes and universities' response to such changes. Highlights the libraries' response in view of the paradigm shifts in higher education system. Enumerates the problems of the university libraries and suggests the possible ways and means to overcome the problems.

INTRODUCTION

Education is a life-long process and its purpose is to establish a learning society, i.e. society that knows how to learn to grow and transform itself to the needs of ever-changing world. Since independence, the higher education system in India has undergone many changes. Besides public institutions, scope for higher education under private agencies is gaining day by day. A definite change in the teaching-learning paradigm is coming up which can clearly be seen with the rapid modernization of education in recent years. In the past, education was meant for upper class people. Now-a-days the doors of educational institutions are open to all. Education has become a

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process of empowerment and instrument of social change that provides means for upward economic and social mobility. The globalization and application of new technologies have revolutionized the higher education system worldwide. Indian higher education is not an exception to this. As a sub-system in the higher education, university library plays an important role in fulfillment of educational and information needs of the academic community, viz., teachers, students and researchers. Indian university libraries are trying to keep pace with the changing situation. However, the process of change seems to be very slow.

PARADIGM SHIFTS IN HIGHER EDUCATION

In India, from ancient times there have been several institutions like Nalanda, Takshila, the Bhoj school of Dhar and many other which were perceived as internationally recognized centers of higher learning. These institutions were visited by scholars and students from different parts of the world. These ancient systems were highly friendly for nationals of different countries and international cooperation flourished through these systems in a healthy climate that encouraged mutual interaction and international collaboration.

Education in pre-independent India served a limited purpose to satisfy the felt needs of the then rulers. The transition that was witnessed in the first two decades after independence focussed attention on expanding the system moving it from an elitist centered approach to that of fulfilling the aspirations of the common man. Hence, the quantitative expansion of higher education was the immediate need after independence. "In 1947 there were only 20 universities, 591 colleges and 228881 students in India. But today we have 298 universities, 11594 colleges, and over 9.1 million students."[1] The last quarter of the 20th century has witnessed significant conceptual changes in the Indian higher education system. The paradigm shift is from teacher-centered to learner-centered, classroom-centered to virtual classes and subsidization to privatization/ commercialization. According to Srinivas (2003) "higher education today is changing from a conventional type of campus-based university into an Internet-based virtual university; and from time and space confined education to life-long, ubiquitous and perpetual education. Mass higher education is undergoing a radical process of globalization which includes not only round-the-clock, round-the-globe markets and new information technologies but revolutionary concepts of time and space."[2]

Higher education institutions are overrunning state and national boundaries. Universities are no more a place where teacher and students have face-to-face interaction. The role of teachers has been

redefined- from a teacher to a facilitator. Physical distances are no more important with new information technologies. Life-long learning, easy accesses to information, interaction of knowledge, availability of powerful multimedia learning tools, have already started shaping educational institutions. Researchers are being defined as collective collaboration of scholars in distant latitudes to cope with and assimilate vast information and knowledge. Jagtar Singh (2001) opines that "the old model of higher education was based on classroom lectures, passive absorption, individual work, omniscient teacher, stable content and homogeneity. The new model is based on individual exploration, apprenticeship, team learning, teacher serving as a guide, fast changing content, and diversity in course contents."[3]

Causes for Change:

The causes for these changes could be attributed to internationalization and application of new technologies in the field of higher education. Internationalization of higher education is the process of integrating an international dimension into the teaching, research and extension activities of the university. It is characterized by numerous institution linkages, dramatic increase in student mobility, and offering of a large number of programmes across international boundaries. The information and Communication Technologies have also influenced the higher education system. Welukar and Deshpande (2002) have enumerated the situation as this: "The information technology has ushered into a whole new era of teaching and learning. It will now make the university campus borderless and transform the traditional classroom learning into direct learning environments, the students into knowledge workers and teachers into information disseminators. The traditional teachers with their archaic teaching methods would soon become obsolete as informed students would opt for the best educators through expanding Internet and satellite systems."[4]

Universities Response to the Changes:

Indian universities are facing competition of foreign universities. Foreign institutes are operating worldwide including India and pursuing their business interests by marketing their education. In spite of the high fee structure, students are getting attracted towards these kinds of educational institutions because of their perfected professional approach and aggressive marketing strategies. In this competitive world, there will be no other option for the Indian universities but to focus on quality and equip themselves to face this business onslaught.

In near future, Indian universities expand their activities including establishment of their campus abroad, regulating and monitoring the operation of foreign educational institutions in India including their operation through satellite channels, and establishing virtual campuses. In order to achieve this, Indian universities have to pay attention to make their academic community competent, develop infrastructure and strengthen the sub-systems including the libraries.

LIBRARIES' RESPONSE TO PARADIGM SHIFTS IN HIGHER EDUCATION SYSTEM

In response to the remarkable changes that have taken place in the higher education system, the university libraries have also changed their sources and services. University libraries are watchful about the changes taking place in Educational Technology as well as Information and Communication Technologies and stand in forefront to adopt them in their systems and launch newer services to the academic community. To cope with the changing environments, the academic community needs to have quick access to the exhaustive information, interact with their counterparts worldwide, share their resources and get alerted of the nascent thought in their disciplines.

In India, university libraries are developing their collection not only in print media but also in electronic media. Libraries have acquired CD-ROMs, magnetic tapes, floppy discs, audio cassettes, e-journals, and Internet connectivity. The UGC, under its INFLIBNET Programme, has assisted the libraries with allocation of funds to develop basic infrastructure for automation of their activities. Cholin and others (2003)[5] have reported that 142 university libraries had been supported with grants for automation and networking. By making use of such an assistance, the libraries have created bibliographic databases of their collections and automated their traditional services like acquisition, cataloguing, circulation, etc. and providing access to e-mail, online databases, newsgroups, OPACs, e-journals, institutional as well as individual websites and CD-ROM databases. The UGC is planning to interconnect all the university libraries in the country under its UGC-Infonet programme. The main objectives of this programme are to interlink the information/knowledge bases of the country on one hand and also to provide a window for exchange of knowledge both within the country and outside the country on the other hand.

In order to make all these efforts fruitful, the university teachers, students and researchers are expected to develop awareness and competence to make use of these sources and services in their academic activities. The modern higher education system expects the academic community to be information literate. Information literacy

has been recognized as the ability much more than knowing how to use library, searching and finding information. It goes beyond the skills and knowledge involved in information seeking and retrieval and strives for higher level of understanding regarding the context of information in today's society, its composition and organization, as well as its use in life-long learning.

AVAILABILITY AND USE OF E-RESOURCES BY USERS:

The literature in the field of Library and Information Science reveals that the collection development in electronic media in Indian university libraries is very meager and slow, and less number of teachers, students and researchers make use of electronic information services that are made available by the libraries. A study conducted in the university libraries of the states of Delhi and Haryana by Ashu Shokeen and Kaushik (2003)[6] found that the total digital collection was only 0.13% of the total collection. Chandran (2000)[7] conducted a survey to examine the use of Internet resources by the library users of S.V. University, Tirupathi and found that only 25% of the respondents were Internet users. A questionnaire survey conducted in Kuvempu University Library during August 2003 to determine the entry-level information literacy of the P.G. Students revealed that the majority of the students were unaware of the general information sources like dictionaries, encyclopedias, yearbooks, bibliographies, geographical sources, etc. They were unable of recognize the key concepts in view of given information problems. The computer competency among the students was also very negligible.

SUGGESTIONS

On the basis of observations made above, the following suggestions have been put-forth to improve efficiency of the university libraries in India.

INFRASTRUCTURE DEVELOPMENT

University libraries should shoulder the responsibility of collecting the electronic information gadgets along with print media for the benefit of the academic community. University libraries need to make provision for robust and reliable campus network and wide area network that connects the users not only with the library resources but also with the ocean of information available via the Internet. University libraries need to bring standardization on hardware and software, and technical support to deal with them. The provision for sufficient number of computers, printers, seating arrangement and undisrupted power

supply are essentials to make use of electronic information sources and services.

TRAINING

In order to assess the diversified information needs of the multiple users and handle the modern information and communication tools efficiently the library staff must be trained thoroughly. The process of training the staff must be a continuous process. Because information technology, the adoption of which is an indispensable for university libraries, is changing every now then and library staff needs to develop skills to make use of it for providing services to the users. On the other hand, the users of the libraries, viz., teachers, students and researchers must also be trained in making them information literates. Training courses should be conducted for the library users in creating awareness of different information sources and developing computer competency.

CHANGES IN CURRICULA

It is the responsibility of the universities to see that by the time the students complete their bachelor's degree the students are information literates and computer literates irrespective of their disciplines. In order to make them acquainted with the different sources of information, forms of information and their importance in the process of making them self-learners and life-long learners, the students must be taught the basics of Information Science and Computer Science and if necessary they must be made compulsory by incorporating in curricula at undergraduate level itself.

FINANCIAL SUPPORT

Indian university libraries are facing severe financial crisis. This situation adversely affects the services of the library and image of the university at large. In the present era of globalization, universities are in the verge of attracting the students not only from different parts of the country but also from different corners of the world and thereby enriching the financial resources. Hence it is required to equip university libraries with advanced sources and services to attract the learners. Therefore the financial support to the libraries must be the prime concern of the universities.

CONCLUSION

The globalization and application of new technologies in the field of higher education have brought dramatic changes in the Indian university education system. The courses offered by the universities, methodology of imparting education, the way of conducting research,

etc. have undergone a sea change. Universities are forced to expand their boundaries beyond nation. In response to the changes that have taken place in the higher education system, university libraries are trying to respond positively by developing basic infrastructure. However, the process seems to be insignificant. University libraries are at the crux of insufficient funds, untrained/semi-trained staff, information computer illiterate users, etc. The UGC, the state governments and universities themselves have to take necessary steps to eradicate the problems and make the universities and their libraries fit to face the globalized higher education market.

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LIMPING ALONG THE INFORMATION SUPERHIGHWAY: A RESPONSE OF THE LIBRARIANS' AWARENESS AND USE OF THE INTERNET IN INDIA.

H.P.S. Kalra

EXTENDED ABSTRACT

The concept of digital library is now well established in the professional literature. The practice in digital librarianship is also underway worldwide for many years now. Many digital library initiatives in India have been started, largely in elite institutions (some special and university libraries), and are progressing somewhat satisfactorily. Major problems generally being cited for relatively lesser and slower development of digital libraries and information (LI) systems and services in India is the lack of funds, and lack of awareness among policymakers about the potential of digital libraries to deliver goods. All this is despite the fact that India has a very large human resource capable of using information and communication technologies (ICTs). As awareness about the concept of digital library in general and of public library and digital library among policymakers and the public at large in India is increasing, there is every likelihood of increased funding for digital library projects.

This paper presumes that in the event of a large number of such projects being started as a result of increased awareness and funding, these will have to include public and college libraries as well to be successful and benefit the people and societies in India at large. With the exception of school library system, public library system is perhaps

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the least developed sector of library services in India. Since digital library system can't be established as a parallel system in colleges and for public at large, the existing traditional libraries would have to become hybrid or polymedia libraries. Connectivity to the Internet would be a natural corollary to digital library projects in these polymedia libraries. The paper emphasizes that in India the existing human resource, particularly in colleges and public libraries in cities, towns and rural areas is not adequately aware (exceptions apart) and therefore not adequately trained to meet the demands of traditional librarianship fully. How will this existing human resource in Indian librarianship respond to the pressures of providing instant information to users in a digital and networked environment is a big question. The answer lies in ascertaining the present state of awareness of the ICTs and its use by the Indian library & information professionals and then responding accordingly.

This paper presents the results of a survey of the awareness and use of the Internet by human resources serving largely the traditional libraries in India, carried out during June 2001- June 2003. About 125 librarians working in public, college, university, and special libraries in India were distributed questionnaires during their professional training programmes (refresher courses, conferences, seminars, and workshops). 75 of them responded back with filled in questionnaires. The analysis of the data revealed that many of them were aware of the Internet and related terminology, while others had heard of these terms, but did not bother themselves further with it. Many of the aware professionals who had used the Internet agreed that it could be used for providing information services to the users in a globalized world effectively. The largest source of information about the Internet for librarians was their computer professional colleagues, followed by the printed documents. But very few of those who actually used the Internet had only used free web-based email and popular search engines only. Their suggestions on using the Internet showed that the indifference towards the use of the Internet was on account of non-availability of the computers and the Internet connectivity at their workplaces. This was particularly true of librarians working in government funded institutes (colleges and public libraries). It is clear from the analysis of data that librarians are not fully aware of the emerging technologies and related developments, and only a few are using it passively. Many others are indifferent to it and many are just limping along the Internet or the Information Superhighway.

The results of the survey therefore conclude that librarians' indifference towards the Internet should be investigated before planning for innovative information systems and services to the users in the

changing environment. Studies on library & information professionals' awareness and use of the Internet should be conducted at various levels. This should be a prerequisite before planning for innovative services to users in the digital environment. Results from such studies would help formulate a cohesive professional response at the national level to train the existing human resource in the use of the Internet. This paper concludes with the hope that library & information professional leadership of the country would respond appropriately so that in the changed environment users, particularly of the non-elite institutions and libraries, are provided with quality timely information from networked sources as well.

I. 3

NEEDS AND EXPECTATIONS OF USERS OF BHAI GURDAS LIBRARY

MANJIT KAUR

INTRODUCTION

Today libraries are not mere store houses of documents but also disseminators of information. The incessant output of scientific literature in varied forms has created a fuss for the readers to retrieve information from the vast complex of materials for their research. The librarians are expected to increase the effectiveness and efficiency of library services to stand by the needs and expectations of users. The effectiveness of a library can be measured in terms of its resources and the services rendered to its users. As a result of frequent rise in prices of documents and budge cuts, we are helpless to fulfill all demands regarding resources. But library services can be improved to stand by the expectations of the library users only if we know the needs of its users and their level of satisfaction regarding services rendered to them. For this purpose feedback from the users is of great importance.

OBJECTIVE OF THE STUDY

The primary objective of this study is to investigate the utility of library services rendered by Bhai Gurdas Library. The specific objectives of the study are as follows :

i. to assess the needs and expectations of the library users.

ii. to assess the use of library facilities by the users.

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iii. to assess the satisfaction of the users regarding their needs and expectations.

iv. to identify the problems faced by the users in using the library.

METHODOLOGY

To get the feedback from the users to evaluate their needs and expectations stratification sampling method has been used. To collect the primary data, questionnaire technique has been adopted. A total of 205 questionnaires were distributed among teachers (Professors, Readers and Lecturers), Students (Under Graduates, Post- Graduates) and Research Scholars. Out of these 166 (80.98%) questionnaires were duly filled in and received back.

ANALYSIS

The categories of users under study include 12 (7.23%) professors, 19 (11.45%) readers, 39 (23.49%) lecturers. In all 70 (42.17%) teachers,20 (12.05%) research scholars, 76 (45.78%) students i.e. 54 (32.53%) post graduates and 22 (13.25%) graduate students. 54 (32.53%) respondents are concerned with sciences while 112 (67.47%) are from social sciences and humanities.

TABULATION

The data collected through questionnaires has been analysed in tables to know the actual needs and expectations of the user as follows:—

General Information About Users

Social environment has a direct effect on the reading habits. Keeping in view this factor users were asked about their background (Urban/Rural)

TABLE 1

Background	Students		Research Scholars		Teachers		G. Total	
	No.	%	No.	%	NO.	%	No.	%
Urban	58	76.32	12	60.00	38	54.29	108	65.06
Rural	3	3.95	2	10.00	5	7.14	10	6.02
Urban for < 5 years	1	1.31	2	10.00	4	5.71	7	4.22

> 5 years	3	3.95	3	15.00	2	2.86	8	4.82
> 10 years	3	3.95	1	5.00	3	4.29	7	4.22
> 15 years	7	9.21	0	0.00	18	25.71	25	15.06
No response	1	1.31	0	0.00	0	0	0	0
	76	100.00	20	100.00	70	100.00	166	100.00

The data in Table 1 shows that a large number of the respondents 65.06 % are residing in the urban areas, while another 15.06 % though belong to rural area but are now residing in urban areas for more than fifteen years.

Motivation From Library

TABLE 2

Motivation From	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Teachers	52	68.42	15	75.00	49	70.00	116	69.88
Parents	6	7.89	2	10.00	4	5.71	12	7.23
Teachers & Parents	2	2.63	2	10.00	6	8.57	10	6.02
Self motivation	9	11.84	1	5.00	5	7.15	15	9.04
Brother/Sister	1	1.31	0	0.00	0	0.00	1	0.60
Friends	2	2.63	0	0.00	0	0.00	2	1.21
No response	4	5.26	0	0.00	6	8.57	10	6.02

The data in Table 2 shows that about 70 % of the respondents are motivated by their teachers at school, college or university level, while another 9% respondents told that library is a motivation in itself to fulfill the wish for awareness. 7% respondents were motivated by their parents.

Use Of Library

TABLE 3

Level	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
School	20	26.32	8	40.00	24	34.29	52	31.33
College	38	50.00	8	40.00	26	37.14	72	43.37
University	18	23.68	4	20.00	20	28.57	42	25.30

The data in Table 3 reveals that 31% respondents started using library fro

0.m school level, 43% of them started from college level, while 25% -respondents have not used library services before hand.

Membership of Libraries Other Than GNDU Library

TABLE 4

Type Of Response	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Yes	20	26.32	6	30.00	21	30.00	47	28.31
No	56	73.68	14	70.00	49	70.00	119	71.69

28% respondents disclosed that they were also members of libraries other than this library, while rest of the two third respondents are regular members only of Bhai Gurdas Library.

Use Pattern Of Library Services

TABLE 5

Duration Of Use/Week	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
< 2 hrs	19	25.00	1	5.00	28	40.00	48	28.92
2 to 5 hrs	20	26.32	13	65.00	28	40.00	61	36.75
5 to 10 hrs	21	27.63	4	20.00	9	12.85	34	20.48
10 to 15 hrs	10	13.16	1	5.00	2	2.86	13	7.83
> 15 hrs	5	6.58	1	5.00	1	1.43	7	4.21
No response	1	1.31	0	0.00	2	2.86	3	1.81

Use pattern of the library in table 5 reveals that 47% students, 30% research scholars and only 17% teachers use library for more than five hours per week. The above data reveals that about one fourth of the total respondents use library for less than two hours per week.

Reason For Using Library Services

TABLE- 6

Reasons	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Convenience of location	8	7.69	3	8.11	7	4.12	18	5.79
As a habit	14	13.46	3	8.11	19	11.18	36	11.58
For supplim-enting class teaching	27	25.96	3	8.11	40	23.52	70	22.51
For tutorials	1	00.96	2	5.41	10	5.88	13	4.18
For seminar work	7	6.73	5	13.51	13	7.65	25	8.03
For research work	10	9.62	15	40.53	45	26.47	70	22.51
For class work	18	17.31	3	8.11	17	10.00	38	12.22
For getting information	19	18.27	3	8.11	19	11.18	41	13.18
To meet friends	0	0.00	0	0.00	0	0.00	0	0.00
No other alternative	0	0.00	0	0.00	0	0.00	0	0.00

Out of ten reasons (enumerated in Table 6) asked from the users for their visit tc the library, 70 (22.51%) respondents were using library for supplementing the class teaching as well as for research work. Only 13.18% respondents were visiting the library to get information , while 11.58% were the habitual visitors of the library. However most of the users visit the library for more than one reasons.

5.7 Popularity Of Sections Of The Library

TABLE-7

Sections	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Reading Hall Periodical/	49	28.65	11	15.94	25	12.38	85	19.23
Journals	30	17.54	17	24.64	57	28.21	104	23.53

Reference	21	12.28	10	14.49	40	19.80	71	16.06
Rare Section	12	7.02	6	8.70	23	11.39	41	9.28
Xerox	2	1.17	3	4.35	7	3.47	12	2.71
Lending	26	15.21	6	8.70	30	14.85	62	14.03
Newspaper These and	20	11.70	7	10.14	8	3.96	35	7.92
dissertation	11	6.43	9	13.04	12	5.94	32	7.24

The data in Table 7 shows that periodical/ journal section is most popular among one fourth of the respondents as they visit it not only to scan through the latest issues of journals but also to acquaint themselves with the latest developments in their subjects. Next to periodical section reading hall, reference section and then lending service are the main attraction for the users of the library.

Lending Services

Satisfaction Regarding Lending Services

TABLE 8

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	57	75.00	18	90.00	67	95.71	142	85.54
Unsatisfied	17	22.37	2	10.00	3	4.29	22	13.25
No Response	2	2.63	0	0.00	0	0.00	2	1.21

The above data reveals that the majority of the respondents (85.54%) are satisfied with lending services. Satisfaction percentage of teachers and research scholars is much more than students.

Satisfaction Regarding Loan Period

TABLE 9

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
General Books								
Satisfied	56	73.69	19	95.00	65	92.85	140	84.34

Unsatisfied	16	21.05	1	5.00	2	2.86	19	1.44
No Response	4	5.26	0	0.00	3	4.29	7	4.22
Text Books								
Satisfied	38	50.00	15	75.00	56	80.00	109	65.66
Unsatisfied	32	42.11	5	25.00	8	11.43	45	27.11
No Response	6	7.89	0	0.00	6	8.57	12	7.23

Regarding the present loan period of Text and General Books majority of the users are satisfied .

Satisfaction Regarding Number Of Books Issued

TABLE 10

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	48	63.16	17	85.00	64	91.43	129	77.77
Unsatisfied	27	35.53	3	15.00	6	8.57	36	21.69
No Response	1	1.31	0	0.00	0	0.00	1	0.60

The data collected and analysed in table 10 shows that more than three fourth of the respondents are satisfied with the existing limit of books issued to them as set by the library authority to different categories of users. But rest one fourth of the dissatisfied respondents should also be taken into account.

Inter Library Loan Services (ILLS)

Awareness of ILLS

TABLE 11

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Aware	17	22.37	6	30.00	35	50.00	58	34.94
Unaware	57	75.00	14	70.00	35	50.00	106	63.86
No Response	2	2.63	0	0.00	0	0.00	2	1.20

Utilisation Of ILLS

TABLE 12

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Utilised	10	58.82	5	83.33	16	45.71	31	53.45
Not Utilised	3	17.65	1	16.67	16	45.71	20	34.48
No Response	4	23.53	0	0.00	3	8.58	7	12.07

Satisfaction Regarding ILLS

TABLE 13

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	9	90.00	4	80.00	11	68.75	24	77.42
Unsatisfied	1	10.00	1	20.00	5	31.25	7	22.58

The above data shows that only 34.94% respondents are aware of the Inter Library Loan Service provided by this library. Only half of the respondents who are awared of this service have availed of this service. Out of those who have availed of this service more than three fourth of them are satisfied by this service. Those who have not availed it think that the procedure is not very simple and is time consuming. Those who have availed this service but are not satisfied with it suggest that the information about the availability of source should be informed timely. Some of them are dissatisfied because they could not get books demanded by them.

Reference Service

Reference service is directly concerned with assistance to users in their search for information. It is very necessary for the reference librarian to know the needs of the users and their satisfaction regarding their expectations

Satisfaction Regarding Reference Service

TABLE 14

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	53	69.74	12	60.00	52	74.29	117	70.48
Unsatisfied	22	28.95	8	40.00	18	25.71	48	28.92
No Response	1	1.31	0	0.00	0	0.00	1	0.60

Reasons For Dissatisfaction

TABLE 15

Reasons	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Lack of assistance	7	26.92	0	0.00	4	16.00	11	18.64
Inadequate ref.collection	12	46.16	3	37.50	11	44.00	26	44.07
Improper Arrangement	7	26.92	5	62.50	10	40.00	22	37.29

The data in table 14 shows that more than 70% respondents are satisfied with the reference services provided in the library. Dissatisfaction of about one fifth of the dissatisfied respondents is due to unhelpful reference staff, 44% of them are dissatisfied due to inadequate reference collection while others are dissatisfied due to improper arrangement of documents.

Satisfaction Regarding Periodical/ Journal Services

TABLE 16

Nature of Reply	Students Scholars		Research		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	53	69.74	10	50.00	23	32.86	86	51.81
Unsatisfied	18	23.68	9	45.00	47	67.14	74	44.58
No Response	5	6.58	1	5.00	0	0.00	6	3.61

Reason For Dissatisfaction Regarding Periodical/ Journal Service

TABLE 17

Reasons	Students Scholars		Research		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Under Subscription	10	35.71	4	28.57	35	43.21	49	39.84
Delay in Receipt	5	17.86	3	21.43	27	33.33	35	28.46
Improper Arrangement	8	28.57	5	35.71	15	18.52	28	22.76
Lack Of Assistance	5	17.86	2	14.29	4	4.94	11	8.94
	28	100.00	14	100.00	81	100.00	123	100.00

The data in Table 16 reveals that only half of the respondents are satisfied with periodical services. Dissatisfaction of two third of the dissatisfied respondents, as enumerated in Table 17, is due to under subscription of journals in their subject of study. About one fourth of them are dissatisfied due to delay in receiving journals in the library,while one fifth of them are not satisfied with the arrangement of journals and less than one tenth of them are not satisfied with the assistance from the staff.

Use Of Indexing/ Abstracting Services

TABLE 18

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Used	32	42.11	13	65.00	43	61.43	88	53.01
Not Used	38	50.00	6	30.00	26	37.14	70	42.17
No Response	6	7.89	1	5.00	1	1.43	8	4.81

Satisfaction Regarding Indexing/ Abstracting Services

TABLE 19

Nature of Reply	Students Scholars		Research		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	25	80.65	13	100.00	28	75.68	66	81.48
Unsatisfied	6	19.35	0	00.00	9	24.32	15	18.52

The above data reveals that only half of the respondents have taken advantage of Indexing/ Abstracting Services. Four fifth of the respondents who have utilised this service, are satisfied with it.

Awareness on Catalogue Facility

TABLE 20

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Awared	74	97.36	20	100.00	69	98.57	163	98.19
Unawared	1	1.32	0	00.00	1	1.43	2	1.21
No Response	1	1.32	0	0.00	0	0.00	1	0.60

Satisfaction with the Catalogue Facility

TABLE 21

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	60	78.95	19	95.00	53	75.71	132	79.52
Unsatisfied	13	17.11	1	5.00	17	24.29	31	18.67
No Response	3	3.94	0	0.00	0	0.00	3	1.81

Reasons For Dissatisfaction with Catalogue Facility

TABLE 22

Reasons	Students	Research Scholars	Teachers	G Total	
	No.	No.	No.	No.	%
Improper Arran -gement Of Cards	1	0	8	9	21.43

Repetition Of Cards	0	0	6	8	19.05
Absence Of Subject Entries	6	1	11	18	42.86
Lack of Staff Assistance	2	0	5	7	16.66

Except three all the respondents are aware of catalogue facility available in this library. About four fifth of the respondents are satisfied with the catalogue facility. Overall satisfaction is higher among research scholars followed by students and then teachers.

The reasons attributed by one fifth of the dissatisfied users are improper arrangement of entries and repetition of entries of catalogue cards. One third of them are not satisfied because of absence of subject entries in the catalogue, while one sixth are dissatisfied with the behavior of the staff.

Awareness on Reprographic Service

TABLE 23

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Awared	26	34.21	10	50.00	48	68.57	84	50.60
Unawared	44	57.89	8	40.00	19	27.14	71	42.77
No Response	6	7.90	2	10.00	3	4.29	11	6.63

Satisfaction with Reprographic Service

TABLE 24

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	12	46.15	7	70.00	26	54.17	45	53.57
Unsatisfied	14	53.85	3	30.00	22	45.83	39	46.43
No Response	5	6.58	1	5.00	0	0.00	6	3.61

Reasons For Dissatisfaction

TABLE 25

Reasons	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Machine Mostly Out Of Order	26	34.21	10	50.00	48	68.57	84	50.60
Excessive Charges	44	57.89	8	40.00	19	27.14	71	42.77
Delay in Work	6	7.90	2	10.00	3	4.29	11	6.63

Tables 23, 24 and 25 reveal that only half of the respondents are aware of the reprographic services being provided by this library. About half of the respondents who are making use of this service are satisfied with it. The reason for one fourth of the dissatisfied respondents is the delay in work, while rest of the two third are dissatisfied because of the machine remaining mostly out of order. To solve these problems library has purchased one more reprographic machine recently.

Collection Evaluation

TABLE 26

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
General Books								
Adequate	26	34.21	4	20.00	17	24.29	47	28.31
Partially Adequate	41	53.95	10	50.00	41	58.57	92	55.42
Inadequate	5	6.58	5	25.00	10	14.29	20	12.05
No Response	4	5.26	1	5.00	2	2.85	7	4.22
Text Books								
Adequate	12	15.79	3	15.00	10	14.29	25	15.06
Partially Adequate	35	46.05	7	35.00	35	50.00	79	46.39
Inadequate	28	36.84	9	45.00	21	30.00	58	34.94
No Response	1	1.32	1	5.00	4	5.71	6	3.61
Collection In Specific Subject								
Adequate	10	13.16	6	30.00	9	12.86	25	15.06

Partially Adequate	31	40.79	4	20.00	25	35.71	60	36.14
Inadequate	33	43.42	9	45.00	36	51.43	78	46.99
No Response	2	2.63	1	5.00	0	0.00	3	1.81

The overall response of book collection as analysed in Table 26 reveals that a little over one fourth of the respondents disclosed that General Book Collection is sufficient, while percentage of respondents in favour of this in case of Text Books and Collection in Specific Subjects is far from satisfaction. Half of the respondents showed their consent in favour of average collection in General Books and Text Books. The above data also reveals that neither students nor teachers find collection in their subjects as sufficient. All these facts point a finger on the poverty of subject collection. This should be taken into right perspective to form a sound policy for collection building.

Satisfaction with Arrangement Of Books

TABLE 27

Nature of Reply	Students Scholars		Research		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Textbook Section								
Satisfied	54	71.05	12	60.00	49	70.00	115	69.28
Unsatisfied	17	22.37	8	40.00	15	21.43	40	24.10
No Response	5	6.58	0	0.00	6	8.57	11	6.62
Science Section								
Satisfied	42	55.26	11	55.00	38	54.29	91	54.82
Unsatisfied	20	26.32	4	20.00	6	8.57	30	18.07
No Response	14	18.42	5	25.00	26	37.14	45	27.11
Social Science Section								
Satisfied	44	57.89	13	65.00	46	65.71	103	62.05
Unsatisfied	15	19.74	6	30.00	9	12.86	30	18.07
No Response	17	22.37	1	5.00	15	21.43	33	19.88
Literature Section								
Satisfied	44	57.90	14	70.00	43	61.43	101	60.84
Unsatisfied	18	23.68	3	15.00	2	2.86	23	13.86
No Response	14	18.42	3	15.00	25	35.71	42	25.30

Back Volumes of Journals								
Satisfied	32	42.11	9	45.00	39	55.71	80	48.19
Unsatisfied	18	23.68	6	30.00	10	14.29	34	20.48
No Response	26	34.21	5	25.00	21	30.00	52	31.33

If we exclude respondents who have not given any response the satisfaction percentage increases to 77.44 for Social Science Section, 81.45 for Language Section, 75.70 for Science Section and 70.00 for Back Volume Section. The above data shows that a little less than two third respondents are satisfied with the arrangement of books in Text Book Section. In the facultywise arrangement of books, about one forth of the respondents have given no response. From the responded data about three fourth of them are satisfied with the arrangement of books in their respective faculty. Same is the case with Back Volume's arrangement.

Availability Of Books

TABLE 28

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Available	30	39.47	7	35.00	47	67.14	84	50.60
Not Available	45	59.21	12	60.00	23	32.86	80	48.19
No Response	1	1.32	1	5.00	0	0.00	2	1.21

Reasons For Nonavailability Of Books

TABLE 29

Reasons	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Improper Arrangement	3	6.00	9	75.00	11	44.00	23	26.44
Lack Of Assistance	7	14.00	0	00.00	5	20.00	12	13.79
Insufficient Multiple Copies	40	80.00	3	25.00	9	36.00	52	59.77

The data in Table 28 reveals that only half of the respondents were able to find books of their interest. From the rest half who were not satisfied with the availability of books of their interest three fifth

of them disclosed that multiple copies of books were not sufficient, while one fourth of them blamed the improper arrangement of catalogue entries and one seventh of them were not satisfied with the assistance from the staff (as enumerated in Table 29)

Awareness Of Rare Books/ Theses Section

TABLE 30

Nature of Reply	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Awared	55	72.37	16	80.00	63	90.00	134	80.72
Unawared	19	25.00	4	20.00	7	10.00	30	18.07
No Response	2	2.63	0	0.00	0	0.00	2	1.21

Satisfaction Regarding Rare Books/ Theses Section

TABLE 31

Nature of Reply	Students Scholars		Research		Teachers		G Total	
	No.	%	No.	%	No.	%	No.	%
Satisfied	37	72.55	11	64.71	44	75.86	92	73.02
Unsatisfied	14	27.45	6	35.29	14	24.14	34	26.98

Reasons For Dissatisfaction

TABLE 32

Reasons	Students		Research Scholars		Teachers		G Total	
	No.	%	No.	%	No	%	No.	%
Improper Arrangement	2	13.34	2	40.00	6	31.58	10	25.64
Lack Of Assistance	5	33.34	1	20.00	3	15.79	9	23.08
Closed Access System	4	26.66	1	20.00	9	47.37	14	35.90
Distance From Main Entrance	4	26.66	1	20.00	1	5.26	6	15.38

The above data shows that four fifth of the respondents know the location of the Rare Books/ Theses Section and three fourth of those

who know it are satisfied with the services rendered by this section. Out of the one fourth dissatisfied respondents two fifth (enumerated in Table 32) are dissatisfied due to closed access system and limited timings of this section, one fourth are not satisfied with the arrangement of documents while another one fourth are dissatisfied due to lack of assistance from the staff and only one seventh of them are dissatisfied due to its distance from the main entrance.

SUGGESTIONS AND FINDINGS

To make library services fully effective, user's needs are premier as is said by Dr. Ranganathan 'to provide right information to right person at right time'. So user's needs and expectations must be taken into right perspective.

Popularity of periodical/ journal section and use of library for research work proves that Bhai Gurdas Library is being effectively used for research work.

Latest and up-to-date information is stored in journals which are the core of research work. The annual budget for journal's subscription is Rs.82 lac, still there is common demand for more funds for journals. Regarding under subscription of journals of particular subjects some respondents demonstrated that funds are not properly distributed to different disciplines. Only number of readers should not be taken into account while distributing funds, as science books/journals are more than ten times costlier than books/journals of other disciplines.

Some of the journals are kept under lock & key for which there are more chances of tearing. Some respondents have asked to keep all the journals for open access while others have grumbled against torn out pages from important journals.

New comers to the library generally show their ignorance about catalogue and library resources. University library has started Orientation Programme for new -comers to introduce them to the library, to make them familiar with the collection in various subjects, the procedure to locate and get the books issued so as to provide better access to the library stock and services. But departments do not show much interest in it. In 2003-04 session out of 35 departments only fifteen departments sent their students for the orientation of the library.

The information about the availability of sources through Inter Library Loan Service, should be given immediately to the readers to put them to their maximum use, because such sources are time bound. If there is no reply to the demand, reminders should be given to save the time of the readers.

Adequate and dedicated staff with smiling faces should be appointed where ever there is direct interaction between the staff and the readers.

It is not possible to purchase each and every reference document but selected and latest reference material and journals relating to research work being done in the university is a must.

Most of the books are transferred to departmental libraries. To make the main library more useful, at least one copy of each document transferred should be kept in it for ready availability.

PROBLEMS AND REMEDIES OF USERS OF COLLEGE LIBRARIES

O. P. Hooda

ABSTRACT

The paper describes college library and objectives of college library. Explains use of library and users' problems. Suggests remedies of users'problem, effective usuage of college library. Explains responsibility of librarian and steps for improvement in the college library.

LIBRARY

All human activities are organized through institutions in the modern society. All activities, maybe economic performance, health care, education, research, business or industry are institutionalized. The libraries are those institutions that collect, stock, process, organize, disseminate and distribute information/knowledge recorded in documents. Since knowledge and information are essential for all round development of human beings libraries that handle and manage knowledge and information are indeed in- valuable. Some definitions of library are mentioned below:

Dr. S. R. Ranganathan described "A library is a public institution or establishment charged with care and collection of books and the duty of making them accessible to those who require to use them."[1]

CARL M. White observed "Library is a collection of graphic, acoustic and holistic materials such as books, periodicals, newspapers, manuscripts, maps, charts, film strips, micro films, phonographs, records etc., all designed for use."[2]

According to ALA Glossary for library and information Science "A collection of materials organised to provide physical, bibliographic

and intellectual access to a target group, with a staff that is trained to provide services and programmes related to the information needs of the target gourp."[3]

International organisation for standardization defined the library as "Irrespective of title, any organized collection of printed books and periodicals or of any other graphic or audiovisual materials, and the services of the staff of to provide and facilitate the use of such materials as are required to meet informational, research, educational or recreational needs of its users."[4]

From the above definitions we can say that library is a place/ institution which acquires the reading materials in form of printed books, periodicals or in non-print media form i.e. microfilms, film strips, audio-visual and other graphic forms. It organizes that material to fulfil the informational intellectual and recreational needs of the users.

COLLEGE LIBRARY[5]

College is an institution of higher education where an individual sharpens the intellect and unfolds the mysterious faculties of mind. The college education open to its entrants new vistas of knowledge and inculcates in them a sense of purpose of value. It enables the students to be responsive and responsible to the problems faced by the contemporary society and motivates them to contribute to the welfare of their fellow beings. Colleges are primarily teaching institutions and this is reflected in their approach to the educational process. They focus on courses and the broad study of their academic endeavours, rather than on the departments and disciplines.

The college library is a place that collects, stocks, processes, organizes, disseminate and distributes information knowledge recorded in print/non-print media. The college library acquires reading materials on all disciplines taught in the college and other literature which is required by the users to fulfil their informational needs. The college library thus assumes an important role in the process of college education. It is the heart of an academic institution with arteries running into all departments. A good college library not only serves the student community but also meets all educational and research needs of the teaching community. A modern college must have a well-planned and functional library so that it becomes an intellectual hub of the institution both for students and teachers.

OBJECTIVES OF COLLEGE LIBRARY[6]

The main objectives of a college library are mentioned below:

i. To provide resources necessary for research in fields of special

interest to the college.

ii. To aid the teachers in keeping abreast of developrnents in their fields.

iii. To provide library facilities and services necessary for the success of all formal programmes of instructions.

iv. To open the door to the wide world of books which encourage reading for pleasure, self-discovery, personal growth and for the gain of knowledge.

v. To help the teachers and taught in their instruction work.

vi. To help in cultivating reading habits amongst teachers and students. ii. To help in conversation and dissemination of knowledge.

viii. To maximize accessibility of materials to users.

ix To maximize exposure of users to the materials.

x To acquire useful reading material to meet the needs of the users.

xi. To arrange the reading material for smooth running of all formal programmes.

xii. To inform the authorities about the achievements and literary output.

xiii. To establish an instruction centre in the library and render advisory services to the teachers and students.

xiv. To create atmosphere to bring the readers and reading material together and to encourage reading and making the intellectual curiosity more acute and strong.

xv. Service oriented approach should be followed which involve the following:

a) needs of users

b) provision of alternative ways for meeting the demands

c) supply of information from any source may not be available in the library.

USE OF COLLEGE LIBRARY

The main aim of the library is to help the parent organisation or institution in achieving its goals. In educational institutions the library has to play vital role in supporting the educational programmes. The library is used for the following purpose:

i) To support the formal and informal education by providing the required reading materials to the users;

ii) To support the research by providing access to existing knowledge and information essential for research;

iii) To support the cultural activities by preserving the cultural heritage of the human race as represented by printed and non-printed media;

iv) For dissemination of knowledge and information. The users need information to equip themselves better for fulfilling their academic pursuits. It is the library which collects information, organizes and disseminates to the users:

v) The library is used in spiritual and ideological realms as it provides reading materials for inspiration in the form of religius, spiritual and book of permanent value; and

vi) The library is used in recreation and leisure as it provides reading materials for light reading i.e. magazines and books (novels) etc.

USERS PROBLEMS[7]

There are many problems faced by students and teachers in using the library more effectively. Some of these are:

i. The users are generally not well versed with the way in which library collection is developed and services organized.

ii. The closed access system still predominates fully or partially in the majority of college libraries which does not permit the users to select the required reading materials freely.

iii. The classified organisation of the reading materials on the shelves pose problems in locating the desired documents in the open access system. The numbers indicating each subject and filing order are not user-friendly.

iv. The library staff generally tries to ignore the presence of users in the library. Lack of user orientation and counseling service in the library make users' problems more acute.

v. The college library keeps the reading materials on one subject at different places according to the form of reading material, category of users expected etc. One category of users are not allowed to use the reading materials meant for other categories of users. The users feel that the library does not consider their information needs.

vi. The classified filing of catalogue entries, lack of title entries, filing of author entries according to surname etc. pose problems to the users in using and understanding the library catalogue.

vii. Most libraries insist that students return all the books issued to them before the distribution of examination hall tickets. This practice adversely affects their preparation and performance in examination.

viii. Some college libraries issue documents to the students on specific days and times, categorizing them on the basis of the courses. This may be during class hours which affects their studies.

ix. Some college libraries enforce strict and unscientific rules on the users viz. the rule of pay three times the latest published price for a lost document. The users are held responsible for returning a damaged document issued to them, even if damage is not caused by them. This discourages the use of library documents/ resources.

x. Students are only aware of prescribed text books for study. They are not aware that relevant and suitable reading material on various topics available in the library. Due to lack of a significant number of text books, they avoid visiting the library with the presumption that these may have been already issued to other users.

xi. Some libraries exhibit new arrivals at the entrance. Only regular visitors get information about these new arrivals and this information is not properly communicated to all users.

xii. Due to inadequate space in the reading room, the students visiting the library during free hours for reference purposes do not get seats. The library does not allow the students to take reference books outside for consultation. Hence they are deprived of the facility of consultation and reference books are not properly used.

REMEDIES OF USERS PROBLEMS

These users' problems are common to almost all college libraries, especially in developing countries like India. It adversely affects the growth and development of these libraries as well as the utilization of the library resources and services. The problems of users fail to get addressed. This requires serious consideration. Some remedies are listed below to minimize these problems:

i. In the case of library budgets, the librarian has to explore all possible sources of funds like central and state governntents, the U. G. C., the UNESCO, Voluntary Organisations and the individual college for a well-equipped library.

ii. Provision of a separate, adequate and properly laid out library premises together with different sections must be made.

iii. Efforts must be made to improve communication amongst the faculty, library staff and the students about the effective use of the library for knowledge acquisition and inculcating good reading habits.

iv. A suggestion-cum-complaint box/register must be provided for the users to give feedback about their requirements in relation to the services provided by the library.

v. Involvement of the college principal, faculty members and students should be increased for improvement in present activities and for starting new technological innovations like computerized library services and computer networks etc.

vi. The college may hold orientation training programmes for proper use of the library at the beginning of the new academic session. The librarian should address the students, covering all important aspects which are necessary for the proper use of library collections and services.

vii. The librarian should try to convince the authorities and teaching community that the library is a vital part of the teaching- learning processes. The librarian should conduct lectures, exhibitions, seminars etc. in the interest of the academic community.

viii. Users must be informed properly about other relevant reading materials available on the prescribed topics. They should also be informed properly through additions to the library about new arrivals.

ix. The Closed access system should be limited to large sized, rare, out-of-print, illustrated and costly reading material.

x. The library rules should be simple and easy to follow. Strict rules should be relaxed to avoid unnecessary harassment of the users. Genuine cases of loss or damaged books should be treated sympathetically.

xi. Issue of examination hall tickets and no-dues of the library should not be correlated for all. For serious students, some arrangement must be made so that they can refer to the library materials in examination days.

xii. There should not be any specific timing for different categories of students for the issue and return of books. They should be allowed to borrow books during free hours.

xiii. The librarian and faculty members should direct the students to the information sources suitable for study and reference

books available in the library.

xiv. The librarian and library staff should be eager to help. If they face any difficulty in consulting the catalogue or the non-availability of required reading material, the library staff should help the users.

xv. An information/assistance counter should be in the library for satisfying users' queries.

xvi. Adequate space'should be available in the reading rooms for reading and consulting reference books.

EFFECTIVE USAGE OF COLLEGE LIBRARY[8]

The use of library reading material can be made effective by using the following methods:

1. The Library staff must process quickly i.e. classify and catalogue all the documents available in the library. The well catalogued library will increase access to library collection.
2. The Library Committee should be represented by book loving teachers so that good policies, planning and improvements may be made in the library to attract more users.
3. The reading material should be arranged on shelves which will attract. more users
4. Change in teaching method and students be asked by the teachers for self study, writing assignments and consulting the reference sources will increase the use of library resources.
5. Students volunteers should be encouraged to motivate other fellow students to use the library resources.
6. Reference service may be provided by the library staff for the' maximum use of the library collection. The new students should be informed through, initiation about the library collection and to conduct literature searches and finding out reading material for themselves.
7. Public relation activity helps in gainning the confidence of the users and winning over their attitude and removing their indifference towards library and attracting more and more users to the library. The following public relation methods as library tours, library bulletin, book talks, display and exhibits, use of mass media, use of audio visuals, personal contacts will increase the use of library resources.
8. The beginning of user education could be identified with the reference service started as "Initiation of Freshman".

"Bibliographic Instructions which introduce infonnation resources to the users "User education should be a continuous process".

9. The goal of resource sharing is to maximize the availability of materials and services and initially it was limited to inter-library loan facilities only, but now-a-days it can be done through library networks which are available i.e. NICNET, INFLIBNET, PUNENET, MALIBNET, INDDNET, DELNET etc.
10. Photocopying services in the library will increase the use of library resources as photocopies can be supplied to more users even the library has only one copy of the book.

RESPONSIBILITIES OF THE LIBRARIAN

The main responsibilities and duties of the college librarian :

i. To formulate and administer policies, rules and regulations with view for securing the full use of the library by students and teachers.
ii. To conduct meetings of the Library Committee as a secretary of the committee.
iii. To allocate the library budget for book purchase to different subjects.
iv. To maintain liason with the Principal and Heads of the Deptts. in matters of selection of books and journals.
v. To be responsible to the principal in matters of satisfactory management and administration of the library.
vi. To provide resources and reading materials not available in the library through Inter library loan for scholars doing research
vii. To prepare plans important for the college library and execute them.
viii. To participate in all academic meetings.
ix. To represent the college library in All India Library Conferences.
x. To prepare the annual report of the library.

STEPS OF IMPROVEMENT OF COLLEGE LIBRARY[9]

The following steps will be useful for improvement of college library:

I. College librarians should provide dynamic leadership in their respective organisations.
II. The librarian should be directly responsible to the principal of the college.

III. The librarian should know the share of the college library budget.

IV. The librarian should submit budget proposals.

V. The librarian should play key role in meeting of the library committee and should present the items in an effective manner.

VI. College library should be housed in well planned separate building.

VII. The librarian should play key role in book selection.

VIII. Adequate funds should be provided to the college library.

IX. College libraries should be equipped with the latest technology and library services should be computerized.

X. College librarian should devise some mechanism for user education.

XI. Librarian should maintain record or statistics relating to various activities, services provided etc.

CONCLUSION

To implement these basic objectives and functions in practice, the college library has to play a positive role in minimizing users' problems. A good and efficient college library helps students to meet the new challenges they start facing at the college level. They can, within the four walls of the college library, use their leisure time more usefully and meaningfully, discover their inherent potentialities and begin instructive and absorbing hobbies and generally lay the foundations of a good and more responsible life for the future. College libraries will, therefore, have to become more important. A college library has to playa very responsive and responsible role in catering to the requirements of young students and teachers.

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QUALITY CONTROL AND ITS IMPLEMENTATION IN COLLECTION DEVELOPMENT IN ACADEMIC LIBRARIES

S. Harvinder Bhoria

PROFILE

Provision of high quality service has always been the prime concern of librarians. However, the rising expectations of clientele, increasing complexity of service provision and grater competition for financial resources make it all the more imperative to employ management skills in every function and service in libraries to match these more intense demands.

QUALITY COLLECTION DEVELOPMENT AS A MANAGEMENT FUNCTION.

Collection building is the basic function undertaken by every librarian, irrespective of the size of his library. Collection is the basic foundation on which the total library service is built. This, collection development is directly linked to the mission of the library. Any library is basically visualized as representative of whole body of knowledge.

The old dictum about developing library collection stated that 'librarian should have no politics, no religion and no morals'. It can be stated adopting a more positive approach as 'Librarian should have human sympathy for people of different views.' Thus, collection development is a task which is accomplished slowly over a period of years, as a skyscraper rises storey. The librarian builds a collection according to purpose, philosophy of selection, which is subject to continuous revision. However the collection should not just be built, but developed over the years to comprise of various classics, standard treatises, monographs, textbooks, reference sources, back files of learned journals, authors, etc.

THE SYSTEM CONTEXT OF COLLECTION DEVELOPMENT

Collection development encompasses a number of activities, viz.,

- The determination and co-ordination of selection policy,
- The identification and assessment of needs of actual users and potential users,
- The collection use studies, collection evaluation, selection of the materials, Planning the resource sharing, collection maintenance and weeding.

Thus the system context of collection development involves a series of hierarchical functions, which include selection and/or rejection of current and retrospective material, acquisition as a process that implements selection decisions and collection development plans. Actual purchases, gifts and exchanges come next in the hierarchy of collection development process. The deselection or evaluation of the existing collection, the replacement of worn out or lost but useful materials follow thereafter. The process of surveying the collection to determine new fields in which collections need to be developed and the level of intensity in each field, is a continuous ongoing process, which has to be the prime concern of the librarian e.g., Vipashana Philosophy is a new subject and collection needs to be developed for this new trend in philosophical thought.

The total system context of collection development can be presented in the following diagram.

BOOK SELECTION BY SUBJECT FIELD

According to Robert N Broadus subject classification does provide a reasonably intelligent map of the world of knowledge. Since the reader consults the library collection with a specific subject approach, it is convenient way to treat the mass of published literature by subject classification. But this allows the pitfalls and inconsistencies of classification scheme to be reflected in the collection development. At times the interdisciplinary approaches to a particular subject of study are neither reflected in classification scheme nor in the collection development. But a library's collection should depict collection in each area (such as humanities, social sciences, pure sciences, etc.), fields or disciplines (such as, philosophy, economics, chemistry, etc.) and sub-fields or topics (such as Western philosophy, Keynesian economy, Phyto-chemistry, etc.).

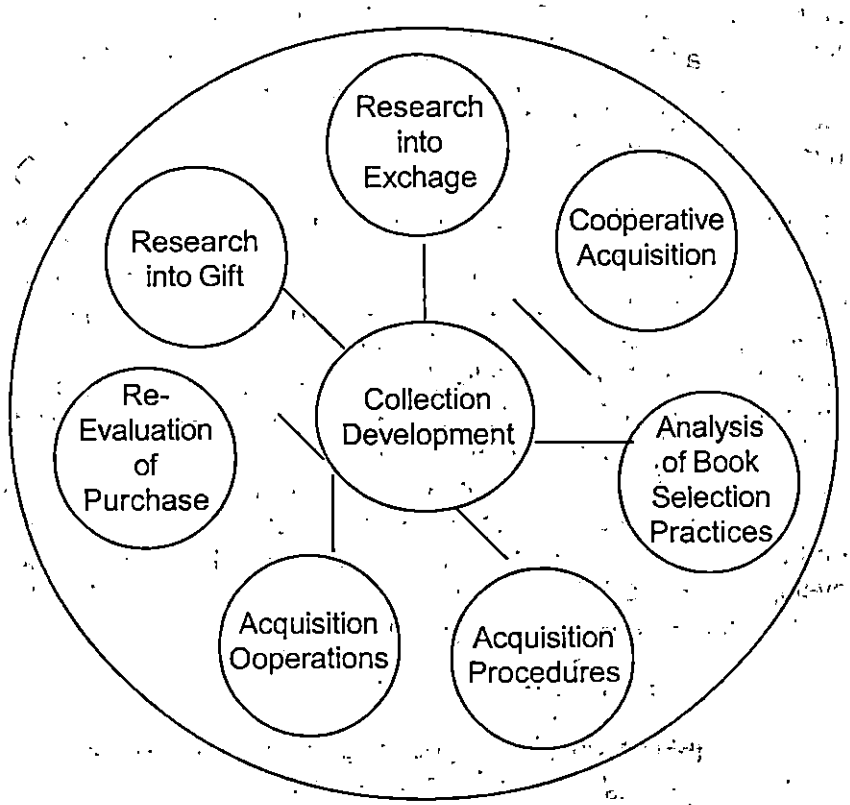


Fig. 1: The System context of Collection Development

For selection new material for library, the librarian adopts varied criteria such as authoritativeness; accuracy, impartiality, recency of data, adequate scope, depth of coverage, aesthetic qualities, physical characteristic, special features, etc. However, the basic criterion in collection development should be the library potential of the material, its appropriateness for users, its relevance of users' needs. In other words, it is prerequisite to consider whether it will fit into the library collection and whether it will be useful for clientele or not.

BUDGET ALLOCATION FOR COLLECTION DEVELOPMENT

The academic libraries have employed various criteria for allocating book budgets to academic developments, viz. academic activities of the departments, faculty size, number of research students, age of the department, number of the courses conducted by the department, size of publication output by subject, etc. The weightage is assigned

to each criterion and proportionately budget amount allocation done. The literature size approach is less common in modern times. As WE McGrath points out that some academic departments fail to spend their allocations for not many books having relevance to their work are published each year. This applies more to the Language Departments where the book prices are too low to utilize the allocated budget fruitfully.

DEMAND FOR USE –BASED COLLECTION DEVELOPMENT

Libraries have long built collections on the basis of potential use. However, now due to financial constraints they must concentrate on actual users. They must be more responsible to the immediate information needs of their users as far as collection development is concerned. The published output of each subject has increased and the library budgets has either shrunk or remained stagnant. In quantitative terms, it means that libraries can buy lesser number of books within available lesser financial provisions and serve lesser number of users. Hence, it becomes mandatory for the libraries to develop demand-based or use-based collection. In this context, use and user studies are of increasing value.

USE AND USER STUDIES

According to Robert N. Broadus collection use studies are those that start with a group of library material and then try to determine what use or how much use they receive. W A Britten & J D Webster opine that collection use studies are typically statistical summaries of circulation patterns for an entire collection or portions of a collection. However, they usually do not examine the use of specific titles. Titles remain well used for many years after their publication even outside the area, Where they might be expected. Distribution of imprint dates, viz., pre-1950s, 1960s, 1970s etc. for most circulated books show that further study is needed before weeding older books. Under such circumstances instituting a collection development policy to exclude purchase of old books will have to be further rationally scrutinized. The title-recorded-use phenomenon is the 80:20 rule published by Richard W Trusewell. Approximately, 80% of the circulation requirements are satisfied by 20% of the library's holdings. One impact of the user studies reinforces the judgment that no library is an island and that no library should try to be complete for any community of users. If it is, it will have to store thousands and millions of items that will be used once a decide or even less frequently.

The next generalisation is the use of materials in the library premises

for reading purposes, seems to be parallel and proportional to circulation. Phillips M Morse indicated that the average book circulation diminishes as the book ages rapidly at first, then leveling off. This can be proved by the example of the circulation statistics in J N Library of the book 'Suitable Boy' by Vikram Sheth, published in 1993.

OBSOLESCENCE OF LITERATURE AND HALF LIFE OF PERIODICALS

The librarian who is interested in saving shelf space needs guidelines for uses per unit of shelf space while discarding material and expectation of life of volumes of a journal while deciding, whether to bind and retain it. The regularly conducted use studies will help him to arrive at decisions regarding discarding and relegating older material in libraries in accordance with their obsolescence.

The expression of half-life, borrowed from Physics, has made frequent appearance in literature on documentation since 1960. The half-life is the time (actual or expected) during which half the total use of individual items constituting a literature has been, or is expected to be made.

R E Burton and R W Kebler point out that literature becomes obsolescent rather than disintegrating, so that half life means half the active life, which is commonly understood as measuring the time during which one-half of the currently active literature was published.

SELF RENEWING LIBRARY

'Self-renewing library is yet another measure available to the Librarian in order to maintain the quality in collection development. It was provided by Great Britain's University Grants Committee's Working Party Report (1976) submitted by the Chairman Prof. Ralph Atkinson. Self-renewing Library is a library of limited size, in which beyond a certain point material should be reduced at a rate, related to the rate of acquisitions. This solution was proposed due to reduction in education budget, which was reflected in reduction in finances for building bigger university library buildings. The university libraries were expected to provide storage for current stock plus enough space for anticipated accessions for 10 years ahead. The alternative in the form of self-renewing library or zero growth library expected the university libraries to maintain their stock at a certain optimum level, thus reducing the need for extra space.

P Harvard-Williams and Anne Gilman reviewed the reactions to this concept from the point of view of some libraries in UK, which participated in local, regional or national co-operative lending or

disposal schemes and were bound by the network rules. They lacked the freedom to decide about weeding the material to maintain the zero growth of the library. Hence, they opined that this concept of self-renewing library was impractical and would merely remain as theoretical concept.

WEEDING OUT

The concept of self-renewing library implies weeding of library material. Weeding is a generic term, which includes both relegation and withdrawals. This solution to controlling the growing size of academic libraries is not new for the academic librarians. They, perplexed by the sheer growth in the number of books added to the library every year, also feel that constant elimination, convenient storage and frequent rearrangement of books is essential.

COLLECTION DEVELOPMENT POLICY

Thus, the total shift in library services from 'ownership' to 'access' dictates the framing of policy for collection development. Library should reallocated resources for access. There are some key indicator of effective Collection Development Organization, viz. There is a shift in perspective. More and more dependence is there on peer library collections, through resource sharing networks, e-mail connections, Xeroxing facilities, microform availabilities. For all these decision implementation; written document in the form of collection development policy becomes essential, which will guide the schematic selection of a world's recorded knowledge. But, it is not a substitute for books selection. It will be a framework, which will provide the parameters for collection development to the librarian; but actual work of developing quality collections is the Librarian's responsibility. Ross Atkinson stresses the significant role of the acquisitions Librarian as change agent in the transition to the electronic library. His role will be more proactive in nature rather than the present reactive one. It is he who will determine the worth of each and every title before it is added to library's collections.

CONCLUSION

In the context of libraries, it needs to be registered that size is not always synonymous with excellence. The quantity of a collection does not assure quality. And, just as no newspaper can really print all the books worth collecting. And to seek and even to acquire everything is not to have the best collection.

The underlying philosophy being as John Gilbert states Quality is

consistent conformance to users' expectations. Quality means never having to say "I am sorry". Ultimately, the collection would be of quality, if the user gets his information needs satisfied by consulting the collection. Hence, the collection development should be use-based and demand-driven, which will lead to achievement of quality control in collection development.

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I. 7

QUALITY IS WHAT USER SEES, PERCEIVES, AND OBSERVES: AN EXPLORATIVE STUDY OF SOME SELECTED UNIVERSITY LIBRARIES

K.C.DABAS

ABSTRACT

The paper emphasises the impact of information revolution and stresses the need and importance of the key word 'Quality'. Defines quality and total quality from the perspectives of users of university libraries. Focuses on users perception of quality in libraries and points out the need and importance of users perception in maintaining and improving quality. Also clarifies that customer service or service quality is an important aspect of total quality and it is a dependent factor of customer satisfaction. Service quality and satisfaction view library and its services from users point of view and lead to outcome measures, whereas performance measures concentrates on library and lead to output measures. In this paper the quality in university libraries has been studied, analysed and compared on the basis of user perceptions. The scope of this research paper is limited to the nine university libraries in Punjab, Haryana and Chandigarh. Concludes that users want not only information and document alone but also better facilities and services to their satisfaction. Therefore, librarians need to sense, serve and satisfy the needs and expectations of the users and beyond that little extra to delight the users and win their loyalty. In order to remain ahead of the users paper based libraries must be modernised and networked to share

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the resources. In this resource constraint regime access is more important than ownership. Therefore, Internet can be dovetailed to enhance the library resources and print and digital culture must be converged for user satisfaction.

INTRODUCTION

The concern for the user is the epicenter of Total Quality management (TQM). A service strategy with customer friendly staff and user friendly system is essential for customer focus. The word customer focus was used in 1931 in the form of user satisfaction. User is placed at the top in TQM framework and next are those who serve user, i.e., front-line staff, and management to support front-line staff.

Since quality is the strategic priority and beginning and end of TQM so it is essential to define and understand quality and total quality in the context of the university libraries. Three general definitions of quality help in understanding the attributes of a quality information organisation:

(1) Quality is the total experience that a customer has with the vendor organisation,

(2) Quality is the ease, convenience, excitement, interest, and fun that the organisation provides to the customer,

(3) Quality is the ability to provide customer with high value solutions.

British Standard 4778 and ISO 8402 also defined quality from the perspective of users, i.e., "The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". Fitness for purpose or fitness for use view of quality also stresses on meeting users requirements, needs, or desires. The Citizen's Charter also shifts public services towards a market model in which the user of the service decides the types and mode of services.

Quality as value for money sees quality in terms of return on investment, i.e., time spent by the users in getting the information. Quality is also the sum of use (objective) and esteem (esthetic) value. It is always possible to achieve quality at higher cost but that is not the solution. Therefore, control dimension helps in process control and cost effectiveness. Learning dimension of TQM helps in continuous improvement and customer satisfaction. Five P's, i.e., Products, Provision of services, Processes, People and Place comprises of total quality. Total quality is total performance of an organisation on all fronts, i.e., cost, quality and delivery.

NEED AND IMPORTANCE OF USER PERCEPTIONS

New and bigger Information Revolution accelerated by Information and Communication Technology (ICT) have made globalisation, privatisation and liberalisation the 'Mantras' of International Economic Order and Global Information Society. The word 'Quality' has become the buzzword and symbol of survival and growth and now it is the key to globalisation, a strategy to survive, a path for excellence, and an eternal philosophy of continuous learning.

The authority of customer has already been established indirectly in manufacturing sector and directly in all profit making service organisations but in non-profit making organisations people delivering services become uncomfortable by having someone else for whom services exist.

Amidst many competitors such as computer centers, publishers, data base managers and teaching departments connected with Internet, university libraries cannot step back from the authority of customer.

Generator-driven information explosion and provider-driven acquisition policy was due to lack of customer focus in information sector in general and university libraries in particular. These self-focused policies have not only enhanced the gap between information generation and utilisation but also widen the gap tremendously between information acquisition and utilisation.

Increasing domain of librarianship and ICT has not only accelerated the changing and complex information needs but also enhanced their expectation for information products, services and consultation.

In electronic age library is rarely referred to as "the heart of the university" and under such circumstances loyalty of delighted customers has special value in indicating the quality of library services.

The lack of knowledge and awareness on the part of the vendors and suppliers caused mismatch between the material supplied and true requirements and priorities of the university libraries.

Performance measures focus on efficiency of activities when our chief concern is productivity, and on effectiveness when our chief concern is users needs, user satisfaction constitutes a third dimension of measurement because user has some expectations about ease and convenience of library use or manner of library service.

SCOPE

The scope of this paper is limited to the nine university libraries in Punjab, Haryana and Chandigarh. These are: Guru Nanak Dev

University Library, Amritsar; Punjab Agricultural University Library, Ludhiana; Punjabi University Library, Patiala;Thapar Institute of Engineering and Technology Library, Patiala; Kurukshetra University Library, Kurukshetra; Maharshi Dayanand University Library, Rohtak; Chaudhary Charan Singh Haryana Agricultural University Library, Hisar; Guru Jambeshwar University Library, Hisar; and Panjab University Library, Chandigarh

METHODOLOGY

This paper deals with the views, opinions, values, perceptions, and expectations of the users on the various parameters of quality, total quality, and total quality management collected through Questionnaire and Interview Schedule from the faculty members, research scholars, M.Phil and Postgraduate students of all the nine universities under study.

The user population includes students (Post-Graduate, M.Phil and Research Scholars),faculty members and 10 percent of the population of all these categories of users.

It has already been well established in corporate sector, and amply revealed in review of literature, that quality management leads to quality products, services, and consultation. If quality exists in the library, then library users will be happy and satisfied with library collection, facilities, staff, services, products, procedures, and processes and will use the library more. In another way service quality has a positive correlation with satisfaction of user and satisfaction of user on user retention (user loyalty), and further user loyalty on total benefits of libraries.

The dimension and parameters on which information was collected include: quality of library collection, staff quality, staff quality in relation to the use of library, staff knowledgeability and communication skills, physical facilities and services[1-2].

The gap in user importance level and perception level has also been studied on user satisfaction on the basis of rater set designed by Zeithaml, et al[3] (1990), Berry, et al[4] (1988). This set has five important dimensions of service quality such as :

1) Reliability is the ability to perform the promised service dependably and accurately, 2) Assurance is the knowledge and courtesy of employees and their ability to convey trust and confidence, 3) Tangible is the appearance of physical facilities, equipment, personnel and communication material, 4) Empathy is the caring and individualised attention the organisation provides to its users, and 5) Responsiveness is the willingness to help users and provide prompt

service. Also includes expectations of users of all the libraries with regard to computerised access of learning resources.

QUALITY OF COLLECTION

The integration of quality in collection development is essential for TQM success. It has been a universal truth to count the size and scope of library collection for the purpose of evaluation. But calculation of users' satisfaction with the collection and its quality is more important.

TABLE 1 : QUALITY OF LIBRARY COLLECTION

Statements	GNDUL	MDUL	PAUL	HAUL	PULP	KULK	TIETL	GJUL	PULC
Range of Material to meet needs	3.400	3.562	3.042	3.540	3.290	3.620	3.100	2.500	3.520
Multiple copies of items in high use	3.239	3.422	3.174	3.564	3.369	3.394	3.099	3.027	3.562
Purchase of Relevant Material	2.975	3.362	2.957	3.610	3.081	3.250	3.259	3.085	3.35
Authenticity of library material	3.350	3.350	3.531	3.550	3.744	3.312	3.342	3.500	3.82
Total score	12.964	13.696	12.704	14.264	3.484	13.576	12.800	12.112	14.252
Mean Score	3.241	3.424	3.176	3.566	3.371	3.394	3.200	3.028	3.563

Table.1 displays quality of library collection with regard to the range and adequacy of material, multiplicity of material, authenticity of material and relevancy of material in meeting users minimum; basic; study and teaching; research; and comprehensive needs. Out of nine libraries HAUL has the highest (3.61) relevancy score, whereas PAUL has the lowest (i.e., 2.957) score. In respect of authenticity of library material, PULC tops the list with a score of (3.82).

Table reveals that the mean score of library collection quality is highest (3.566) in the case of HAUL. PULC comes next with the score of 3.563, .MDUL got the 3rd rank, and KULK the 4th with the scores of 3.424 and 3.394 respectively, PULP and GNDUL got the 5th and 6th rank with 3.371 and 3.241 as their scores, TIETL occupies the 7th rank with the score of 3.200, and PAUL the 8th rank with the score of

3.176. The score of GJUL, i.e., 3.028 is found to be the lowest amongst all with regard to quality of library collection.

STAFF QUALITY

A large collection in a big building has no meaning without making the collection serviceable to users. It is library staff which makes the collection serviceable. Quality in library comes from quality personnel.

TABLE 2: STAFF QUALITY

Description	GNDUL	MDUL	PAUL	HAUL	PULP	KULK	TIETL	GJUL	PULC
Availability	3.687	3.675	4.042	3.970	3.511	3.462	3.516	3.771	4.120
Approa-chability	3.812	3.450	4.491	4.685	3.790	3.812	3.540	3.928	4.170
Courtesy and Politeness	3.650	3.325	4.285	4.014	3.753	3.825	3.500	3.700	4.300
Willingness to help	3.818	3.233	4.114	4.128	3.746	3.225	3.489	3.071	3.83
Friendliness	3.812	3.325	4.288	4.014	3.858	3.837	3.490	3.871	4.170
Total Score	18.779	17.008	21.220	20.811	18.658	18.161	17.535	18.341	20.590
Mean Score	3.755	3.401	4.244	4.162	3.731	3.632	3.507	3.668	4.118

Table.2 shows staff quality with regard to availability, approachability, courtesy, politeness, willingness to help and friendliness in relation to respective user community of the nine university libraries. Table depicts that the staff of PULC got the highest (i.e.,4.120) and (i.e.,4.300) score with regard to availability and courtesy of staff.

Table further shows the mean-score of overall staff quality. It denotes that PAUL got the highest (i.e., 4.244) score, followed by HAUL (4.162). The score of PULC slided to 4.118 score and got the 3rd rank.

STAFF QUALITY IN RELATION TO THE USE OF LIBRARY

Libraries are full of complexities. Due to these complexities there is a wide gap between users and their documents/information. It is staff assistance which solves all ambiguities and complexities in library system and reduces the gap between users and their document/ information. All this is not possible without quality personnel, i.e., personnel with knowledge, skills, dignity and attitudes.

Table 6.3 charts the score of fifteen statements with regard to the importance of staff assistance in the use of library, i.e., use of catalogue,

reference book, electronic resources; all the resources; selection of appropriate resources; cultural sensitivity; direction; details of information; encouragement; accurate answers to questions; suggestions regarding ILL; referral services; e-mail; personalised help and understanding of the problems of the users of respective university libraries.

TABLE 3 : STAFF QUALITY IN RELATION TO THE USE OF LIBRARY

USE OF LIBRARY	GNDUL	MDUL	PAUL	HAUL	PULP	KULK	TIETL	GJUL	PULC
Catalogue, Reference book and Electronic resources	3.537	2.787	3.185	3.028	2.872	2.987	3.020	3.014	3.160
Use of al resources	3.612	2.881	3.200	3.045	3.418	3.075	3.310	2.657	3.180
Selection of resources	2.750	3.013	3.670	3.480	3.000	2.725	3.145	2.585	3.240
Work culture	2.800	2.750	3.550	3.325	3.209	2.512	3.010	2.600	3.250
Know library rules	2.879	2.890	3.180	3.628	3.928	2.812	3.420	2.485	3.030
Details of information	3.315	3.136	3.714	3.785	3.501	2.900	2.010	3.071	3.320
Encourage-ment to seek help	2.562	2.712	3.457	3.200	3.302	3.012	3.021	3.217	3.680
Accurate response to questions	2.662	2.881	3.523	3.444	3.383	2.975	3.056	3.142	3.780
Mention of ILL	2.256	1.984	2.814	2.785	2.500	2.475	0.881	2.328	2.270
Referral service in side library	2.708	2.312	3.454	3.457	3.174	2.800	2.685	3.142	3.410
Referral service out side library	2.412	2.662	2.561	2.342	2.627	2.462	2.600	2.785	2.800
No undue harassment	2.714	2.787	3.716	3.828	3.290	2.537	2.640	2.914	3.010

Use of e-mail	3.396	2.562	1.000	1.000	1.453	2.286	1.314	2.057	2.590
Use of books on Shelf	2.859	3.420	4.123	4.242	3.034	2.550	3.200	3.128	3.210
Understanding the problems of users	2.750	3.120	3.785	4.300	3.360	2.825	3.100	3.014	3.490
Total Score	43.212	41.897	48.932	48.889	46.051	40.933	40.412	42.139	47.420
Mean Score	2.880	2.793	3.262	3.259	3.070	2.728	2.694	2.809	3.161

HAUL emerged at 1st position by doing least undue harassment of its users with 3:828 score and GNDUL got 1st position with 3.396 score with regard to use of E-mail service. Where HAUL got 1st position with 4.242 score with regard to use of books on shelf, whereas PULC got 1st position with 3.49 score with regard to understanding the problems of users.

After displaying the results of individual statements, table further demonstrates the total score and mean score with regard to all the fifteen statements. It denotes that PAUL got first place with mean score of 3.262, closely followed by HAUL (3.259). Out of nine universities PULC slided to 3rd position with 3.161 score, while PULP got 4th Position with 3.07 score. In all GNDUL got 5th position with 2.880 score, whereas GJUL got the 6th position with 2.809 score. With regard to staff assistance in the use of library MDUL slided to lower side with 2.793 mean score and got 7th position, whereas KULK got 8th position by scoring 2.728 points. The score of TIETL is lowest (i.e., 2.694) amongst all with regard to staff quality in the use of library.

KNOWLEDGEABILITY AND COMMUNICATION SKILLS OF STAFF

Libraries are full of information resources and global information resources can be accessed on Internet to complement and supplement local information resources. A knowledgeable staff member with communication skills can easily multiply the library resources and optimise the use of resources. Table 4 indicates the staff quality with regard to availability of knowledgeable staff on service desk when library is opened, communication and teaching skills of staff in relation to the respective user community of the libraries.

perceptions of service quality are known as dimensions or attributes of service quality. Marketing is concerned with the exchange of relationships between libraries and users and quality and customer service are the key linkages in this relationship. Customer service is a process which provides time and place utilities for the customer and which involves pre transaction, during transaction and post transaction considerations relating to the exchange process with the customer. Customer service quality has links with customer satisfaction.

According to Ghosh and Goswami [5] (2000) the first link deals with relation between service quality and customer satisfaction. It can be based on an outsider perspective, advertising, knowledge about service provider, and experiences with the service. The second type of satisfaction is purely based on customer's own experiences of a service where the outcome has been evaluated in terms of value received against price paid. The outcome may be low satisfaction but high perceived service quality. The third link between service quality and customer satisfaction is that the customer is always ready to absorb some unfavourable evaluations before expressing them in terms of net dissatisfaction. The fourth link between service quality and customer satisfaction depends upon the availability of other providers of service. In this connection Bhattacharya[6] (2000) said that customer service, quality, and marketing are closely related and yet frequently managed separately. Therefore, relational marketing approach brings them into a much closer coherence. Quality of interactions with the users is the core of marketing strategy in the context of library and information services.

Table.5 is self-explanatory which displays the user importance level with regard to various attributes of service quality. Users give more importance to those attributes, which are lacking in their library.

TABLE .5: IMPORTANCE OF SERVICE QUALITY FROM USERS POINT OF VIEW

Dimensions	GNDUL	MDUL	PAUL	HAUL	PULP	KULK	TIETL	GJUL	PULC
Appearance of physical facilities, equipment, perso-nnel and infor-mation resources	12.31	9.12	9.53	10.80	11.15	11.29	12.16	14.88	9.53

Library's ability to provide promised service dependably and accurately	29.48	28.95	32.47	29.77	28.36	30.36	30.66	32.17	28.68
Willingness to help prompt service	24.14	25.76	26.15	25.41	26.32	26.97	24.38	24.25	23.78
Knowledge and Courtesy of staff and ability to convey trust and confidence	21.36	21.98	18.76	20.81	19.34	20.82	21.52	18.43	18.96
Caring and individualised service by the Library	12.71	13.39	13.09	13.21	14.83	10.56	11.28	10.27	19.05
Total score	100	100	100	100	100	100	100	100	100

USERS PERCEPTIONS

In this connection Banwet and Datta[7] (2000) observed that customer satisfaction mediates the path between service quality and post-visit intensions. Quality is meeting customer requirements. It is what the customer says, perceives and believes in the process as well as in services. Perceptions of casual users differ from frequent users. Frequent users are relatively more satisfied than casual users. This is largely due to information seeking behaviour.

Users' perception about service quality is displayed in self explanatory Table 6. With regard to tangibles, PULC scored 12.71 points and got first position, whereas GJUL scored 6.59 points, i.e., lowest amongst all. Regarding reliability PULC scored first position with 27.78 points and GJUL got the last position with 20.15 points. PULC scored 23.98 points and got first position with regard to willingness and KULK got the last position with 20.19 score.

TABLE 6: USERS PERCEPTIONS ABOUT DIMENTIONS OF QUALITY

Dimensions	GNDUL	MDUL	PAUL	HAUL	PULP	KULK	TIETL	GJUL	PULC
Appearance of physica facilities, equipment, personnel and info-rmation resources	9.12	10.02	11.76	11.51	9.79	9.01	8.68	6.59	12.71
Library's ability to provide promised service dependably and accurately	25.15	24.68	22.18	26.16	24.31	23.45	26.11	20.15	27.78
Willingness to help prompt service	20.60	23.89	23.47	23.59	21.58	20.19	22.68	21.15	23.98
Knowledge and Courtesy of staff and ability to convey trust and confidence	24.61	21.78	22.61	19.64	25.75	22.72	25.68	24.73	23.18
Caring and individualized attention provided by the library	20.52	19.63	19.98	19.10	18.57	24.13	16.85	27.38	12.35
Total Score	100	100	100	100	100	100	100	100	100

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RESPONDING TO USERS' CHANGING NEEDS IN UNIVERSITY LIBRARIES

Trishanjit Kaur

NEW ENVIRONMENT

Libraries exist to serve the diverse needs of users as this service element is the main tenet of this profession. In case of university libraries this task is very challenging. The users today are techno-savvy and are aware of the latest developments in their fields. They are aggressive by nature and impatient. All these changes in their behaviour, attitude comes as a result of the total changing environment in which the university libraries find themselves. The Internet and access to it have brought in the main change in how users formulate their needs and want them fulfilled. So that means technological changes that are totally changing the way have initiated the new environment of libraries in which the users and library professionals find themselves. University librarians were managing the challenge of budget cuts, rise in subscription rates, inflation, balancing book purchase and periodical subscription. Now these technological changes, new innovations, new options, choices have raised more issues and challenges for the library and information (LI) professionals to deal with. The instable environment in which the present generation of LI professionals finds itself is putting a lot of pressure on them to meet the users needs.

NEW CHALLENGES

Earlier everything was manageable and minor upheavals were dealt with. But now, on one hand the state government and the U.G.C. are decreasing their grants to the universities and on the other hand new mediums like CD-ROMs, DVDs are making way in the university

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libraries thus making collection development policy a challenging task. Some university libraries (mainly agriculture) are having access to online databases. As agricultural universities are getting financial support from Indian Council of Agricultural Research (ICAR). A look at the *Handbook of Indian Universities* will give an idea how the collection and services at these university libraries are improving as compared with the general state university libraries.

The users expectations and needs are increasing as a result of their familiarity with handling computer and other technologies and also the skills of accessing information makes the empowered and impatient. There is information overload and information anxiety. This is a result of the inability to find relevant information in time. So much is available via the Internet (half may be junk) that it makes a user lean forward to find more and more. As a result the user forgets what he actually wanted as formulating information need is the first step for getting right information at the right time. The hypertext links have made jumping so fast that users are virtually lost in the virtual or e-environment.

Here comes the challenge for the LI professionals, who have this enormous task now, first to update their knowledge and skills and then to guide and help these users who are getting caught in the web. Time now is to do and act and not to ponder on, what and how, it should be done. LI professionals do not have a choice but to go ahead and make themselves more competent so that they feel comfortable in the new environment created by the developments in information and communication technologies. If the LI professionals have to survive they have to perform and prove themselves.

NEW TASKS

Earlier university libraries were busy dealing with the carriers of knowledge, i.e. books and journals but now they have to deal with the contents. As one western author had said "We thought for many years that we were in the wine business. In fact, we were in the bottling business. And we don't know a damned thing about wine' (Van House and Sutton, 1996)". The perception of the users about the university library as merely a storehouse of books where they go for borrowing books or getting photocopies has to change to a place where they can find information in whatever context the users want.

LI professionals have a tough task ahead, i.e. to deal with a type of users who are more comfortable with information communication technologies and on the other those who are not. That means dealing with both extreme situations. There may be students, researchers and faculty members who are capable of searching information on the Internet. But on the other hand there may be those users who are not

aware of the new environment. LI professionals have to satisfy the first category of users, and also provide information literacy to those who are not aware of the e-environment. For this they have to have

-right attitude

-willingness to empower

-right environment

-resources

-adequate knowledge and skills.

Users are going to use the library only if they feel satisfied after coming there. Internet has made possible digital reference service or virtual reference service or email reference service or 24/7. That means users think they have a choice of asking queries from these services if their own LI professionals of university will not respond. Virtual reference service should be complementary to reference service provided by the university library and definitely NOT an alternative. So LI professionals at the reference desk have to be competent, motivated and dedicated to meet the users needs in the changing environment.

They have to play a proactive role and cater to the needs of all types of users from info literates to info illiterates. Information literacy programmes have to be designed according to the local needs of the users and these can be made available online in the university library. This will change only if the authorities on top have a vision of university libraries in the future. Only then the top management will be able to motivate the LI professionals who have to initiate change. Another challenge for them is to generate funds for which collaboration, convergence, consortia could be some way outs.

CONCLUSION

Thus everything needs to change in the rapidly changing environment in which the users of university libraries find themselves. The change will be top down and bottom up also.

Vision and roles of LI professionals have to change. Users too will have to change and become more independent and info-literate and the second level digital divide has to reduce. After all it's the LI professionals who are the gatekeepers of this information superhighway and they will have to steer the users with the human touch and provide users delight.

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I. 14

RESPONDING TO USERS' NEED IN CHANGING INFORMATION LANDSCAPE

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USER PERCEPTION AND NEEDS .

Library is the center of any academic settings . It is the backbone upon which infrastructure for salubrious atmosphere & strong deeds are achieved. Classroom teaching provides a glimpse of knowledge, the libraries disseminate a wide range of knowledge, which are required to attain intellectual heights.

Real education can only be achieved through the libraries . It has within – power to help a student to develop its life–long learning ability . An investment in library might be a great resource of tomorrow for the country, being a factory of manufacturing great nation-builder, which would prove its worthy for the country. The more use of it is made, the greater is the benefit derived out of education. It provides the incentive to the development of educational, social & cultural activities. According to Dr. S.R.Ranganathan, the father of Library Science in India, "Libraries are not mere store houses, they are rich springs from which knowledge flows out to irrigate the wide field of education and culture."

UNESCO's Terminology of documentation has also expressed about library that it is an organized collection of printed books & periodicals or of any-other graphic or audio-visual materials & the service of a staff to provide & facilitate the use of such materials as are required to meet the information, research, educational or recreational needs of its users.

The word library comes from the Latin word "libraria" which means a place where books and other writings are kept but the concept of

present day library has not been so, it is much more than a building stocked with books. It is a workshop for the students to accumulate knowledge & wisdom.

The old myth of the library i.e. "store house of recorded documents" , has been thrown out by the modern and changed concept . Now the library is also renamed as "Information center".

The modern library is expected to provide the following services to its users

(i) Should have prompt information service provider.
(ii) Should have better Reference service provider.
(iii) Should have character of facilitating dissemination and retrieval of knowledge.
(iv) Should have either be inter-library loan facility or Library network facility.
(v) Should have intention to satisfy each & every user with its desired material.
(vi) Should have intention to provide & enhance service by adopting mechanized & automated procedures.

We also have suggestion of '5RIs.' By J.H.Herald for better information services to adopt, which are,

(i) Right information would go to
(ii) Right man in the
(iii) Right amount at the
(iv) Right time and in the
(v) Right form

To achieve the objectives of modern libraries, it is important to adopt the following principles : -

(i) Organization
(ii) Administration
(iii) Cataloguing
(iv) Classification
(v) Technical service such as circulation, acquisition, reference service, information retrieval, automation etc. We are living in an age of 'explosions'. According to J.S.Sharma, the following are the driving forces, which have given birth to this explosion.
    (i) Progress made by science and technology during the last 150 years.
    (ii) The democratization of political institutions throughout

the world.

(iii) The popularization of education in all sections and society.

(iv) Introduction of communication systems etc.

Dr. S.R.Ranganathan in 1928, formulated the fundamental Laws of Library Science on the basis of his experience and observations, which he had in Europe and other countries. In 1931, in his book "Five Laws of Library Science", he enunciated the five laws of library science, which are also fondly known as 'punch sheel' of library science but, soon he had to need of feeling to revise his fundamental Laws Of Library Science, it was all because of his thinking it to be as a growing organism. Further he understood it as follows:-

(i) Documents are for use.

(ii) Every reader his or her documents.

(iii) Every document its reader.

(iv) Save the time of the reader (as well as of staff).

(v) A Lib.document is a growing organism

A growth and development of a modern library in the context of changing environment is in the disseminating of information/ knowledge, being a prime purpose of the user of every nook & corner. Information might be framed within the punch sheel format with as follows: -

(i) Information are for use.

(ii) Every readers/users his/her information.

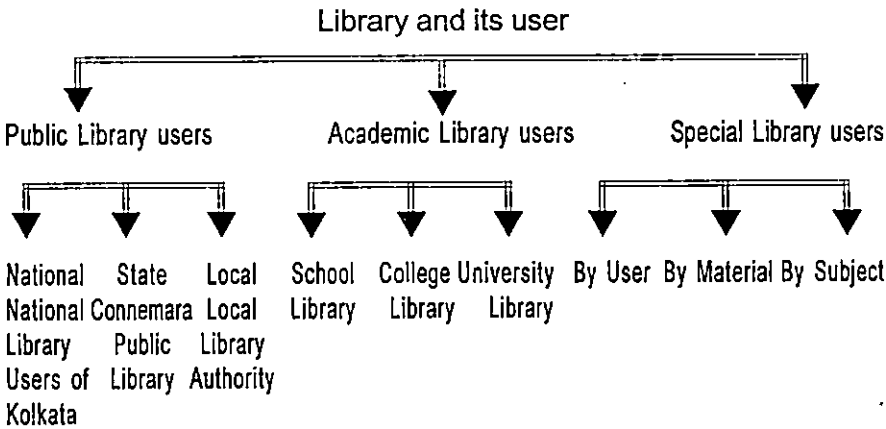
(iii) Every information its readers/users.

(iv) Save the time of the users/readers (as well as of staff).

(v) An automated (i.e. well equipped) library is a growing organism.

The above five laws are framed in the same format, which we have studied in "Five Laws Of Library Science", so, they are to be known as normative principles. They are the very essence of library science, since they provide the basic concept & branches of library science like, cataloguing, classification, technical services, organization & administration etc. Really Information has become a vital resource in the present day society for the country specially, which has her aim of making her citizen a key component of its development.

Now the topics (illustrated) :



Topics to be discussed :

- ⇨ Users in Academic Libraries
- ⇨ Users in Public Libraries
- ⇨ Users in Special Libraries
- ⇨ Changing perceptions and needs of users in Internet Era.

Users in Academic Libraries :-

Academic Library is the backbone of any academic system, which is to live in the challenging landscapes.Any system, unless it is adopted whole-heartedly by the society, it cannot be successful to achieve its objectives. The same is the function of academic library for any Academic society if it is to be developed. An academic society which includes:-

(i) School library
(ii) College library
(iii) University library

A library attached to the above institutions is known as an academic library. The academic library differs in purpose, scope and service from public library and a special library. Its main objective is to function as an auxiliary of the institutions in which it exists and to serve the needs of the students & faculties in institutions. It helps to attain the institutions its intellectual heights.

The Education commission set up in 1964 also stressed the important role of libraries in academic institutions in imparting better education.

(i) School Library :- A school library is found in school & used by school-going children. The users in this library would mainly consist

of teachers & students .A few members would consist of the administrative staff. A child comes here having intention of, to knowing many things than the grown-ups. Hence, it is the duty of the school authorities to provide suitable atmosphere for the all round development of the child. The child will not be satisfied unless it is fed with facts & figures. Undoubtedly, the school library can under take the responsibility of serving the curiosity of the child . It should create the reading habit among children. This will in turn, help them to make the best use of College, University, Public library in future.

(ii) College Library : - It is the advance stage of school library & has huge collection of advance books in the concerned subjects. It is why, it is regarded as an institution of higher learning, which usually offers three-year or four-year course after school leading to a Bachelor's Degree. A college library is an integral part of Bachelor Degree programme so, it occupies a prominent position or attention & has always been an attraction of high-learning programme. The college library provides ample opportunities for self-education to the students, besides supplementing the class lectures . Enjoying college library, students might be motivated to play a vital & creative role in their own education. The college library is one of the means to achieve their ends. Realizing the important role of the college library, the UGC has been granting special sums of money towards the development of college libraries. The following are the objectives of a college library.

a) To provide suitable supplementary books to assist the students & faculties.

b) To keep the faculty members research-scholar/students informed of the latest thoughts in their respective field.

c) To help the students to overcome their problem.

d) To guide research-scholars & provide them the resources useful to enhance the research projects.

e) To arrange & keep arranging the essence & other essence facilities (from the library if possible) for the smooth running of all formal & special programme of learning.

(iii) University Library : A university library is a part of a university setup. Therefore it exists to serve the objectives of its parent organization . It should have the aim of advancement of the functions of its university . It should reflect the character of the university.

The university library is expected to cater to the varied needs of Graduates, Post-graduates, Research-scholars and consists of books related to their curriculum, supplementary reading & books for teaching & research. Besides the library has to subscribe to

many current useful journals related to the Research- scholar & has to possess non-book materials such as microfilms, microfiche. Therefore we need to kindle a light within student of university through its library to bring back their interest in library & make them feel about library to be a powerhouse of knowledge where they can fulfill their undisclosed dream. In a other words, both for humanities and scientific research, a well organized library is essential in a university at least for the country who have aim of being shown in the line of developed nation upto 2020. Today as we are in the 21st century every nation needs to provide its citizen what has not been made available since time immemorial, only then it could have the opportunity to face the challenging world either be in sector of technology or independent development. The education system in School, College or University is not proper, it is why we neither be able to develop research (student) nor devotion within student, as a result students have got no aims of their own. They simply come to the institution to complete their academic course either be in School, College, University. This is not a proper system to bring development. We should not decline that developments in all spheres are possible only through generation of new ideas through research. The research should be introduced at each & every step of the learning process in contrast to the understanding of research as an activity leading to a research degree. We cannot decline the library of these institutions have great role in bringing awareness towards study for the students, it is why there is huge demand of user from the library to be fulfilled, but few institutions have the will to do something in this sector so that students might have intention to motivating themselves towards studies. The purpose of education should not be to producing people who loiter for jobs, but to produce responsible citizen. Lack of a critical mass of educated people have no place in the developing world & it might lead to economic & political slavery. So, we should learn from our experiences & strengthen our centers of technology, basic sciences and centers of lower to higher like School, College or Universities and develop self-reliance. Institutions of higher education have the responsibility for equipping individuals with advanced knowledge & skills required for positions of responsibility.

Poor attitude and lack of will to develop existing facility of library has also been the main reason behind the declining interest in pursuing research-work in the country & (the) rising trend of brain drain by mass of our intellectual personality to furthering their education. Really users of the above have greatly been influenced in this information era.

USERS IN PUBLIC LIBRARY

The public library is often called the people university for its overall character. The Public Library is an institution for the people, of the people, by the people. It is for all, without the distinction of caste creed, class, colour, or sex. UNESCO, in its terminology of documentation has conceded the public library, a library , which serve the population of community or region, free of charge or for a nominal fee.

Reverend Dr.S.R.Ranganathan compares the public library with Academic library and says, Academic library can serve only a small fraction of the community. The rest must depend for their life-long self-education on a second species of libraries in the national network - the public library. It has the advantage over academic libraries in that the benefit it can bestow is global; the public library is a source not merely of information but also of recreation & inspiration.

UNESCO proclaims :- Public Library as a living force for education, culture & information and is an essential agent for the fostering of peace and understanding between people & nations.

Public library has potential power to influence society being served. It can make every possible needs available to its user or its user or country citizen, which would make them tangible to intellectual heights & feel the nation to pride. It can help farmers to improve production. It can enable businessman to improve business prospects. A public library can create in children a love of reading ,which can lead to formation of reading habits at an early age. It can provide job information, helping people looking for better prospects especially for those who are unemployed .

Similarly, elderly poor and handicapped person can also be served by public library. A blind person might be provided books in Braille here. In developing countries many users use a public library for the purpose of self-improvement. They are concerned with information and education. Success of a democracy depends upon universal education of people. In this context education is a continuing and life-long process. Public library having special category or specific

Information or rare collection of books or having special experts service (followed by Readers advisory service) are required to be used if available in the library or by consulting another linked library. Readers, advisory service is concerned with providing Reading guidance to individual into the selection of documents for study. This is what they might read. Bibliographies may be compiled on demand or in anticipation. This is a useful service .Bibliographies can be helpful in providing Readers advisory service.

The library, specially public library attracts readers by converting

itself into a special & cultural center. A library may organize a lecture, a musical concert, a story hour etc. Once people come to any of these functions, then library can make an attempt to bring books and readers together. In a developing country like India there are a large number of people who are Economically, Socially, Culturally & Educationally disadvantaged people. They need information for their very survival. A public library in India has a special responsibility towards such society, the disadvantaged people need to be given greater attention so that they can gain a rightful place in the society. As a result they would become better informed of the opportunities, which could be utilized to advantage. Thus, they can gain certain advantages, which otherwise they can't. The convergence of information media have also influenced all kinds of users whatever they, Academic, Public or Special class. The users of today's are not unknown about the fact of changing & developing information .They better know how to collect it and from where. They do have the need of updadting their information to justify their knowledge & make it qualitative use. The users have got exploded with needs and perception. We cannot circle their needs and the needs are only fulfilled by adopting modern technology & providing them update information.

USERS IN SPECIAL LIBRARIES:

A special library has status of its own. It is the product of 20th century. It is directly related to scientific and technological research and industrial development. The basic objective of the special library is to provide latest information to those who are engaged in promoting the interests of the organization. Since the users of the special libraries are definite in their purpose and need exact and accurate information, these libraries are expected to provide exact latest information at the right time.

A special library acquires and organizes information in anticipation of demand. As a result information can be made available when required.It is generally believed that the general libraries are not able to satisfy the specific needs of the special type of information seekers who are in the Research & Development wing.

Hence, the need for establishment of special libraries for a specific field for special type of user was made to necessary. Convergence of information media have also influenced to the users of special library. New developed technologies in information media has made it possible to develop the quality of information/knowledge on as is where is basis with newly developed & pin-pointed information in their

(interested) subject. So, they (users) expect same from their libraries.

The following are the special libraries established in India:

I) Birla Institute of Technology.

II) Council of Scientific and Industrial Research.

III) Indian Council of Agricultural Research.

IV) Central Leather Research Institute (Madras).

The above said libraries have really been playing vital role in bringing development in the respective field but still they are facing financial crunch in their project. Development in the above said libraries is the need of the hour. Agricultural independent might be surfaced only through adopting new technology brought in agricultural field. Industrial Development Rate either be 6.3% or above might be raised only by adopting new developed technology brought in industrial sector and the same may be expected from the development of Service Sector. G.D.P. which might be raised from 7.1% only when we have strengthened root of the basic sector. The organization having special libraries facility has definite policies and commitments to bring development in its organization. The users of this organizational library are very purposeful & they make use of the resources of the library in pursuit of their objectives.

The Networking of the special library have also been developed to meet the need of the user. But still there is a great expectation from the special libraries to be providing to the users.

NEEDS OF USERS IN INTERNET ERA WITH INNOVATIVE THOUGHTS

Thus we should have a network of public libraries which should aim at providing nation-wide library service either be Academic, Public or Special just to satisfy and,to reach the facility to the user of every nook & corner at least those who are to become future prospect of the country. The libraries in developing countries are in a developing stage. Therefore, it would be possible to develop them into a network . But it is a bare truth that whatever has been discussed earlier could not have been surfaced after a five decades of our independence. We all need to have to be involved for something the good in this field. Simply crying to bringing development in library neither pioneer us nor incite the interested people, having a hope for the country. We need to develop a fool proof plan which should be accountable & might not be backtracked from the stepping ahead .

A library having vital information either belonging to public or literate or illiterate farmer, they all would have full opportunity to adopt or

understand new or any developed technologies brought in their plaughing field. They can well be trained in mixing how much they need to add chemical or techniques helping to grow more food to fertilize their field. Generally, they use either be D.D.T. or any kind of chemicals in very excessive amount, which causes infertility of their field & having poor knowledge they fail to save the field from being infertile.

The same may be expected from the academic library after all they play key-factor in every society. A developed academic library can better address the problem of its user either be theoretical or practical. Users can also enjoy practical and theoretical understanding here & they make up their wide gap left in the class-room & personalize themselves. Users having need of special library either be Scientific or any other can easily go the library and get the desired & vital information. Researcher can update his/her synopsis and give a new heights to its thoughts & make it qualitative rather than quantitative for the purpose of its application in the country. Otherwise quantitative research would have been replaced by qualitative research, which is practical too.

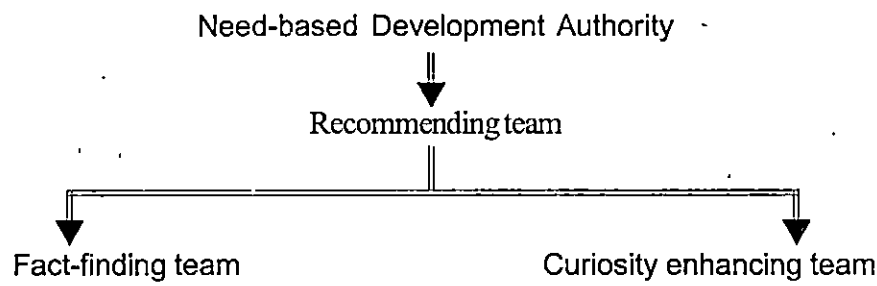
Today, not only library but also each and every sector either be Teaching, Medical, Engineering or their related field, all is being challenged with their practical viewpoint. Today one needs to study Applied teaching course, Applied physics, Applied Chemistry, Bio-engineering, Bio-technology etc. Why? Because they all need to develop themselves according to its application to the society either be earning or job oriented purpose.

Now, we see on the surface level analysis, there is a need of to be a Need-based Development authority i.e. Nb.D.A. or may be called N.D.A which will have accountability of bringing development in library either be in within or beyond its sphere. By forming N.D.A, which should be supporting body to the Library Committee or Librarian to gain its prime objectives . The authority should be having discretionary power of finding users 'suggestion & would adopt comprehensive standard to feel users' perception.

N.D.A. must have been binding to prepare an annual report on Need-based Development took place under its umbrella & put it before the Librarian or Library Committee for being it vetted. The N.D.A. might have been the following major discretionary function as a team-wing to comprehend one better.

The able & skillful user of this era wants up-to-date knowledge from library. Users who expect to develop their quality of knowledge have to be in constant touch with the collections, which store data &

new development brought in their (subject) interest. To provide better facilities to its user, libraries have been accommodating new developed technologies in its information-collecting sector. They are gradually turning into well-equipped library electronically, cutting across conventional facilities.



Function of the above : -

Function of Recommending Team :

(i) To prepare a report, having gone through the report being received from fact finding team.

(ii) To conduct a conclave among representative with the other two team from time to time

(iii) To bring coordination in their functional activities.

(iv) To settle the dispute between them if it occurs untimely.

(v) To recommend the project placed before it to the Library committee or Librarian to smoothen the same easily.

(vi) It should be made accountable for Library Committee or to Librarian.

FUNCTION OF FACT-FINDING TEAM .

(i) To incite to do the best to be the best.

(ii) To keep guiding the C.E.T. [Curiosity Enhancing Team] from time to time for developing contact between user & its personnel.

(iii) To find out the work done by C.E.T. & then push forward to the Recommending Committee for its approval.

(iv) To couch its intention regarding C.E.T.'s role from time to time.

(v) To facilitate the efforts being done by C.E.T. with incentives by recommending to parent body.

(vi) To facilitate harmonious relations at the decision-making.

FUNCTION OF CURIOSITY ENHANCING TEAM

(i) To prepare a plan for further improvement challenging its conventional facilities.

(ii) To collect suggestion from its user and get it to be implemented in its future plan .

(iii) To provide training to the user, being them made able to use Developed/Automated library.

(iv) To organize cultural programme or sub-lecture & folk programme & bag more & more user into its sphere.

(v) To incite the user to be its (Library) member.

(vi) To keep its Library net and clean & sound maintenance of kept books or electronic appliances to be used.

I, consider those libraries having resource-sharing facilities covering LAN i.e. Local Area Network (DELNET , CALIBNET , BONET, MALIBNET, NAGNET, HYLIBNET etc.) or LAN to WAN (INFLIBNET) have been providing better facilities to circle their user. This resource-sharing quality makes it empired, which does not have paucity of funds for its developing. There, information seeker either be in Public. Academic or Special, need not have to ponder for viable to vital information from the respective library.

As is being considered, the world has become global village due to the explosion or revolution brought in Information Technology & the masses should move with the latest Information technology, otherwise the technology or the information will throw them out, at least whom, who have obsolete or viable Information.

In the progressing world, we all need to ornament ourselves with updated/developed Information either be technological or theoretical only then we would be able to provide better opportunities & latest technological development brought in that particular field either be grass-root level or educational level & would make our library a pioneer in the field of orienting a ray of developed hope for the use of every nook & corner of the citizen of our country. Really, Education has a unique adjective of to be the most dominant role in the sphere of human beings. It is as important as eyes to a man for enjoying the world & its application.

A person having education is the powerful human resource asset to the country. The country having such a tangible asset might have (been) turned into mighty or legacy & could have been made it generic which would never be backtracked from the challenging trend being faced either be technical or theoretical. This all might have been horizontalised by providing sound & hygienic atmosphere to our upcoming generation to inhale them in cultured & educated spring.

RESPONDING TO USERS NEEDS IN CHANGING INFORMATION LANDSCAPES: (SOJOURN OF LIBRARIES FROM PALM LEAF TO PALM TOP)

SUB THEME: USER PERCEPTION AND NEEDS

Madhu Bhargava

The illiterate of the twenty-first century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn....ALVIN TOFFLER.

History of writing and history of libraries has traveled through passage of time almost hand in hand for about 5,500 years. People have made written records of their ideas, their relations with others and the world around them. They have kept their record on variety of materials-bone, clay, metal, plant leaves, wax, wood, papyrus, silk, leather, parchment, paper, film, plastic, magnetic tape, floppies and CD-ROMS. At almost every stage in the development of these materials, people have assembled collections of their records into libraries.

Up till now libraries have been ranking as one of society's most useful service institutions. Libraries play an important role in preserving a society's cultural heritage. Today's libraries differ greatly from libraries of the past not only in contents, kinds, and services but in physical layout of atmosphere. The contents of libraries have changed so much through the years that the word 'library' itself is, in a sense inaccurate. In turn future libraries may be entirely different from what they are today. This is so because librarians constantly strive to find ways to expand and perfect the contributions that they and their institutions make to society.

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Modern library service as we know it was largely developed in the second half of the ninetieth century, characterized by:

1. The idea of library collection being for service;
2. The notion of systematic, purposeful book selection
3. The adoption of a series of technical innovations, such as relative shelf location, improved cataloguing codes, more systematic approaches to shelf arrangement and subject classification, card catalogues and sustained efforts at standardization and co-operation; and
4. In the twentieth century, a trend towards self service, with open stacks and public catalogues

It seems that the relative stability of the past century is but a prologue to another period of radical change, comparable insignificance to that of the late nineteenth century with its exciting renaissance of ideas and techniques. Terminology has evolved, the scale of operation is much increased, and technical refinements have been made. Until recently libraries technical operations (e.g. purchasing, processing, cataloguing and circulation) and library materials (primarily texts) were both based on paper and card board; strictly speaking, libraries have always included materials other than paper such as clay tablets, palm leaves, vellum, film and so on. Over the past two decades, libraries technical operations have become based on computer technology while the library materials still remain overwhelmingly on paper and paper like media: the "Automated Library"

The prospect that library materials, as well as library operations, will increasingly be in electronic form indicated a further change in the means of library service; the "Electronic Library." The concept of the Electronic Library is important because library materials/information is increasingly available now in machine-readable form. Users will need access to them, and access will, therefore, have to be provided.

To shift to computer based technical operations and, more especially, the advent of library materials in electronic form indicate the prospect of radical changes in the means of library service. Library materials in electronic form differ significantly from traditional media. In particular, unlike paper and microform, it is possible to make electronic media available so that they

Can be used from a distance

Can be used by more than one person at a time, and

Can be used in more different ways.

The radical changes in the technology available as means for acquiring information, leaves the libraries future unclear.

LIBRARY USERS: How are the circumstances of library users changing?

Part of the answer is that many of those whom the libraries are funded to serve are themselves adopting, electronic habits, making increasing use of the new information technology of computers, electronic storage, and telecommunications in addition to the old information technology of pen, paper and photocopier. The new electronic tools provide powerful options for working with data, text and images. Some things are certain of the future. The world of the learner will increasingly be information rich and information driven. It will be a ambiguous information world. If the current educational literature is an indicator of the future, then the world of the learner will also focus on maximizing opportunities for flexible learning, co-operative learning, collaborative learning, situated learning, conceptualized learning, customized learning, and transformative learning.

Library services have to do with support for learning, both the study of what others have discovered and researched to discover what is apparently not yet known. Yet the librarian's role is often very indirect and invisible. The librarian's concern, rather than being with knowledge itself, is usually with representations of knowledge. Further, much of the time, the concern is not really with the texts themselves, but with text bearing objects: the millions of books, journals, databases that fill our libraries shelves. Librarians generally assist, not by giving answers directly, but by referring the enquirer to a book. Somehow we need to maintain the underlying concern with how individuals use information (books, journals, any other resources) and also how they become informed and knowledgeable. This is entirely different in case of academic libraries, particularly school libraries, which I will take up later.

The old information technology of pen, paper, and, latterly, photocopier did not encourage much departure from library use as 'read, think, write.' In contrast- the new information technology is transforming the use of library materials, with computer based techniques identifying, locating, accessing, transferring, analyzing, manipulating, comparing and revising texts, images and data. A wholly new dimension of the use of library services is emerging. What would do more for users, for the development of library service, and for rapport with users than providing assistance that keeps pace with these changes?

USER PERCEPTION AND NEEDS: USER'S CHANGED WORK ENVIRONMENT AND LIBRARIES

The people whom libraries are to serve are making increasing use of the new information technology of computers and electronic storage, in addition to the old information technology of pen, paper, and photocopier. The new tools provide powerful options for working with data, text, sound, and images. Consider the reduction in labor now required for sending an electronic message or text to distance collaborators for any purpose. There is, predictable, an increasing departure in information handling from the simple pattern of read, thinks, then write. Computers are used for so much more than the traditional notion of "computing."

The change from the Paper Library to the Automated Library has been primarily a matter of computerizing the library's internal procedures. There has been little impact on library users and little reason for there to be much, until the on-line catalog began to replace the card catalog. Before that time, users may have noticed improved circulation procedures and, perhaps, better-produced lists of various kinds, but the impact of the move to the Automated Library was mainly internal to the library and independent of changes among library users' working habits.

The on-line catalog has two quite kinds of impact. For all who visit library it is a different sort of catalog, with a keyboard, screen, and a new way of searching to be learned in the place of passive trays of cards.

A different impact has been on the growing proportion of library users whose work habits and working environment have changed to include routine use of computers. For these people the option of remote access to the library's catalog has constituted an important new extension of library service. Not since library catalogs were printed and distributed in book form in the nineteenth century has this kind of catalog access been possible. The fact is that this enhancement of service through the automation of the catalog is of benefit only to those who had the technology to use it.

This second selective impact—an enhancement of service primarily for those whose work habits and equipment enable them to benefit—is a major characteristic of the shift from the Automated Library to the Electronic Library. The ability of the library to provide access from *within* the library to materials stored electronically and to generate copies on paper is clearly a useful extension of service. It can be symbolized by the provision of printouts of the results of bibliographic searches performed by librarians for library users. However, the ability

of the library to arrange for access from outside the library to materials stored electronically, such that users with suitable equipment and skills can use these resources by themselves, constitutes a much more substantial extension of library service.

Extensive use of the Electronic Library depends on a change in the work habits and working environment of library users. In many work environments, Especially in universities and corporations, and among professionals, administrative employees, writers and now doctors, generally, it is common to find widespread and increasing use of computers, laptops, palmtops and telecommunications. People who have moved to a personal computing environment for their work they need the provision of an Electronic Library because the effective conduct of their work is based on access to electronic records. Following example From American College Of Physicians web site will illustrate the use of Electronic Devices better.

" A patient was having cardiac arrest induced by ventricular fibrillation. Ebben Smith, MD< an internal medicine resident at the University of Pennsylvania Medical Center in Philadelphia, was following the advanced cardiac life support algorithm when he came across an indication for amiodarone. Because the drug had recently been added to the algorithm, however, no one knew the appropriate dose.

Fortunately, Dr. Smith had downloaded information about the drug onto has handheld computer and had easy access to dosage information and indications for the drugs. "I pulled it up at the patient's bedside in a matter of seconds,"" he recalled. "It was there when I needed it, when the patient was dying. It was a life saver, literally."

Dr. Smith's experience illustrates the convenience that Palmtop computers offer physicians, particularly when they need information quickly.

For these reasons the shift from the Automated Library to the Electronic Library should be associated with and paced by the parallel shift in the "task environment" of the people that the library is to serve. Once library users work electronically they are held back by the lack of remote access to an on-line catalog and by lack of access to materials in electronic form. The Electronic Library will be useful but the benefits are not fully achieved until the library users work electronically. The new information Technology is transforming the use of library materials, with computer-based techniques for identifying, locating, accessing, transferring, analyzing, manipulating, comparing, and revising texts, images, sounds and data.

This close coupling of library development with changes in user's

work-styles requires a new perspective among those responsible for library services. Increasing proportion of those to be served use a computer and that telecommunications are in place to support extensive connectivity between computers, the library, and databases. It is not difficult to outline what needs to be done: the starting point would be the principle that the kinds of services provided in the Paper Library should be made available for use by those who now use the information technology. Hence from a computer anywhere a library user should be able:

1. To search the library catalog, including all cataloged holdings, without need to refer to additional catalogs on card or on microfiche. The library "catalog" is best seen as a series of concentric circles that include the holdings of the local library, of nearby, and of distant libraries. Within each catalog category, the searcher should have the option of expanding a search to associated files: circulation records, incompletely cataloged materials, and files of materials that are on order.
2. To search in bibliographies and also to be able to find the items listed, whether on paper, on microform, or on-line.
3. To search in directories and reference works.
4. To search for numeric data in social, technical, economic, and scientific databases—and to retrieve conveniently whichever datasets are needed.
5. To search for images and moving images—pictures currently on slides, movies, photos, and videotapes—and to retrieve copies for use.
6. To search for texts, whether texts that were already known or those discovered in a catalog or bibliography.

These resources (catalogs, bibliographies, directories, numerical data, images, and texts) should be available for library users at their place of work using the tools with which they normally work (desktops, laptops and palmtops), which implies copying in electronic form into personal storage, printing, or ordering a copy of printed material. These resources should suit the user's convenience by being available when needed, requiring minimal effort or formality, blend smoothly with personal computing practices. They should allow for convenient movement from one file or function to another and for integration of computerized with nonautomted procedures. The Electronic Library will involve a heterogeneous hardware and software environment that requires a heavy emphasis on compatibility, linking, and interoperability through standardized protocols. The technical complexities of providing such service should be invisible to the library user.

The adoption of computers for libraries' technical operations, the transition from the Paper Library to the Automated Library, can be viewed as an evolutionary development. Much of the change represented, at least initially, the mechanization of previously manual procedures of the Paper Library. The changes have been, at least until the provision of on-line catalogs, mainly for internal efficiency and for the convenience of library employees. In contrast, the rise of Electronic Library, in which materials are stored in electronic form, may seem revolutionary than evolutionary because of the implications for the provision and use of library services by users.

ELECTRONIC DOCUMENTS

The "full text" of documents in machine-readable form has been generally absent from library services until recently, in contrast with the progress made in making bibliographies, catalogs, and numerical data available in electronic form.

The characteristics of electronic documents differ greatly from those of paper documents.

1. Electronic documents are not localized. Given telecommunications connections, an electronic document can be used from anywhere, without one even knowing where it is stored geographically.
2. In practice several people can use the same database or electronic records at the same time.
3. Electronic documents are easily copied.
4. Documents stored electronically are very flexible. They are easy to revise, rearrange, reformat and combine with other documents. Hence the popularity of word-processing among people who have to create and, more especially, revise documents.
5. Collections of documents stored in electronic form are now less bulky than paper versions. The trend is to even greater compactness.

INCREASE OF ELECTRONIC DOCUMENTS

There is steady growth of documents in electronic form and access will necessarily have to be provided to them. Databases are increasingly available in (and sometimes only in) machine-readable form. Publishers commonly have or could have the text of their books in machine-readable form even if they may not yet choose to publish them in that form.

The most obvious source of electronic documents is new publications issued in electronic form. But what of the older materials on paper that occupy so many mils of libraries' shelves?

Classical Greek texts and increasing quantities of medieval and modern literary texts are already available in electronic form. Devices have been available for some years that can scan printed material, derive digital versions, and "read" the text out loud for the blind and visually impaired. Technology exists for copying microfilmed materials into electronic, digitized form and, most likely, much of this, once digitized, could also be converted to digital text. Therefore, it is technically feasible that very substantial amounts of older as well as future library materials becoming available in electronic form whether or not librarians engage in retrospective conversion. Storage costs for electronic documents are decreasing steadily, while the building costs for storing paper documents are not. For the users it is extremely easy to access electronic materials provided they have tools (desk, lap, palm tops) available.

CONVERGENCE OF INFORMATION MEDIA: REINVENTING THE LIBRARY

What are we to do with documents in electronic form? There is little choice but to do the same as we do with a paper document or with microfilm document:

Catalog it and, as with manuscripts, pay careful attention to which versions or state of text it is.

Store it in some accessible place.

Give it a call number.

Ensure that pertinent bibliographic and location data are accessible in or through bibliographic databases.

There seems no real alternative. Given that electronic documents exist and are becoming progressively very important, to ignore them would be to provide a progressively less complete library service. A library administration might choose to retain an exclusive concentration on paper, microfilm, and other localized media, but that would mean that access to electronic documents would have to be found through other channels, such as the computer center. The result would be a split in the provision of library service: the "library" providing access to only some kinds of documents; and another organization providing the balance of the library service—that which involves access to electronic documents.

The significant difference with an electronic document is that if you

have the call number it should in principle be possible, from any workstation, to gain access to it remotely, view it, download it, and, in brief, "use" it. Think how much simpler and quicker it would be if librarians and even better, library users could obtain their own inter library 'loans'(now technically copies or excerpts) on a self service basis, requiring the tolerance but not the time and energy of the staff of the library from which it is obtained. This change would be rather like the change from having closed library stacks, in which library employees had to fetch each book for users, to open stacks in which library users could obtain and examine books by themselves. Similarly, in Electronic Library, library staff would be mainly concerned with creating and sustaining the system so that users could serve themselves.

Self service however, is a mixed blessing. It also assumes standardized intelligible procedures, presupposes some expertise on the user's part, and may make it less easy for the service providers to know what is going well and what is not going well. Yet it may be the only affordable way to support large-scale library use.

The advent of text in electronic form, the step from the Automated Library to the Electronic Library, has profound consequences on the users. In an on-line world the user could move to the table of contents by depressing a key, then on to examine a chapter. Next the user might want to look for specific terms or names in the index, on-line, then move to specific patches of text, again on-line, since the text is on-line one could expect a concordance providing access to all of the text. The user might abandon that text, follow up a reference(from inside the text or from a citation index) to another text, go back to the catalog records to look for another book, or scan the subject headings with a view to reformulating the search. There would be a continual changing, "zooming in" and out between a broad view and focus on details. It is not that the familiar data elements of the catalog record will have disappeared or that the identifying and locating functions are any less important, but rather than the catalog will effectively have disappeared as a recognizably separate, physical entity. Instead, the catalog data would be part of a much broader set of data elements and the catalog function would have become one feature in a suite of related functions in on-line library.

GLOBALIZTION IN ELECTRONIC LIBRARIES

Two elements of Paper Library and Automated Library, 'conveniently accessible' and 'locally held' begin to dissolve with the Electronic Library. Because electronic documents are remotely accessible, it does not matter much to the library user where the documents are

located—nationally or internationally. Sources available all over the world respond to the user of Electronic Library and it changes our perspective on collecting and local collections. Instead of our thinking being dominated by local collections, as is unavoidable with the Paper Library and the Automated Library, the effect of having electronic documents is to make local storage optional rather than necessary. This means that we can realistically begin to think nationally or, in more technical terms, network-wide-as broadly as there is networked access. Since electronic documents do not need to be locally held and since the needs of users in different locations vary, the most plausible approach is that of viewing the totality of electronic documents as being, in effect, one great big distributed collection, analogous to the great big collectivity of bibliographies.

There is more to be said on this issue: Relatively little attention seems to have been given to comparing the costs of maintaining paper collections compared with the costs of maintaining electronic collections. If hardware costs and computing costs continue to come down, then presumably the costs of storing electronic documents must also be trending downward relative to the costs of storing paper documents. Similarly studies will need to be made of the costs and difficulties of accessing electronic documents remotely compared with accessing both locally held and remote paper documents. Here again the same assumption about cost trends would suggest a long-term cost trend favorable to electronic documents. For both types of documents the underlying problem is an "owning versus borrowing" trade-off, but the costs, cost trends, and acceptability appears to be different and to be changing.

Here again issues are broader than technology, costs and the preferences of library users. Publishers, booksellers, authors, and probably, intellectual property rights are also moving into changed situation as electronic documents permit, in principle, a significant change in library collecting practices and in the use of library materials. A changed "industry" and new policies are expected.

CHANGING PERCEPTIONS AND NEEDS OF USERS IN INTERNET ERA: THE CHALLENGE

There is overwhelming consensus concerning trends in unit costs in Information Technology:

The cost of computing power will continue to decrease rapidly;

Data storage costs will continue to decrease steadily; and

The technology of telecommunications indicates strong long-term reductions.

Overall trend is very clear ; Computer based operations are becoming steadily and substantially more affordable.

Computer based procedures can be substituted for pre-computer procedures overall, the amount of internet and computer based activity has increased tremendously.

Information technology may only be a means and not an end, but that does not make it unimportant. Internet era has changed whole personality of paper and automated library. Drastic amounts of information scanned and unscanned, used and to be misused, left absolutely to the wits, whim and fancy of users. Professional library staff can help academic user to a large extent and for rest of the segments help can be extended when asked.

Internet and computer based processing and electronic document storage have been found to have its own distinctive characteristics. The constraints include a greater need for standardization, increased technical complexity, and greater dependence on equipment that is much fragile and much more prone to obsolescence than that of a paper library. Advantages of the new technology are that repetitive, mechanical tasks can be delegated to the machinery; the rate of increase in labor costs can there by be moderated; electronic records can be modified, rearranged, and combined with each other; and, with telecommunications, distance has become substantially irrelevant. These factors transform those aspects of library service that derive from the constraints of paper and cardboard. The location of the user, the catalogue record, the bibliography, and the document can now be connected in ways that, hitherto, could only be dreamed about. As these changed constraints came to be appreciated it becomes clear that these new circumstances offer the possibility—indeed the inevitability—new paradigms for libraries and its users.

Several major changes are indicated:

1. Since library materials in electronic form lend themselves to remote access and shared use, the assembling of local collections becomes less important. Coordinated collection development and cooperative, shared access to collections become more important.
2. With materials on paper, having copies stored locally is a necessary condition for convenient access. With electronic materials, local storage may be desirable but is no longer necessary. Therefore, a catalog defined as a guide to what is locally stored becomes progressively less complete as a guide to what is conveniently accessible. The answer is to shift from catalogs to union catalogs or linked catalogs and to holdings

data linked to bibliographies, reversing our usual perspective on catalogs as bibliographic descriptions attached to holdings records. Arguably the present day catalog, online or on cards, is a more a product of the limitations of nineteenth century library technology than of present day opportunities.

3. In the meanwhile, those to be served are changing their information-handling habits. Paper and pen have already been supplemented largely by desk top work stations and now are being replaced by laptops and Palmtops, capable of using a multiplicity of remote sources. This leads to an entirely different perspective: from a library-centered world view to user-centered.
4. The trend is to digitize everything for storage and manipulation: sound, image, moving images, texts, and numeric data. Documents of all kinds are becoming more homogeneous in their physical medium. Limiting libraries to printed documents, or, indeed, written documents, makes less and less sense. If that demarcation dissolves, there is a blurring of boundaries. The functions of the library, the computer center, and the telecommunication office are converging, overlapping. Or, at least, more closely related. New patterns are evolving in the relationships between libraries, publishers, and others in the information industry. The roles of archives, libraries, museums, and other information stores seem likely to become less clearly differentiated.
5. There is much greater opportunity to bring service to wherever potential users of library service happen to be.

Catalogs, collections, buildings, and library staff are the familiar means for providing library services. Computers, networks, and electronic documents provide additional means with interesting possibilities.

Hitherto library services have been dominated by local catalogs, local connections and great inequalities in the geographical distribution of services. The constraints on library service are changing right now. None of this is a argument for abandoning paper and local collections. All of this requires us to think again about the mission of the library, the role of library, and means of providing service. For the first time in more than hundred years we face the grand and difficult challenge of reshaping, redesigning library services.

USERS IN ACADEMIC LIBRARIES; WITH SPECIAL REFERENCE TO INTERNATIONAL SCHOOL LIBRARY SERVICES.

Since the time of Plato, we have known how to teach yet we rarely

do it and have become almost obsessed with what we teach!

Sheer volume of information available today requires students and libraries to evaluate carefully and assess its value and accuracy. Our students born just a few years ago do not have the same frame of references we have had. An entertaining yearly list of these differences is compiled by Beloit College in Wisconsin to remind teachers that the children in front of them today are not the same ones that were there 10 or 15 years ago- and these students need a different knowledge base than ours as they live and learn in future.

Information has, at the risk of being trite, truly become the coin of the realm. The process of information acquisition has taken on far more complex nuances as we involve students in experiences that require them to assess what information they know, what they need or want and how accurate the information is.

The concept in International schools that the classroom benefits from the library as it is transformed into an exciting learning laboratory; the students learn and practice life long skills with the help of librarian, have enabled me to define the dynamic role of librarian and library in the learning process.

It is a happy circumstance for educators and librarians that we know about learning converges with a technological revolution that customizes and tailors teaching practices to support these paradigm shifts. More than a tool for the learner, electronic information delivery and access affects what we teach and how we teach. It affects what is worth knowing and what is worth knowing how to do, it sets a new agenda for educators. Technology, and specifically Internet access, puts 'real' data at our fingertips and helps us generate our own new data. In both instances technology can raise the level of learning from the hunt-and-peck activities that characterized early library instruction to investigate activities that challenge learners to be 'authentic researchers'. In this context computer becomes more than a tool; it is a unique interactive learning environment that increases cognitive processing and the cognitive and social dimensions of learning. Interactively adds to the motivating capability of computers and enables the potential for higher order thinking when used to solve a problem.

WHAT DOES A LIBRARIAN DO IN INTERNATIONAL SCHOOLS?

No longer the librarian limit her repertoire of teaching to lists of skills dictated by a curriculum document conceived in isolation. Based on the innovative pedagogical strategies of the school which generally include:

a. Project-based learning

b. Discovery learning
c. Problem-based inquiry learning
d. Critical thinking
e. Multiple intelligences
f. Resource-based learning
g. Co-operative learning
h. Metacognitive learning
i. Interdisciplinary teaching
j. Multi-cultural teaching
k. Action research and reflective practice.

Information literacy agenda of the librarian blends artfully with the agenda of the class teacher. Team teaching, interdisciplinary planning and teaching, integration of technology in teaching, and authentic, or performance based learning and assessment, are comfortable partners to resource-based project work that highlights problem solving, enquiry learning and critical thinking.

In these projects students assume the persona of a child living in their town during the Middle Ages and keep a diary that chronicles a day at the market place, or the adventures of becoming an apprentice to the village blacksmith. The Black Plague and destruction of Pompeii is seen through the eyes of a child. Students become Cultural Consultants and Counsel families moving to the Middle East. Their own experience as global nomads enables them to personalize the assignment and project their own experiences into it. Students investigate the relationship between smoking and health as they collect evidence from sources that survey real people as well as sifting through information sources, both print and electronic, to produce a brochure. Students become Secret agents sent by their governments to explore historical, geographical and economic data about several European countries. Their reports are submitted to headquarters with recommendations for investment and development. They become designers as they weave a tapestry, create a computer program, plan and cook an Asian meal or construct a model of a Korean temple, choreograph a dance or perform an original play, or write and implement a program in bike safety for children.

These projects relate to a cross section of academic subjects Librarian plays the role of reflective practitioner and the use of action research to involve students and teachers in critiquing project design and implementation.

USERS IN PUBLIC LIBRARIES AND SPECIAL LIBRARIES

Users of special libraries have been using facilities such as on-line database search, AS and SDI services and Inter-net from few decades. Whereas exposure to such services in public library users is recent. The potential use of library service greatly exceeds the actual use, which is known to be sensitive to convenience. On the one hand, use of the Electronic Library depends on a technical infrastructure that is increasingly in place at least for special, corporate and university library users. On the other hand, the electronic library appears to remove many of the constraints of the Paper Library, such as the effective limitation to local collections, the tendency for desired books to be unavailable, limited opening hours, and, especially, the need to go to the library in order to use it. With these constraints removed or moderated there is the prospect of a dramatic increase in library use.

With so much more service possible in the Electronic Library expanded use of library service seems likely to depend more and more on facilitating self-service than on ever more one-to-one service by library staff, even though the latter will remain necessary and desirable and even though the tasks facing the library users are becoming more complex.

USERS IN PUBLIC LIBRARIES: COPING WITH COMPLEXITIES

Where there is increasing complexity, problems arise when user's expertise is inadequate for the task particularly in Public Libraries. Different sorts of response are possible:

1. User education. Expertise can be increased.
2. Advice. The system could possibly be designed to offer helpful guidance or prompts.
3. Simplification. If the complexity facing the user could be reduced, then the user's expertise would become more adequate, relative to the task.
4. Mediation. Providing an expert human intermediary to provide assistance-a reference librarian, for example—is an obvious course of action.
5. Delegation. It may be possible to shift some of the task complexity inside the system: make the system itself smarter, more capable of determining what should be done next.

The advent of computerized services for searching machine-readable databases has also added a new dimension to reference and information services. Many of the major abstracting and indexing services are now searched on-line as well as on paper. Increasingly

bibliographies are available not only from on-line search services but also as optical digital disks that can be searched inside the library and as files mounted on on-line library catalogs.

To conclude, a greater investment in User Education will be needed to ensure that effective use is made of library resources, all the more so as any library's resources comes to include the resources of all cooperating libraries. Such an investment is needed if library users are to achieve a return on the greater investment in the creation of Paper, Automated, and Electronic Libraries.

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USERS IN ACADEMIC LIBRARIES

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INTRODUCTION

In the rapidly changing environment library and information services are as important and essential for the development of community and nation as basic needs of foods, clothes and home. Library services can be defined as a process by which users fulfill their information needs.

Information is growing at a very fast rate and is available in various formats.

- Users and their needs are increasing
- Increasing interdisciplinary research
- Increasing role of electronic sources for academic and research purpose

GLOBALIZATION

Knowledge is key to economic opportunity. The globalization of the world economy and the revolution in the information technology are the motors of the knowledge society, and their most important resources are education and training. The knowledge society will transform social structures and totally reshape the world of work. If one wants to be able to meet the demands of the future, he will have to rely on one decisive factor: Lifelong learning. The volume of knowledge at our disposal is currently doubling every five years. The effect of the present transition from an industrial to a knowledge society has had a great impact on the business world, education. Digital information is the ultimate example and a significant cause of globalization information particularly electronic information is ubiquitous, it respects no boundaries (cate, 1998).

RELATED ELEMENTS OF GLOBALIZATION

Globalization affects professionals from all sectors of the information, knowledge and communication area as well as information users because networks affect all levels of our Society. Globalization

has close relations with the elements such as :

- Networking and access
- Information superhighways and infrastructures
- Knowledge based generation
- Quality issues
- Information Science
- Intellectual Property
- Lifelong learning and distance education
- Integrity
- The Consequences on business and industry
- The impact on the information professionals

An enhanced understanding of the technologies underlying information and communications systems. R&D approaches, and technology management are the basics in knowledge society under the influence of globalization. We can say that multimedia development in global scenario has created working and learning in a networked electronic environment leading to the "Globalization of Information". Definitely it requires a better understanding of the structure of the world-system, the global economy, and the mechanisms-including international regimes-that "govern" the global economy within an anarchic world-system.

Globalization has developed Global Information Infrastructure (GII) and Global Information Society (GIS) in the knowledge society.

ROLE OF GLOBALIZATION IN THE CURRENT KNOWLEDGE

Globalization has provided following responses for the development :

1. Creation and support of a "forum" to connect scientists, information technologists, policy makers, and practitioners for the purpose of rethinking education in the age of globalization and information.
2. Support mechanisms for the exchange of ideas and experiences in the use of educational technologies.
3. Encouraged explorations, experimentation to push the frontiers of the potential of information technologies and communications for more effective learning.
4. Engagement in the design of pilot "learning communities" that expands the time and space dimensions of education.
5. Encouraged, and engaged in, collaborative schemes for the development of educational curriculum-related software that

can be used worldwide to achieve economies of scale and expertise.

CONVERGENCE OF INFORMATION MEDIA IN ACADEMIC LIBRARIES

CHOICE OF READING MATERIAL

Selection of reading materials in the library influences the success of users . Selection of materials should be based on the most relevant and wanted books . In the past, traditional literature such as *printed books and journals* were selected on the basis of printed publisher catalogues. Bibliographies and pamphlet. The actual order was usually placed as an order letter. Now many *e-books e-journals* catalogues of other libraries and publishers are available online via internet and other networks. Selecting and ordering of the literature can be done via email and home pages. Many publishers and organizations are providing facility to sign up for email notices . *Online newsletters, and news bulletins* to inform about their new publications new issues of periodicals and other activities.

- **RESOURCE SHARING**

One library cannot fulfill the information needs of its users fully. Therefore resource sharing is very essential amongst libraries with the advent of computer networking, internet and electronic sources the concept of resource sharing is changing. Libraries can share their licensed electronic sources with the permission of publisher. Libraries can send scanned pages of printed materials through e-mail on the urgent requirement of users

- **EVERY TIME AVAILABLE**

Printed reference material can be used only in the library and mostly limited copies of papers books are found already issued to users, but electronic document can be used from anywhere at the same time by several users.

- **ONLINE OPEN ACCESS SYSTEM**

Open access system is the most effective system . In this system users can directly access the bookshelves. Electronic documents do not have the disadvantage of the theft of books and tearing of pages from books in open access as traditional documents are having.

- **CATALOGUE**

In the traditional libraries, to get required books users are expected

to search books in the catalogue by author , title and subject only but in the modern computerized catalogue and online catalogue, users can search books by keywords, combination of any filed to use Boolean operators with the help of internet and networking, users can search required materials in not only their own library, but also in other libraries through online catalogue with multiple searching facilities.

- **WEBSITES**

Now with the advent of internet the library develop their own websites to disseminate information about services, activities and source of the library. Clyde (2000) had stated that library websites can be used to promote the libraries and their services, provide current information to the users access to online and CD_ROM based reference sources. Such as databases and encyclopedias and to provide remove access to the library catalogues and other databases created by the library.

- **Email**

Libraries can circulate the list of new arrival and the list of books and journals related to users interests through email without any delay and increase the possibility for books to be accessed by their readers

- **INTERNET ERA AND ELs**

Internet offers a wealth of new applications which are advantageous to users. The rapid growth and fast changing environment of the internet has left many information providers and information users struggling to keep up-to-date with information. Information gateways are quality controlled information services like traditional information services gateways also employ subject experts and information professional to select classify and catalogue. Internet resources aid search and retrieval for their users. Users are offered access to a database of internet resources descriptions, which they can search by keywords or browse by subject area.

The inclusion of internet resources is in the interest for support of research and education. *Integration of internet resources in to the library services ,however, would mean a commitment to maintaining access to select internet resources* and this would do a great and necessary service to the research community. Internet resources are very convenient for the users as they can be accessed from outside the library and material can be delivered without delay either to the computer in the library to the users computer at home. Properly maintained internet resources also are more UP_TO_DATE than printed resources. When evaluating the quality of internet resources: gateway staff should be trained. This reflects an acceptance that do

build a high quality collection needs;

- A good understanding of the information needs of the user group
- To base selection on semantic judgments about the relevance and value of resources to the users
- To have knowledge and experience of information resources
- Skill in critical evaluation of information resources

• OPAC

Number of libraries are involved in the projects to integrate internet resources in their OPACs. A pre-requisite for this however is the availability of a web-based OPAC which can support hot links.

• DIGITAL LIBRARY

The digital material shall include books, periodicals, literature, patents, reference books, manuscripts, sound recording pictorial images, multimedia publications etc. Through internet the digital resources of all libraries of the world shall be accessible to the users.

• REFERENCE SERVICES

Virtual reference librarian is available via email or through a web form for providing reference services to users (Rao and Babu2001)

• LIBRARY AUTOMATION SOFTWARE

Library automation software can save the time of the user. Many library automation softwares are available in the market. Some are based on barcode technology which provide fast circulation system. Quick and multiple field searching facilities to users and save their valuable time . Many library remain closed at the time of stock taking and users are unable to access the libraries but with the help of barcode scanner, the stock taking can be done in very short time. Implementation of barcode technology is one of the best tools to minimize the time taken at the circulation counter in charging/ discharging the reading materials

Electronic document do not require circulation, searching for missing material and binding. Users can get information about required material in a second with the help of computerized and online catalogue.

• WEBLIOGRAPHIES

Webliographies is the indexing of information sources which are available on internet. Many of the librarians maintain the list of web

addresses (URL) related to the interest of their users as an additional service, hence saving their time to search information.

- **E-books**

Academic libraries about their e-book experience. Electronic books offer creative possibilities for expanding access as well as changing learning behavior and academic research. Content can always be accessible, regardless of time or place, to be read on PCs or on portable book readers.

Academic researchers need to rely on authenticity and integrity of content.

E-book content should match any print version and include all its elements: text, graphs and illustration. We anticipate that academics will increasingly incorporate information that can only be presented as non print media (e.g., visualizations, interactive content etc.) Content needs to be separated from access and manipulation features, and needs to be transferable, in a non proprietary format, into a variety of software and hardware readers, both to offer readers a choice of additional features, and to make it possible for libraries to loan e-book content

CONCLUSION

We are living in the age of information, which is available in many formats in vast volumes. Computer, Internet and Networking have enhanced our access to information. They have broken international boundaries and we have new tools and techniques to provide services to our users. In this environment, **the Five Laws** could be restructured as under:-

1. Information is available in any format located anywhere for use.
2. Every user would get his/her information anywhere and in any formats located anywhere else.
3. Information which is available in any format and located anywhere should get its reader wherever he/she is located.
4. Save the time of global user.
5. Information is growing at very fast rate in various formats.

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USER'S INFORMATION NEEDS: A CASE STUDY OF POWER SECTOR LIBRARIES IN INDIA

Shankar Singh
Dr. S.K.Sharma

ABSTRACT

The present article is based on the practical observation gained over two years to complete research work on power sector libraries in India. Although this is a small and revised portion of the main research but this has impact on collection development policy and redesigning library services under a library system. The paper highlights user information need and information seeking behaviour of power sector libraries in India.

POWER SECTOR LIBRARIES

Power Sector Libraries can be defined as an institution intended to support the administrative agencies of the power sector including government, public sector autonomous body and private sector through its services . These are administered and financed by the concerned organizations These are attached with power sector offices and departments. It is an information centre established for effective transfer of information needed by various power sector institution having responsibilities such as policy making, decision making research and development in power sector. Stress is provided on information

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processing and quick retrieval of significant and indispensable information rather than collection development.

Most of the libraries of this category attached with the corporate office of the power sector but due to the nation wide spread of its plants and research center these are also attached with that like NTPC, NHPC,BHEL, and PGCIL have a chain of plant libraries established in India. Libraries of State Electricity Boards are also not in a proper form and we can say these only a depository of documents .

The genesis of power sector libraries is very difficult to trace because there is no evidence to focus light on it. We can think that MOP library was established after the formation of power ministry. CPRI library was established in 1960 and libraries of NTPC, NHPC and TERI were established in the year of 1975. There is no resource for identifying status and importance of power sector library in India except articles written by Mr. Pramod Verma, Manager BHEL and Mr. Shankar Singh, Manager PFC Library.Therefore it is not easy task to evaluate the resources and services offered by there libraries and users study in the present context of redesigning techniques for the modernization of these libraries.

USER's OF POWER SECTOR LIBRARIES

The term 'user' in the context of information chain may be at the end. The generator of information who comes in the beginning of the chain may also be and 'end-user' of information. In the context of a database he is the researcher, he may be a target user for a desired information product or information services. According to White,Taker - a user may be defined, as a person who uses one or more library's service at least once a year.

In Power Sector Libraries the users are almost homogeneous in nature. A librarian should ascertain about the information requirements of his library users. The user is involved in most operation of the documents chain: He knows certain sources of information which he is able to weigh up and communicate: He can contribute in the process of document selection and sometimes ever decide on new publications.In short we can justify that he knows his core subject areas very well .He utilizes the products and services of the information unit and state what he wants and how it should be presented. He also plays important role in the collection development process of a library system.Therefore user is the essential consideration to the design, evaluation, improvement adoption, stimulation and operation of the library service.

TYPES OF LIBRARY USERS

Library users can be categorized on the basis of their nature of work

(i) Policy makers like Minister,Secretary,Director ,Head of Units
(ii) Manager & Professionals like MBA, CA, Engineers
(iii) Non executives
(iv) Industrial worker
(v) Support staff

USERS PROFILE OF POWER SECTOR LIBRARIES IN INDIA	
DESIGNATION	QUALIFICATION
Cabinet Minister/ State Minister	MP
Secretary/SPL/JOINT/DY	IAS
Chairman & MD	IAS/Expert
Director/Executive Dir	Expert
Advisor/Consultant/GM	Expert
DGM/AGM/CM/SM/DM/AM/OFFICER	Professional
Company Secretary/Programmer/PRO/AO	Professional
Librarian/Rajbhasha Adhikari/Asstt Officer	Professional
Engineer/Sr Engineer/Chief Engineer	Professional
Supervisor/Workman/Operator	
Asstt./Steno Typist/Attendant	

It is necessary to identify the basic information need of each category of users .

NEED OF USER STUDY

There is a need of user's study user because

- User attitudes are essential considerations in the design of the library services ;
- User have ways of doing things and these should be accommodated in the design of services ;
- User's psychology is different ;
- User have ways of doing things that should be changed .

For information seeking attitudes of users the following questions may be asked :

- ✓ What do users require from the library ,in terms of types, quality and range of service to satisfy their needs ?

- ✓ What does user do about his /her needs ?
- ✓ How does the user carry out a search for information ?

ASSESSING USER's INFORMATION NEEDS

Very little has been done in studying the user needs of Power Sector though the area is very challenging and important for National Power Development and making necessary policy formulating to meet the energy crisis of India. Following twenty different methods of collecting information about user's needs listed by MS Pauline Atherton can be utilized for user study in Power Sector Libraries.

- ➢ Study the organogram of the institution;
- ➢ Study of its functions / activities chart;
- ➢ Study of its annual reports, project reports, corporate plan and other publications;
- ➢ Survey of user's requirement using questionnaire;
- ➢ Interviewing users:
- ➢ Interviewing user;
- ➢ Interview of superiors of users;
- ➢ Interview of subordinates of users;
- ➢ Study of papers , books etc . published by the user;
- ➢ Attending seminars, colloquia, etc. in which user participates;
- ➢ Observing users at his work place;
- ➢ Personal informal contact with users;
- ➢ Meeting user in small, preferably homogeneous groups periodically;
- ➢ Feedback from information services rendered;
- ➢ Providing for suggestions from users , about their subject interest, author interest institutional interest etc.;
- ➢ Attending technical meetings within the institution in which projects and problems may be discussed;
- ➢ Scanning correspondence and reports prepared and receive by user;
- ➢ Study of documents used by user;
- ➢ Study of reference queries received from users;
- ➢ Participation in institutional/work orientation programmes.

POWER SECTOR PROFESSIONALS INFORMATION SEEKING BEHAVIOUR

There is no study available on information seeking behavior of Power Sector Professionals in India. It is the complex pattern of action and interactions which people engage in, when seeking information of whatever kind and for whatever purpose. The users information behavior reflect their relationship to the information unit and its various products and services .How much does the user already know? How does he select his information source? How does he formulate his queries? How does he choose his information? and so on. Following factors are responsible for change in users behavior towards information seeking:

- User's knowledge ;
- Role of library and its services;
- Use of information product;
- Accessibility to information product ;
- User's status in the organization
- User Participation in Collection Development :

SOME SUGGESTIONS TO IMPROVE USER - PARTICIPATION IN COLLECTION DEVELOPMENT ARE

- Intensifying current awareness services and disseminating information about new titles /document to a large group of users ;
- Systematizing literature searching, reference service and other information functions and services to get regular feedback to acquisition system for identifying useful items;
- Speeding up procurements of recommended documents to create a drive of achievement motivation in users ;
- Involving actively the projected areas to identifying precise requirements of information and documentary resources of new and ongoing projects / programmes;
- Active participation of users in collection development is highly desired.

USERS' PERCEPTIONS ABOUT COLLEGE LIBRARIES IN KERALA

K.C. Abdul Majeed
M. Bavakutty

INTRODUCTION

Library is considered to be one of the important educational facilities required for the effective teaching and learning process in academic institutions. Higher educational institutions like postgraduate colleges and universities are aimed at preparing students for higher levels of studies, research, and a variety of jobs. In fact it is the library which assists the higher educational institutions to attain their objectives by providing good collection of information resources and services.

According to Kothari Education Commission Report (1966)[1], a library in a higher education institution is aimed at:

- providing resources necessary for research in the field of interest to the institution;
- aiding teachers in keeping abreast of developments in their fields;
- providing facilities and services for supporting all programmes of instruction;
- opening the door to the world of books, which encourage reading for pleasure, self-discovery, and personal growth and sharpen intellectual curiosity.

In order to meet these objectives, college and university libraries collect and provide necessary documents, suitable reading and reference facilities, services and the like.

In Kerala, higher education is imparted through 8 universities and 317 colleges[2]. The 8 universities are: 1. University of Kerala (1937),

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2. University of Calicut (1968), 3. Cochin University of Science and Technology (1971), 4. Kerala Agricultural University (1972), 5. Mahatma Gandhi University (1983), 6. Sree Sankaracharya University of Sanskrit (1993), 7. Kannur University (1996), and 8. Sree Chitra Tirunal Institute for Medical Sciences (2000).

The colleges include 208 Arts and Science colleges, 44 Teacher Training colleges, 12 Arabic colleges, 6 Law colleges, 5 Ayurveda colleges, 6 Medical colleges, 2 Dental colleges, 5 Homoeo colleges, and 16 Engineering colleges. The number of colleges is increasing due to the liberal sanction of self-financing colleges of all categories by the present government in the state.

All universities and colleges maintain a library either as a matter of university affiliation requirement or as part of academic obligation of the institution. Libraries in institutions of good academic standard cater to the document and information requirements of students and teachers in their institution. With this end in view these libraries collect, process, maintain and service a good number of text books, reference books, journals and periodicals, audio-visual materials and other necessary information sources. Besides it provides good physical facilities and information services like loan service, current awareness service, xerox service, reference service, Internet service, etc.

Every student and teacher will have some expectations about his/her college library, and these expectations may be a reflection of what he/she has already received from his/her school, junior college, public, media, information sources and other libraries. Assessing the expectations of students and teachers is very difficult as there is no suitable tool. As a result the library staff have little knowledge about users' expectations, and they provide facilities, collection and service without considering these expectations of the users.

Perceptions and expectations are closely related and are formed from personal experience. Perception is developed during delivery of service and it will affect the whole service the user is going to avail him of. Even if the library offers excellent service, the user may have low perception about the library if the user has a bad impression on any particular service provided by the library.

Now users' expectations and perceptions are largely analyzed as a part of measuring service quality in libraries. The SERVQUAL technique developed by Parasuraman et.al (1985)[3] is totally based on customer's expectations and perceptions about a service. It is assumed that quality is equal to the minus of expectations from perceptions (Q = P – E). Based on this principle, a study of postgraduate students' and teachers' expectations and perceptions

about their college libraries was conducted in Kerala and the details are as follows.

METHODOLOGY

This study used a questionnaire containing 2 parts, - the first part for expectations and the other part for perceptions. Each of these parts contains 44 statements grouped under 5 library quality determinants, namely Physical Facilities (6 statements), Collection (7 statements), Staff (9 statements), Technical Processes (9 statements), and Library Services (13 statements). The levels of expectations and perceptions were measured by using a five-point Likert scale from "1= Strongly Disagree" to "5 = Strongly Agree". The results of the study were processed by means of SPSS statistical software package.

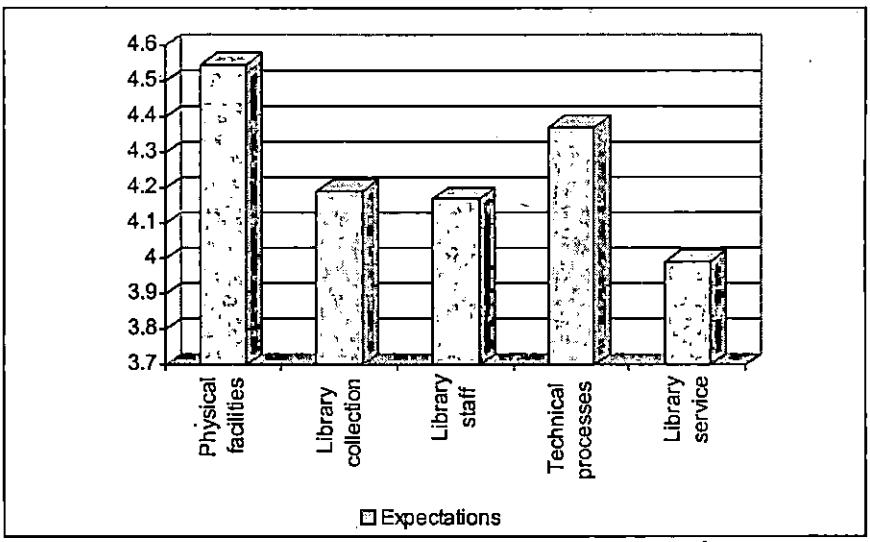
The library of the college offering the highest number of postgraduate courses in a district was selected as sample college library and all postgraduate students and teachers in the postgraduate departments of these colleges were selected as sample users. Thus one college library from 14 revenue districts in the state of Kerala was covered by the study. Out of 3092 questionnaires distributed to the postgraduate students and teachers 2485 responses were received. The respondents include postgraduate students (80.24%) and teachers (19.76%) from Arts (45.63%), Science (46.20%), and Commerce (8.17%) belonging to male (29.66%) and female (70.34%) groups.

The responses of the users were analyzed according to expectations and perceptions and with a view to seeing the level of quality of the library and its determinants. They are as follows.

EXPECTATIONS OF COLLEGE LIBRARIES

Analyses of the statements relating to five service quality determinants show that 'physical facilities' was assessed as the most important determinant followed by 'technical processes' and 'collection'. But low expectations were marked against 'services.' This is clearly evident from the figure 1.

Figure 1
Expectations of students and teachers about College libraries



The priority order of service quality determinants stresses that users' expectations are designed from past experiences with libraries. The majority of the college libraries, school libraries and public libraries, where these users are members, are functioning with inadequate rooms or buildings and other physical facilities. In these libraries, collection is inadequate, not classified and catalogued, and not organized in an easily retrievable order. Inadequate collection, non-professional library staff and traditional types of library services are common features of all college libraries in the state. Therefore students and teachers have high expectations about good physical facilities, well-organized and easily retrievable collection and professionally qualified and experienced staff for giving good library services. Further analysis of the statements relating to each determinant gives more details about the expectations on these determinants.

With regard to 'physical facilities', 'good lighting and ventilation' and 'clean, and tidy setup' are highly expected and 'easy accessibility' and 'comfortable furniture' are least expected. This is also a reflection of the users' past experience as the central library or the department library are located very near to the teaching department and enough furniture needed for post graduate students and teachers are available there. But these libraries do not have good lighting, ventilation and neatness.

Responses relating to 'library collection' indicate that the students and the teachers have high expectations on 'good collection of

reference books' and 'textbooks' and low expectations on 'lending of all books and journals' and 'provision of books very first time they require'. It is true that no college libraries in the State are lending all books, especially reference books and rare books. Due to limited number of copies of books no library can give a book immediately on users' request. At the same time college libraries should have a good collection of textbooks and reference books to support teaching and learning process effectively.

Among the statements relating to the determinant 'staff', 'help to locate books and journals' and 'correct information on request' are expected high and 'personal attention' and 'understanding specific needs well' are expected low. The users are clearly aware that library staff cannot give personal attention to all users and they cannot understand the specific needs of each user. But they are supposed to help the users to locate the books and journals they need and give correct information requested.

In the case of 'technical processes', 'good catalogue' and 'well arranged books and journals on shelves' are expected high and 'early release of new arrivals' and 'simple and fast issue and return' of documents are expected very low. It is due to the fact that the methods of circulation used in college libraries are outdated and time consuming and users might have believed that there are no good and fast methods suitable for the same. They may also understand that library staff need sufficient time to make a newly acquired book ready for service. At the same time, students and teachers think that a good library should have a good catalogue and the collection should be properly arranged on shelves.

The analysis of the statements included in 'services' shows that 'good atmosphere for serious reading' and 'free services' are highly expected and 'issue of documents for sufficient number of days' and 'inter-library loan' is expected very low. It indicates that users have no experience of using interlibrary loan service. No library can lend a book for a period from the date of commencement of the class to the date of last university examination. At the same time all college libraries ought to provide good atmosphere for serious reading inside the library and free services to their users.

Expectations of different categories of users indicate that both students and teachers have high expectations on 'physical facilities' and 'technical processes' and low expectations on 'collection', 'staff', and 'services'.

Users from Arts, Sciences and Commerce subjects have high expectations on 'physical facilities' and 'technical processes' and low expectations on 'staff' and 'services'.

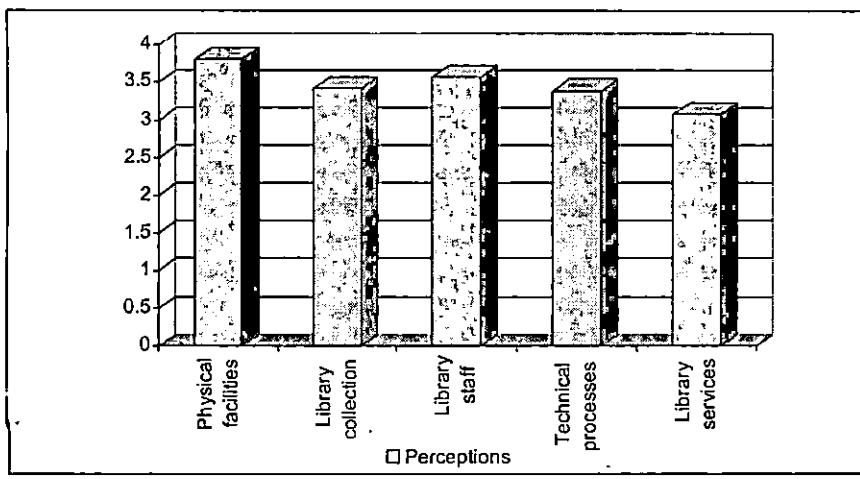
Male and female users also are expecting 'physical facilities' and 'technical processes' high and 'staff' and 'services' very low.

PERCEPTIONS OF COLLEGE LIBRARIES

The experiences of students and teachers from their college library are clearly reflected in their responses shown in figure 2 on perceptions about their library, library quality determinants and statements regarding each determinant.

Figure 2

Perceptions of Students and Teachers about College Libraries



Among the library quality determinants, 'physical facilities' and 'staff' are perceived high and 'technical processes' and 'service' are perceived low. Generally post graduate students and teachers are the regular and serious readers in a college library. In the majority of cases, the central library is in the middle of teaching departments and the department library is very near to their class room and they get enough lighting, ventilation and reading facilities there.

Though the library assistants are non-professionals, they are always ready to help postgraduate students and teachers as friends, or as lower employees or as a matter of existence. But they are unable to classify, catalogue and scientifically organize the collection and provide good services, other than to the normal loan service.

Among the statements representing the quality determinant 'physical facilities' 'easy accessibility' and 'clean and tidy' setup are perceived high and 'comfortable furniture' and 'reader space' are

perceived low. Users' perceptions are correct, as most of the college libraries functioning in small rooms or buildings and the furniture available there are very old and damaged. But these libraries are in an easily reachable location and they are always kept in clean and tidy conditions.

In the case of 'collection', 'provision of books very first time' and 'collection of reference books' have high perception, but 'lending of all books and journals' and 'users requests in acquisition' are perceived as low as no libraries are lending costly and rare documents. Users' requests, especially of students are not considered in the selection and acquisition of new books. At the same time the college libraries have a good collection of reference books and textbooks and these are kept open for postgraduate students and teachers.

Out of the nine statements relating to 'staff', it is perceived that 'correct information on request' and 'help to locate books and journals' are high and 'personal attention' and 'understanding specific needs' are least. Bearing the qualifications and subject knowledge of library staff in mind, the post graduate students and teachers are asking simple questions about the availability, issue condition etc. and the staff are easily answering such questions. Being a lower educated and non-professional, and as a duty the staff actively assist students and teachers to locate needed documents. But the staff cannot give personal attention to all due to large number of users and they do not have sufficient knowledge to understand users specific needs in time.

In 'technical processes', 'issue and return' and 'arrangement of documents in an easily retrievable order' have high perceptions and 'computer catalogue' and 'easily searchable catalogue' have low perceptions. All college libraries ought to issue books to students and teachers and libraries having no classification and catalogue are keeping the collection on a topic basis. But in most of the cases, the college libraries (department libraries) have no catalogue at all.

It is found that in 'services', 'working hours' and 'free services' are perceived high and 'inter library loan' and 'internet service' are perceived low. Every college library opens before the classes begin and closes after the regular classes are over the libraries are giving all services on free of cost except in few cases like 'xerox' and 'internet' services. But no college libraries are participating in resource sharing programmes on a large scale and Internet is a latest development and it will take a long time before it becomes a common service in all libraries.

Students and teachers have high perception on 'physical facilities' and 'staff' and low perception on 'technical processes' and 'services'.

Users in Arts, Science and Commerce subjects have high

perceptions on 'physical facilities', and 'staff'. Science and Commerce users have low perception on 'collection' and services and for Arts users; it is 'services' and 'technical processes'.

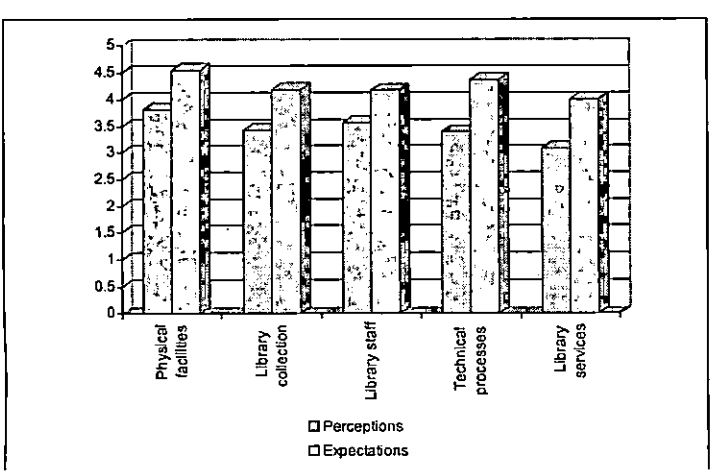
Male and female users have high perception on 'physical facilities' and 'staff'. Male users have low perception on 'collection' and 'services' and for female users it is 'technical processes' and 'services'.

QUALITY OF COLLEGE LIBRARY SERVICES

The responses about expectations and perceptions were compared to see the quality level of post graduate college libraries in the State based on the 'gap theory' devised by Parasuraman et al. for measuring service quality. According to 'gap theory' Quality is equal to the minus of perceptions from expectations. i.e. Q=P-E, where Q=Quality, P=Perception, and E=Expectation.

The overall quality of college libraries in the State are poor as the level of perceptions of users are very low compared to their expectations. Among the quality determinants, 'staff' has high quality followed by 'physical facilities' and 'technical processes' and 'services' have very low quality. Though the number of library staff are inadequate, and they have low qualifications, and knowledge they are always ready to assist students and teachers who need some help. Though the reading area, furniture and fittings etc. are inadequate, the postgraduate students and teachers get required facilities in libraries. But lack of qualified library professionals in adequate numbers greatly affects the technical processing and good library services. The level of quality of all determinants is shown in figure 3.

Figure 3
Level of Quality of College Library Services



Further analysis of the statements relating to each quality determinants indicates that level of quality expected in each statement varies from the other. In the case of 'physical facilities' 'accessibility' and 'layout' have high quality and 'reader space' and 'lighting and ventilation' have low quality. In 'collection', 'lending of books and journals' and 'provision of books the very first time' have high quality and 'collection of reference books' and users 'requests in acquisition' have low quality.

In the case of 'staff' 'timely completion of technical works' and 'personal attention' have high quality but 'informing the availability of requested books in time' and 'knowledge to answer users questions' have low quality. In 'technical processes', 'issue and return' and 'immediate re-shelving of used books' have high quality, but 'computer catalogue' and 'easily searchable catalogue' have low quality. In the case of the determinant 'services', 'issue of books for sufficient days' and 'personal help' have high quality, but 'internet service', and 'list of new arrivals' have low quality.

The rank wise analysis of statements indicates that 'issue of books for sufficient days', 'lending of books and journals' and 'easy accessibility' have high quality and 'internet service', 'list of new arrivals' and 'computer catalogue' have low quality.

Students have the opinion that 'staff' and 'physical facilities' have high quality and 'technical processes' and 'services' have low quality. The teachers also have the same opinion in this regard.

Users belonging to Arts subject have the feeling that 'staff', 'collection' and 'physical facilities have high quality and 'technical processes' and 'services' have low quality. 'staff' and 'physical facilities' have high quality and 'technical processes' and 'services' have low quality to users in Science and Commerce subjects.

Both male users and female users have the same opinion about the level of quality of determinants. To them, 'staff' and 'physical facilities' have high quality and 'technical processes' and 'services' have low quality.

MAJOR FINDINGS OF THE STUDY

The following are the major findings of the study:

1. Level of quality of college libraries in the State of Kerala is very low.
2. 'Physical facilities ' and 'technical processes' are highly expected and 'services' are expected least.
3. 'Physical facilities' and 'staff' are perceived high and 'technical

processes' and 'services' are perceived low.

4. 'Staff' and 'physical facilities' have high level of perceived quality and 'technical processes' and 'services' have low level of perceived quality.
5. 'Issue of books for sufficient days' and 'lending of books and journals' have high-perceived quality and 'internet service' and 'computer catalogue' have low perceived quality.
6. Among 'physical facilities', 'easy accessibility' and 'good layout' have high-perceived quality and 'reader space' and 'lighting and ventilation' have low perceived quality.
7. Among 'collection', 'lending of books and journals' and 'provision of books the very first time' have high perceived quality and 'collection of reference books' and 'users requests in acquisition' have low perceived quality.
8. 'Timely completion of technical works' and 'personal attention' have high perceived quality in 'staff' and 'informing the availability of requested books in time' and 'knowledge to answer users questions' have low perceived quality.
9. Among 'technical processes', 'issue and return' and 'immediate re-shelving of used books' have high perceived quality and 'computer catalogue' and 'easily searchable catalogue' have low perceived quality.
10. 'Services' like 'issue of books for sufficient days' and 'personal help' have high perceived quality and 'internet service' and 'list of new arrivals' have low perceived quality.

SUGGESTIONS

1. Low level of perceived quality of college libraries should be a warning to college librarians and college authorities. It is a clear indication that the real objectives of college libraries are yet to be met. Serious action is needed to improve the level of quality of the library according to the expectations of students and teachers.
2. Low perception of quality determinants indicates that librarians should evaluate all aspects related to various quality determinants in a library and improve them to the desired level of users.
3. Technical processes and services have to be improved by employing adequate numbers of qualified professionals in the library. The non-professionals are to be technically trained to enable them to do technical works and services.

4. Internet service has to be introduced in all libraries and they should develop and provide computer catalogues to users.
5. All physical facilities have to be improved.
6. Libraries should develop a good collection of textbooks and reference books and they should also consider the requests of students and teachers in selection of books and journals.
7. Special care should be given to users requests and a good system of reservation for books lent out have to be introduced.
8. Catalogue of books must be prepared and provided to users. The catalogue should be an easily searchable one and users prefer a computer catalogue most.
9. Exhibition of list of new arrivals has to be introduced.
10. A user focused collection development; works, techniques and services are to be followed.

CONCLUSION

Assessment of perceived quality of library is one of the necessities confronting authorities and managers in libraries. It helps them to understand users expectations, perceptions and level of quality of the library and work accordingly. It is a must in libraries where services and products are marketed. A knowledge about users, their needs, reasons behind the needs, the way in which the need is to be met, reasons for selecting a service, important components in the service, level of satisfaction with these components, etc. will help librarians to keep their library in a right order as expected by its users.

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USERS' SURVEY OF SELECT PUBLIC LIBRARIES OF WEST BENGAL

Amit Kumar Bandyopadhyay

ABSTRACT

West Bengal Public Libraries Act was passed in 1979. Since then, the Government is spending a huge amount of money for the maintenance and development of more than 2,500 Govt./ Govt. Sponsored Public Libraries of the state, keeping in mind, their importance in spreading mass education, information and culture among the public. But it is often complained that "The public libraries have failed to develop sufficient interest among the public", "Number of Readers are decreasing", "Reading habit is not increasing", etc., etc.

It is felt that there is a need for evaluating the services of the public libraries for taking future course of action. Thanks to UGC that sanctioned a Major Research Project for the purpose.

As a part of the project, a survey is made among the users of some sponsored public libraries in a few districts of West Bengal to know what the users think about the services rendered by the public libraries, how far they are satisfied and what more they need. The data so collected is processed and analysed with the help of a computer and inference drawn.

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INTRODUCTION

West Bengal Public Libraries Act was passed in 1979. Since then, the Government is spending a huge amount of money for the maintenance and development of more than 2,500 Govt./ Govt. Sponsored Public Libraries of the state, keeping in mind, their importance in spreading mass education, information and culture among the public. But it is often complained that "The public libraries have failed to develop sufficient interest among the public", "Number of Readers are decreasing", "Reading habit is not increasing", etc., etc.

It is felt that there is a need for evaluating the services of the public libraries for taking future course of action. Thanks to UGC that sanctioned a Major Research Project for the purpose.

As a part of the project, survey is being made among the users of some sponsored public libraries of different districts of West Bengal to know what the users think about the services rendered by the public libraries, how far they are satisfied and what more they need. The data so collected is being processed and analysed with the help of a computer to draw inference.

OBJECTIVE

The objective of the present study is to know who are the users of the public libraries of some backward districts of West Bengal, their subject and information need, their problems and what they think about the services rendered by the libraries with a view to betterment of services.

SCOPE AND METHODOLOGY

Some users of twenty sponsored public libraries of two backward districts of West Bengal, namely Bankura and Purulia are covered in the survey. One District Library, four Town Libraries and five Rural Libraries of each of the two districts are surveyed. Readers available on the spot during the day of survey are only covered. Nearly closed questionnaire was prepared for the purpose, which was given to the users during survey and received back after some time. Most of the rural libraries had very few readers during the time of survey. Only 92 readers could be surveyed. The survey is conducted during some suitable days of 2003.

Analysis

Out of the 92 readers surveyed 18 are of the two district libraries,

40 are of the eight town libraries and 34 are of the ten rural libraries. 79 users or 85.86% are male and 13 or 14.13% are female. 71 of the users surveyed are regular members of the libraries and rest 21 (22.82%) are not members but read in the reading room of the library. Consequently, most of the libraries of West Bengal keep the reading room service free and allow non-members as well to read in their reading room.

Category of readers found by Cast:

GENERAL	SC	ST	OBC
67 (72.8%)	14(15.2%)	0(0%)	11(12%)

It is notable that there is no reader of ST category although a high percentage of population of the two districts belong to this category. This indicates that we have still failed to bring them to the standard. The libraries need take special drive to insist the few educated STs available in their locality to become their members.

Category of readers found by Age:

Up to 15Yrs.	16-30	31-45	46-60	60+
16	54	18	2	2
(17.4%)	(58.7%)	(19.56%)	(2.17%)	(2.17%)

Category of readers Profession:

STUDENT	SERVICE	UNEMPLOYED	BUSINESS	HOUSE WIFE	OTHERS
43	16	12	8	2	11
(46.73%) (11.95%)	(17.4%)	(13%)	(8.69%)		(2.17%)

Out of the 16 service holder users found during the survey 9 were teachers. Out of 11 shown in other category 2 are retired servicemen, one is carpenter, one fisherman and one cultivator. It may be noted that students are a major group of readers of the public libraries and another important group is the unemployed service seekers. These two groups give importance on career guidance and GK and competitive examination oriented documents and services.

Category of readers by Qualification:

PRIMARY	NON-MATRIC	MATRIC/ HS	GRADUATE/ DIPLOMA	POST GRAD.
1	16	18	49	8
(1.08%)	(17.4%)	(19.56%)	(53.26%)	(8.69%)

Thus, majority readers (61.95%) found during the survey are having Graduate or higher degree showing that the public libraries are yet used mostly be the higher educated groups of the society only even in backward districts. Only 18.48% of the readers found is non-matric although they are the majority group of the society. The libraries are yet to take steps to bring more and more less educated readers to the library to fulfil the roll of mass education.

INFORMATION NEEDS

We wanted to know what type of information the readers would desire from the library if it provide information service. It was a open question. The readers were free to propose any subject/topic. Many readers gave more than one choice making the total much more than 100%.

The highest demands are for:

Competitive Exam. related	81.52%
Career Guidance related	18.47%
Education	15.2%
Community Information	7.6%
Information of Daily needs	5.43%
G.K.	5.43%

PURPOSE OF LIBRARY USE

We wanted to know the purpose of library use. It was a multiple choice question from some specified purposes. The readers were free to give more than one choice making the total much more than 100%. The maximum mentioned purposes are:

1.	Home issue	76%
2.	News Paper Reading	73.91%
3.	Magazine Reading	61.95%
4.	Prep. For Competitive Exam	25%
5.	Career Guidance	20.65%
6.	Pass time reading Novel/Story etc.	18.47%
7.	Text Book	17.39%
8.	Cultivation of Knowledge	13.04%
9.	Prep. For Academic Exam.	11.95%
10.	Using Reference Tools	10.86%

Thus, except for home issue of books the major use of the library is for newspaper (73.91%) and Magazine (61.95%) reading. Preparation

for competitive Exam. and career guidance are the next two uses which together are of high 45.65% demand. The library should give importance to these sections increase number of documents and reading seats of these sections.

Next the users were asked about the frequency of their library visit.

FREQUENCY OF LIBRARY VISIT

DAILY	TWICE AWEEK	ONCE AWEEK	ONCE IN 2 WEEKS	LESS
40	25	18	2	1
(43.47%)	(27.17%)	(19.56%)	(2.17%)	(1.08%)

Thus, 43.47% of the users we met in the reading room come to library daily. More than 70% of them come at least Twice a week. Consequently, 73.91% of them read news papers in the library.

DURATION OF LIBRARY VISIT

15 min.	30 min.	1 hour	2 hour	4 hour	more than 4 h.
11	19	32	23	3	2
(11.95%)	(20.65%)	(34.78%)	(25%)	(3.26%)	(2.17%)

Thus, 32.6% of the user met stay upto half an hour only in the library. But at least 65% of the readers met stay one hour or more time in the library.

Next we wanted to know about staff behaviour and helpfulness. The response was as given below:

STAFF BEHAVIOUR

VERY GOOD	GOOD	BAD	V.BAD	NO RESPONSE
57(61.95%)	22(23.9%)			13(14.13%)

STAFF HELPFULNESS

VERY HELPFUL	HELPFUL	NOT HELPFUL	NO RESPONSE
61(66.3%)	17(18.47%)		14(15.21%)

KNOWLEDGE OF STAFF ABOUT SUBJECT BOOKS

VERY GOOD	GOOD	BAD	V.BAD	NORESPONSE
26(28.26%)	19(20.65%)			45(48.9%)

KNOWLEDGE OF STAFF ABOUT LOCAL INFORMATION

VERY GOOD	GOOD	BAD	V.BAD	NO RESPONSE
19(20.65%)	20(21.73%)			53(57.6%)

Thus, according to more than 60% of the readers surveyed, the staff were of very good behaviour and were very helpful. But nearly 50% of the readers surveyed gave no response as they were asked of staff knowledge about subject books and local information. It indicates that more qualified staff with thirst of knowledge are needed for the libraries.

Next we wanted to know users comment about collection of the library on subjects of their 1st, 2nd choice.

LIBRARY COLLECTION ON SUBJECTS OF 1ST, 2ND, 3RD AND 4TH CHOICE

	VERY GOOD	GOOD	POOR	V.POOR	NO RESPONSE
SUBJECT OF 1ST CHOICE:	15 (16.3%)	36 (39.13%)	15 (16.3%)	6 (6.52%)	20 (21.73%)
SUBJECT OF 2ND CHOICE	12 (13.04%)	34 (36.95%)	18 (19.56%)	6 (6.52%)	22 (23.91%)

Thus, 44.55% of the readers failed to say that collection was good on the subject of their 1st choice. 50% of the readers either gave no comment or said that collection was poor or very poor on the subject of their 2nd choice.

Next we wanted to know the users' comment about reading room environment namely, about light, number of seat and quietness.

READING ROOM ENVIRONMENT

	VERY SATISFACTORY	SATISFACTORY	NOT SATISFACTORY	NO RESPONSE
LIGHT	23 (25%)	43 (46.73%)	19 (20.65%)	7 (7.6%)
NO. OF SEAT	20 (21.73%)	38 (41.30%)	26 (28.26%)	8 (8.69%)
QUIET NESS	21 (22.82%)	40 (43.47%)	12 (13.04%)	19 (20.65%)

Thus, 71.73% users are satisfied with the reading room lighting, rest 28.27% are either not satisfied or like not to comment on it. Only

63% users are satisfied with the number of seat, rest 37% are either not satisfied or like not to comment on it. 33.69% of the users can not say that they are satisfied about the quietness of the reading room. Number of seats need be increased in the reading rooms. silence should be observed. In many libraries there is a single reading room for all category of readers. This creates some problem. There should be a separate reading room for students.

Next I wanted to know the number of books a reader likes to take home at a time.

NUMBER OF BOOKS A READER LIKES TO TAKE HOME AT A TIME

ONE BOOK	2 BOOKS	3 BOOKS	3+	NO RESPONSE
17	40	10	3	22
(18.47%)	(43.47%)	(10.86%)	(3.26%)	(23.91%)

Thus, only 18.47% users are satisfied with only one book for home issue. At least 57.59% have expressedly said that they like to have two or more books at a time for home issue. Number of documents should be increased and at least two books should be issued to home at a time considering readers' demand.

Next they were asked if they have ever attended any programme organised by the library.

WHETHER ATTENDED ANY PROGRAMME ORGANISED BY THE LIBRARY

YES	NO	NO RESPONSE
38	29	25
(41.3%)	(31.52%)	(27.17%)

Thus majority readers have not attended any extension programme organised by the library or they do not like to comment on it. The libraries should frequently organise cultural and other programmes to make the library more popular.

We asked the readers to comment about over all service of the library:

OVER ALL SERVICE OF THE LIBRARY

VERY GOOD	GOOD	NOT GOOD	NO RESPONSE
27	58	1	6
(29.34%)	(63.04%)	(1.08%)	(6.52%)

Thus, the users love their library and in spite of all its shortcomings, 92.38% of the users said that the over all service of library was very good or good.

We wanted to know the names of subjects of readers' choice by preference of 1st, 2nd, 3rd and 4th choice. The readers were free to give name of any subject they like. The weight of 1st choice is taken as 4, that of 2nd choice is taken as 3, that of 3rd choice is taken as 2 and 1st choice as one. The number of times a subject is chosen as 1st choice is multiplied by its weight 4 that of 2nd choice is multiplied by 3, that of 3rd choice is multiplied by 2 and that of 4th choice is multiplied by 1 and then these values are added to calculate the total weight given to subject and a weighted ranked list of preference of subjects is prepared accordingly. The first few subjects of the list are mentioned here:

RANKED LIST OF SUBJECTS OF PREFERENCE

SL.NO	RANK NO	SUBJECT	WEIGHT
1.	1	Novel/Fiction/Story	101
2.	2	Bengali Literature	60
3.	3	Detective	54
4.	4	G K	41
5.	5	History	33
6.	6	Religion	29
7.	7	Short Story	24
8.	7	Physics	24
9.	9	Mathematics	21
10.	10	English Literature	16
11.	10	Philosophy	16
12.	12	Career Guidance & Comp. Exam.	14
13.	13	Science Fiction	12
14.	13	Magazine	12
15.	12	Cartoon	10
16.	12	Poetry	10
17.	12	Travel	10

FINDINGS AND SUGGESTION

* Only 14.13% of the users found during the survey are female.
* There is no reader of ST category although a high percentage

of population of the two districts belong to this category. The libraries need take special drive to insist women and the few educated STs found in their locality to become library members.

* 76% of the readers are within 30 years of age and 60% are either student or unemployed, seeking job. Strong text book and career guidance section should be developed in the libraries.

* Competitive Exam. (81.52%) and Career Guidance (18.47%) related information is most needed by majority of the users met.

* Only 18.48% of the readers found is non-matric although they are the majority group of the society. The libraries are to take steps to attract less educated readers to fulfil its roll of spreading mass education.

* The library is heavily used for newspaper (73.91%) and Magazine (61.95%) reading. Preparation for competitive Exam. and career guidance are the next two uses of high 45.65% demand. The library should give importance to these sections, increase number of documents and reading seats of these sections.

* More than 65% of the readers met stay one hour or more in the library. Comfortable seating arrangement and proper lighting should be there.

* 37% of the users surveyed are either not satisfied with the number of seats or are not willing to comment on it. Number of seats need be increased in most of the libraries.

* 33.69% of the users cannot say that they are satisfied about the quietness of the reading room. Silence should be observed in the library reading room.

* Nearly 50% of the readers surveyed gave no response as they were asked of staff knowledge about subject books and local information. More qualified staff with thirst of knowledge are needed for the libraries.

* 57.59% of the users have said that they like to have two or more books at a time for home issue. Number of books should be increased and two books should be issued to home at a time.

* 58.7% readers have not attended any extension

programme organised by the library. The libraries should organise cultural and other programmes to make the library more popular.

* In addition to novel, story, detective and other Bengali literature books, there is high demand for books on G K, History, Religion, Physics, Mathematics, English Literature, Philosophy, Career Guidance & Competitive Examination, Science Fiction, Cartoon, Poetry, Travel etc. Sufficient number of books of these subjects should be purchased.

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ATTITUDE OF RESEARCH SCHOLARS TOWARDS THE INFORMATION RESOURCES AND SERVICES OF UNIVERSITY OF DELHI LIBRARY : A STUDY

Mahender Pratap Singh
Gajender Singh

ABSTRACT

The study conducted with a sample of 220 research scholars of the university of Delhi using questionnaire method, is an attempt to identify the impression of scholars towards the adequacy of library resources, their use of the library, and their view on library services. The findings of the study are : that majority of the users visit the library daily, there is significant difference in the attitude of scholars toward the use library resources and services as being adequate compared to their needs, level of awareness towards the existing facilities are at par and scholars want improvement the library sources and services.

INTRODUCTION

Our educational policy document emphasizes that research in the universities will be provided enhanced support and step will be taken to ensure its high quality. An effort will be made to encourage the setting up of national research facilities within the university system, which proper forms of autonomous management.

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About a century ago when research output and its users were limited in number, it was quite easy to examine and evaluate the collection of library in the light of the aim and objectives of the university. Literature explosion by way of vast amount of research output and tremendous increase in the number of its users have made the libraries of today highly complex and complicated. All these have made it necessary to conduct, from time to time, users surveys to measure the adequacy of collection, its effectiveness and the usefulness of other facilities and services.

No university can claim to promote research without the provision of adequate and well balanced collection of books and periodicals related to the research needs of the university both immediate and potential and without rendering a promote and effective service to its research scholars. Hence there is needs to study the attitudes of research study towards library resources and services because user's attitudes are essential considerations in the design of library service.

BACKGROUND OF THE UNIVERSITY LIBRARY

The story of University of Delhi begins in 1911, when Emperor King George V, announced that the capital of India would be transferred form Calcutta to Delhi. The Delhi University bill was introduced in the Imperial legislative assembly on 16 Jan.1922. The bill was finally passed by the assembly on 22 Feb.1922. The Viceroy gave his assent to the bill on 5 Mar.1922. It aimed at the establishment of a unitary, teaching and residential university, which was to be under the control of government of India.

The Viceroy, Lord Reading was the 1st Chancellor and appointed Sir Hari Singh Gaur, a distinguished barrister-at-law form Nagpur as a first Vice Chancellor. Beginning of University of Delhi with 2 faculty, a department and 3 colleges, the university of Delhi is today one of the best and largest university in the country. There are approximately 245000 students (including nearly 4500 Ph.D and M.Phill students).

LIBRARY

The Delhi University library begin in 1922 with a collection of 1380 gift books. The number of current periodicals was 86 and the daily average of readership was 19. At the 1st meeting on15th Nov.1922, the library committee take the decision for open access system and this is continues to this day. 1st Librarian appointed on 18th June1923,Khan Bahader Pirzada Muhammad Husain (M.A), Retired Distt. and session Judge, Delhi.

Maurice Gwyer when he became Vice Chancellor he instead that

a university could not develop without a library advice was sought from Dr.S.R.Ranganathan, then the librarian of Madras University and Sir Maurice Gwyer brought him to Delhi.

The present Central Library building was inaugurated by the Chancellor, Dr.S.Radhakrishanan on 1st Dec.1958. The library system has grown over the years and today extents all over the city. The Delhi University library system is a network of various libraries. These are:

1) Central reference library,(North Campus)
2) Central Science Library,(North Campus)
3) Central Library, (South Campus)
4) Various Departmental Libraries.

With this network of libraries of library system tries to meet the needs of nearly 245000 students, 14 faculties and 82 Department. The library has over 12 Lacks books. It is also a depository library of all doctoral theses submitted to Delhi University. It published a handbook of research activities every year of the eve of the annual convocation.

To make it a more useful, the library system is planned to be fully computerized. The library published its video cassettes catalogue under the title "Delhi University library system : Video Catalogue". The University Grants Commission granted Rs. One Crore for the computerization of the Delhi University Library System. The Delhi university library system have a Audio books resource centre also.

OBJECTIVES

The present Library Survey has following specific objectives :

(1) To identity the information needs of research scholars.
(2) To ascertain the sources of information used by them.
(3) To determine the extent to which the available library and information services satisfy their information needs.
(4) To identify the factors that influence the use or non-use of available library and information resources in research, and
(5) To improve the use of information services by research scholars in the Delhi University.

METHODOLOGY

The methodology adopted for this study survey is method. Random sampling technique is used. This consisted of questionnaire and interviews. In additions, the published data has been taken from annual reports and other university publications.

A total of 300 questionnaire were distributed among the research

scholars, 220 were returned and were found usable. The analysis of data collected is as follows :

NUMBER OF RESPONDENTS

300 questionnaire were distributed among the research scholars of different discipline by using stratified random sampling method. 220 questionnaire were received back duly filled in by respondants, which reveals a good response, interview technique was also used to obtain information from the user. Detail about the users from whom the responses have been received are given in the following table.

Table 1

Number of questionnaires distributed and responses received

Sr. No.	Category of users	No. of Question-naire Distributed	Response received	Percentage
1	Research Scholars	300	220	73.33%

The above table indicates that the percentage of research scholars in different subjects is only 73.33%.

Gender-Wise distribution of Research Scholars

The number of research scholars sex-wise is indicated in Table – 2. The table shows that out of 220 research scholars, 115(52.27%) are male while 105(47.73%) are female.

Table 2

Gender-Wise distribution of Research Scholars

Sr. No.	Category of Research Scholars (Gender-wise)	No. of Research Scholars	Percentage
1	Male	115	52.27%
2	Female	105	47.73%
	Total	220	100%

Language known

The number of users having knowledge of Hindi or English or both is indicated in Table 3.

Table 3

Language – wise distribution of Research Scholars

Sr. No.	Language	No. of Research Scholars	Percentage
1	Hindi	45	20.45%
2	English	10	04.55%
3	Hindi and English	165	75.00%
	Total	220	100%

LIBRARY LOCATION

Delhi University Central Library is located at the midst of academic campus which caters to the needs and is easily accessible to all its users either residing in staff quarter or hostels. The data collected in this regard is being given in the Table – 4.

Table -4

Library Location

Sr. No.	Place of Residence	No. of Research Scholars	Percentage
1	Staff Quarters	15	06.82%
2	Hostel	110	50.00%
3	Out side the Campus	95	43.18%
	Total	220	100%

The above table shows that the research scholars of the central library beside on the campus and their places of stay are quite near, while 110(50%), a majority of research scholars stay in the hostel. And 95(43.18%), of Research scholars stay outside the campus.

FREQUENCY OF LIBRARY VISIT

The frequency of library use by research scholars is given in Table-5.

Table – 5

Frequency of Library Visit

Sr. No.	Frequency	No. of Research Scholars	Percentage
1	Daily	115	52.27%
2	1-4 times a week	65	29.55%
3	1-4 times a month	28	12.73%
4	Rarely	12	05.45%
	Total	220	100%

It was found that 115(52.27%) of research scholars visit Daily. Only a small percentage of research Scholars is 12(5.45%) visit rarely, while 65(29.55%) visit 1-4 times a week. 28(12.73%) visit 1-4 times a month.

PURPOSE OF LIBRARY VISIT

The Research Scholars were asked to indicate the purpose of their visit to the library. Their responses is given in the Table – 6.

Table – 6

Aim of library visit

Sr. No.	Aim of visit	No. of Research Scholars	Percentage
1	Borrowing of Documents	21	09.55%
2	Consulting of Reference Material	32	14.54%
3	Current Information	21	09.55%
4	Information relating to studies	146	66.36%
		220	100%

Four aim were clearly identified for the users for coming to the library. The survey revealed that 21(9.55%) scholars came for borrowing/return of documents, 32(14.54%) scholars came for consultation of reference material, 21(9.55%) scholars came for current information and most of 146(66.36%) scholars came for information related to studies. It seems that scholars have a tendency to come to the library, the aim may be different.

LIBRARY HOURS

The research scholars response about adequacy in opening hours of the library is given in the Table – 7.

Table – 7

Library hours

Sr. No.	Opinion about Library hours	No. of Research Scholars	Percentage
1	Adequate	190	86.36%
2	Inadequate	30	13.64%
	Total	220	100%

In table – 7 it is indicated that 190(86.36%) of scholars feel that opening hours of the library are adequate for their study where as 30(13.64%) of them were not satisfied.

READING ROOM FACILITY

Best utilization of a library depends, to a great extent, depends upon its reading room facility. Reading room of a library should be cosy and comfortable. Hence the data is collected in this regard and analysed in the Table – 8.

Table – 8
Reading Room Facility

Sr. No.	Adequacy of Reading Room	No. of Research Scholars	Percentage
1	Adequate	190	86.36%
2	Inadequate	30	13.64%
	Total	220	100%

About the reading room facility, scholars table – 8 indicate that 190 (86.36%) of them satisfied, while 30(13.64%) of them were not satisfied. The analysis clearly reveals that the users did not like the present sitting arrangement, lighting arrangement and furniture of the library.

Information sources used by Research Scholars

The respondents were also asked to indicate the type of resources they used in gathering information. Table – 9 indicates in this regard :

Table – 9
Use of Information Sources

Sr. No.	Information Sources	No. of Research Scholars	Percentage
1	Books	19	08.64%
2	Periodicals	88	40.00%
3	Research Reports	26	11.82%
4	Doctoral theses	25	11.36%
5	Reference Material	09	04.09%
6	News paper	16	07.27%
7	Internet	37	16.82%
	Total	220	100%

From Table – 9, it could be stated that 19(8.64%) of research scholars use books, 88(40%) of scholars use mostly periodicals, research reports used by 26(11.82%) scholars, 25(11.36%) scholars use Doctoral theses, while reference material and news paper also use by 9(4.09%), and 16(7.27%) scholars, respectively. In the other hand 37(16.82%) scholars used Internet.

Attitude of the Library Staff

The attitude of library staff towards research scholars plays a very important role to make or mar the reputation of the library. Responses have been given in the following table.

Table – 10

Attitude of the library staff

Sr. No.	Attitude of Library Staff	No. of Research Scholars	Percentage
1	Helpful	177	80.45%
2	Not Helpful	43	19.55%
	Total	220	100%

Research scholars responses on this aspect reveals that the attitude of library staff has been found to be helpful. 177(80.45%) of scholars were found satisfied about the attitude of library staff. While only 43(19.55%), a small percentage of research scholars were found unsatisfied.

Library Collection

The opinion of the research scholars regarding the library collection in various categories because an adequate collection play a significant role in its use. The result are presented in Table – 11.

Table – 11

Library collection

Sr. No.	Types of Documents	Adequate	Percentage	Inadequate	Percentage
1	Books	10	4.54%	9	4.09%
2	Periodicals	65	29.55%	23	10.55%
3	Research Reports	20	9.09%	6	2.73%
4	Doctoral Theses	20	9.09%	5	2.72%
5	Reference Material	7	3.18%	2	0.91%
6	News Paper	16	7.27%	0	0.00%
7	Internet	32	14.55%	5	2.72%
	Total	170	77.27%	50	22.73%

Grand Total : - Adequate + Inadequate = 170 + 50 = 220
Percentage = 77.27% + 22.73% = 100%

This table shows the adequacy of various types of documents in the collection. Regarding the collection of books 10(4.54%) scholars thought they were adequate, and 9(4.09%) scholars were, saying inadequate, while in the case of periodicals,65(29.55%) scholars stated the collection as adequate, 23(10.54%) as inadequate. Regarding research report and doctoral theses, 20(9.09%) and 20(9.09%) scholars stated them as adequate, 6(2.73%) and 5(2.72%) scholars found inadequate respectively. Regarding reference material 7(3.18%) were found adequate, 2(0.91%) were found inadequate. Regarding to newspaper and internet 16(7.27%) and 32(14.55%) scholars stated them as adequate and nonrespectively and 5(2.72%) stated as inadequate.

So this table indicate that total 170(72.27%) scholars were satisfied with the library collection, while 50(27.73%) scholars were not satisfied.

Availability of Information Resources

The data collected in this regard is being given in the Table – 12.

Table – 12
Availability of Information Resources

Sr. No.	Opinion about the Required Material	No. of Research Scholars	Percentage
1	Almost All	97	44.09%
2	Most	30	13.64%
3	Some	43	19.55%
4	Few	23	10.45%
5	None	27	12.27%
	Total	220	100%

About the availability of information resources in the library, scholars indicate that 97(44.09%) scholars get almost all information resources, 30(13.64%) scholars get the most of the resources, 43(19.55%) scholars get some resources, whereas 23(10.45%) scholars get only few resources, while only 27(12.27%) scholars responded none.

Adequacy of Loan Period

Loan period of information resources for study indicated in table – 13.

Table – 13

Adequacy of loan period

Sr. No.	Adequacy of loan period	No. of Research Scholars	Percentage
1	Adequate	145	65.91%
2	Inadequate	75	34.09%
	Total	220	100%

In the above table it is found that 145(65.91%) scholars are satisfied, while 75(34.09%) scholars are not satisfied, because reference books and periodicals are generally not issued. But in the table it is indicates that large majority of research scholars are satisfied with loan period on information resources.

RESULTS

The result of the study on the basis of collected and analysis of data is as below :—

* A majority of the scholars have knowledge of both Hindi and English.
* Most of scholars visit to the library almost daily and a majority of scholars come to the library for information relating to studies.
* A majority of scholars use the periodicals and Internet to get the information and most of them adequate
* Mostly scholars were found adequate to the library collection and specially in E-form.

SUGGESTIONS

The main purpose of this study was to find out the problems of the research scholars. And to solve the problems of the scholars the following recommendations are made :

* The library should provide more information related to scholars studies, through the various resources.
* The opening hours of the library should be increased.
* The air conditioned reading space facility should be increased
* The accessioning of printed and non printed documents and periodicals also should be increased.
* The library committee should extend the information service of the library.

* User studies may be carried out from time to time with a view to determine the need. of research scholars, and providing better services to them.

CONCLUSION

The results of study have far-reaching implication for the provision and use of information by research scholars. Because Sayers states the documents are the foundation of any library. The reputation and failure, depends upon the collection. The implication of this is that they need a wide range of reliable information services to satisfied their needs i.e E-Publishing, Internet and so on. The staff should be adequate because staff provide the important role in library for providing the information resources to scholars.

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CITATION ANALYSIS OF DOCTORAL DISSERTATIONS SUBMITTED IN THE DEPARTMENT OF CHEMISTRY, AMU, ALIGARH : A UTILITY ASSESSMENT APPROACH

M Masoom Raza
Zeba Zarrin

INTRODUCTION

Sir Syed Ahmad Khan instituted Scientific society in 1864 to create a scientific temperament among the Muslims and available to Indians in their own language. He thus rose to establish the Mohammedan Anglo-Oriental College at Aligarh and than he established Mohammaden Anglo Oriented college (MAO) in 1875 which is one of the most important events in the educational and social history of modern India. It was an important catalyst in a process of social change among Muslims. In 1920, an Act of Indian Legislative council elevated the MAO college to the status of a central university. Since that time AMU has grown into a major Indian University It presently covers a very wise spectrum of academic disciplines, having 88 departments and 5 institution, divided into 12 faculties namely Agriculture, Arts, Commerce, Engineering & Technology, Law, Life sciences, Medicine, Management, Science, Social science, Theology and Unani Medicine.

The university currently has about 28000 students on its rolls, most of whom stay in 16 halls of residences with 70 hostels. It employees about 1400 academic staff, and about 6000 non-teaching staff. On an average, about 500 foreign students come to study at AMU every year. Aligarh Muslim University has also the honor of being the largest residential university in India.

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DEPARTMENT OF CHEMISTRY

The Department of Chemistry is a well established department of the Aligarh Muslim University with its long traditions of high quality research and teaching. The M.Sc. classes were started under the stewardship of Prof. H.B. Duncliffe. The department was subsequently guided by Mr. Allah Bux, Col. M. Haider Khan, Prof. H.B. Krall and Dr. Qasim ali Mansoori till 1929. The research in Organic Chemistry was started in the department by Prof. R.F. Hunder and Dr. R.D. Desai. In 1934 the first Ph.D. degree of the Department was awarded to Dr. M. Omar Farooq.

The Department of chemistry is one of the biggest Departments in the faculty of Science. Chemistry is the compulsory subject for all students of science in undergraduate classes irrespective of the main subject offered by the student. Thus about one third of the total teaching load of the Science Faculty is borne by the Department of Chemistry alone. In addition to catering to the academic requirements for teaching undergraduate and post graduate students, the faculty members of this Department are also been actively engaged in research in all the four areas of specialization viz., analytical Chemistry, Inorganic Chemistry, Organic chemistry and Physical Chemistry. They have also been supervising the M.Phil and Ph.D. candidates.

CITATION ANALYSIS

Citation analysis is one of the most important bibliometric techniques involving analysis of the references forming part of primary communication. Citation are formal explicit linkage between publication that have particular points in common. Citoanalytical study of doctoral dissertation which are the products of research activity form an important source of information .Such studies may accusation of materials, provision of better services to patrons and knowing the location of materials. What part of literature is cited most, how long the literature remains useful to readers and languages of most cited publication, knowledge of all these provide guidance to collection development policies, individual item selection, retention and binding decisions. Such studies have been attempted in different subjects in natural sciences but paucity of such works exists in humanities and social sciences. However, some significant studies have been conducted in some areas of social science such as history, anthropology, political sciences, sociology and agricultural economics. The purpose of the present study is to investigate the use pattern of literature as revealed through the analysis of citation figuring in the doctoral dissertation of Chemistry accepted by AMU., Aligarh.

PROBLEM OF STUDY

The present study is "citation analysis of doctoral dissertations submitted in the department of Chemistry, AMU, Aligarh.

OBJECTIVES

The objectives of the study are:

- To identify the different forms of literature used by the researchers.
- To observe the authorship pattern in the field of Chemistry.
- To prepare a ranked list of journals and to find out the core journals.
- To identify the most productive country.
- To know the languages in which most of the literature on the subject has been published.
- To identify in which subject area, most of the theses have been submitted.
- To identify the time period in which most of the journals have been published.

HYPOTHESES

1. Periodical is the most used form by researcher.
2. The frequency of multiple authors is higher than single author.
3. The most productive country is USA
4. Most of the literature is published in English language
5. Most of the theses have been submitted in organic Chemistry

METHODOLOGY

Selection of Source Document

Sixteen Doctoral Dissertations submitted in the Department of Chemistry, AMU, in 1997 and 1998 were the source document for conducting this study.

Collection of Data

From sixteen dissertations, 3741 references were noted down on 5" X 3" catalogue card.

ANALYSIS AND INTERPRETATION OF DATA

The data so collected ware analyzed as under

Distribution of Dissertations submitted in the Chemistry

Department

Table 1 shows that most of the dissertations submitted in the department of Chemistry, AMU, Aligarh, from 1997-1998 were inorganic chemistry 37.5 % (6)

Dissertation were submitted inorganic Chemistry, by Physical Chemistry, i.e 1.25% (5).

Table 1

Distribution of Dissertations submitted in the Chemistry Department

S. No.	Rank	Subject Area	Year		Total	Percentage	Cumulative percentage
			1997	1998			
1	Organic Chemistry	3	3	3	6	37.5	68.75
2	Physical Chemistry	2	2	3	5	31.25	37.5
3	Inorganic Chemistry	1	1	2	3	18.75	87.50
4	Analytical Chemistry	2	2	0	2	12.50	100.00

Ranking of Periodicals

In the collected data, 3028 references appended to the Ph.D. theses were ranked up to 43rd position. However, Table 2 lists only 130 periodicals, in which the frequency of occurrence of items is up to 3. The periodical with less than 3 items have not been considered. Table-I shows that the first rank was occupied by the journal titled 'Journal chemical Society' which accounts for 7.23% of total references. Next four positions are occupied by journals like' Journal American chemical Society' (5.58%) 'Inorganic chemistry' (3.66%) 'Analytical Chemistry Society' (5.58), 'Inorganic chemistry' (3.66%),' Analytical Chemistry' (3.50%),respectively.

Table 2

Ranking of Periodicals

S. No	Rank	Name of Journal	Freq. of occur.	%age frequency	Cumulative of %age
1	1	Journal Chemical Society, Dalton Trans	219	7.23	7.23
2	2	Journal American Chemical Society	169	5.58	12.81
3	3	Inorganicchemistry	111	3.66	16.47
4	4	Analytical chemistry	106	3.50	19.97
5	5	Journal Chromatography.	103	3.40	23.37
6	6	Journal Physical Chem	93	3.07	26.44

(only first six journals have been shown in the table)

Form wise distribution

Table 3 shows that journals are the most dominant form for communicating information in chemistry. 80.96% literature on the subject appeared in the form of periodical article, book and bulletin constitute 9.99% and 2.88% and others are in the form of Reviews,' proceedings, conference patent, Ph.D. Theses, symposium, report, constitutes, 1.49%, 1.22%, 0.40%, 0.34%, 0.29%, 0.13%, 0.08%, 2.19% respectively.

Table 3

Form wise distribution

S. No	Rank	Forms of document	Freq.	%age of freq.	Cumulative %age
1	1	Journals	3028	80.96	80.96
2	2	Books	374	9.99	90.95
3	3	Bulletin	108	2.88	93.83
4	4	Reviews	56	1.49	95.32
5	5	Proceeding	46	1.22	96.54
6	6	Conference	15	0.40	96.94
7	7	Patent	13	0.34	97.28
8	8	Ph.D. Thesis	11	0.29	97.57
9	9	Symposium	5	0.13	97.70
10	10	Reports	3	0.08	97.78
		Others	82	2.19	99.97
		Total	**3741**		

Decade-wise distribution of periodicals

Table 4 reveals that maximum number of journals'were published during the period of 1981-1990 having 27.97% then comes the period from 1991-2000 have 26.61 % and minimum number of journals appeared during the period form 1900- 1910 having only 0.16:0.

Table 4

Decade wise distribution of periodical

S. No.	Rank	Period of Origin	Frequency of Occurrence	Percentage of Frequency	Cumulative %of Frequency
1	1	1981-1990	847	27.97	27.97
2	2	1991-2000	806	26.61	54.58
3	3	1971-1980	605	19.98	74.56
4	4	1961-1970	465	15.35	89.91
5	5	1951-1960	135	4.45	94.36
6	6	1941-1950	79	2.60	96.96
7	7	1931-1940	65	2.14	99.10
8	8	1921-1930	15	0.49	99.59
9	8	1911-1920	6	0.19	99.78
10	10	1900-1910	5	0.16	99.94
		Total:	**3028**		

Distribution of authors of periodicals (By number)

Table 5shows the productivity of authors of journals. It is found that multiple authorship is more than the single authorship, only 550 journals were published by single author out of 3028 journals and remaining were published by multiple author.

Table 5

Distribution of Authors of Periodicals (By number)

S. No.	Rank	Number of author	Freq. of Occu.	Percen. of Freq.	Cumulative % of Frequency
1	1	Multiple Author	2478	81.83	81.83
2	2	Single author.	550	18.16	99.99
		Total.	**3028**		

Country wise distribution of Journals

The country wise analysis of most cited publications indicates that out of 3028 citation, 970 (32.03%) are from U.S.A., followed by U.K. representing 821 citation (27.11 %).

Table 6

Country wise distribution of Journals

S. No.	Rank	Country	Frequency of	Percentage of Frequency	Cumulative %
1	1	U.S.A	970	32.03	32.03
2	2	U.K.	821	27.11	59.14
3	3	India	233	7.69	66.83
4	4	Germany	179	5.91	72.74
5	5	Japan	128	4.22	76.96
6	6	Australia	103	3.40	80.36
7	7	Brazil	93	3.07	83.43
8	8	France	83	2.74	86.17
9	8	Moscow	82	2.70	88.87
10	10	Netherlands	74	2.44	91.31

(first 10 countries have been shown in the table)

Language wise distribution of periodicals

The table 7 shows that the literature used by the researchers were completely in English language.

Table 7

Language wise distribution of periodicals

S. No.	Rank	Language	Frequency	Percentage of frequency	Cumulative percentage
1.	1	English	3028	100	100

Ranking of authors of Periodicals

Ranking list of author's name indicates that M. Shakir and others occupied first rank which accounts for 15.19%(6)however, table 81ist of author. There are only20.17%611authors whose names occurred twice and the rest79.82% 2417 curred only once.

Table 8

Ranking of Authors of Periodicals

S. No.	Rank	Name of Author	Frequency of Occurrence
1	1	M. Shakir and others	46
2	2	Rawat, J.P. and Others	22
3	3	Drew,M.G.B.andothers	11
4	4	Satio, T and others	9
5	4	Siddiqui, F. A and others	9

(first five authors have been shown in the table)

FINDINGS OF THE STUDY

The following are the major findings of this study:

1. A rank list of journals, first 43 most cited journal with a minimum of 3 citation has been given';" which accounts for 82.68% of total journal literature. The remaining 16.67% are contributed by as many as 505 journals. The 'Journal Chemical Society, Dalton Trans' occupied the first position with the highest number of citation i.e,219 (7.23%).
2. The researchers in the field of chemistry mainly use journals, which have the highest number of citations, i.e., 80.96% of total references were as, Reports have the minimum citation, i.e., 0.08%.
3. The maximum number of dissertations have been submitted by the researchers In "organic chemistry", which accounts for 37.5% 06 among and the minimum dissertations have been submitted in "Analytical Chemistry", i.e., 2 (12.5%).
4. The most productive country of journals is U.S.A. which have the highest number of citations, i.e, 32.03% 970 followed by U.K., i.e., 821 (27.1 %).
5. The most of the journals used by Research scholars were from the period 1981-1990 which account for 27.97% 847 the minimum journals were from 1900-1910,which accounts for only 0.16% 5. 6.. Rank list of authors name indicate that maximum articles were contributed by Mohd. Shakir & others, which accounts for 1.510/046 he re are only 20.17%611authors whose name occurred twice and the rest 79.82% 2417occurred only once.

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COMPUTERISATION OF DHANVANTRI LIBRARY, UNIVERSITY OF JAMMU, JAMMU: A Case Study

Sangita Gupta
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ABSTRACT

Computerisation brings about almost a revolution in the functioning of a library The paper after presenting the brief account of historical development of Dhanvantri Library, University of Jammu, Jammu discusses the impact of computerisation on this Library .It provides the current status of activities of the INFLIBNET Section of the library like database creation, Internet Access, E- journal Access, Bibliographic Services, etc. The paper also views the developmental considerations of INFLIBNET Section to improve the users' services in future and also recommends some measures to exploit and explore the technological advancements so that library may be transformed into a modern information Centre.

INTRODUCTION

Information has been considered as an important resource playing considerable role in socio-economic development of society. Due to the growing tendency to have access to relevant and potential information at the earliest, new technologies such as computers, multimedia technology, laser technologies, networking and communication technologies graphical user interface, etc., are being integrated and used for information storage, management and communication. Their convergence had led to the development of

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Internet, intranets, web servers that enabled the librarians and the users to access whatever information they want and from wherever it is possible.

Information Technology brings about almost a revolution in the functioning of a library It has changed the way of information handling and disseminating. Computer is highly productive not only for library operations and management but also equally useful for library users. The university libraries have largely been affected by the rapid changes in IT. The university libraries are playing the leading role in the national development to draw attention of the government and other role playing agencies. Moreover UGC launched its INFLIBNET programme to strengthen and to modernize the functioning of university libraries in India. UGC has been providing funds regularly to various university libraries for developing infrastructure. Initially it was decided to have the communication system that will have a central hub and 400 ground terminals at 150 university libraries, 50 autonomous colleges/PG centers and 200 other comprising R & D institutions to be interlinked via satellite link"(UGC, 1988) In 1993, in the first phase, 11 universities were identified for automation. Now more than 130 university libraries are linked to INFLIBNET. With the result various university libraries have developed computer labs and started converting retrospective data into machine readable form and exploiting IT to improve the flow of information and to provide the required information support to scholars and researchers. Dhanvantri Library of University of Jammu,Jammu was one of the libraries that received grants for automation under INFLIBNET Program (Gupta ,1995).

DHANV ANTRI LIBRARY : A PROFiIE

The University of Jammu started functioning as an independent institution from September 5, 1969.It is a teaching and an examining body and open to all irrespective of caste, colour and creed. With the establishment of university it became necessary that central library be developed to supplement the instructional and research programmes of the university and thus a separate room for the use of library was provided from the old 'Sub Registry Building' which was its reading-cum reference section. In August 1980,the library was shifted to New University Campus at Bhau Wali Rakh and it was renamed as Dhanwantri Library in the year 2002. .The new structure is three storeyed All the floors are used for reading purpose besides stacking different types of documentary collections. Ground floor houses textbook collection,technical section ,acquisition section ,circulation section reading hall for readers and property counter.It has one newly constructed small lab for providing online searching facility.

The first floor in addition to reading room facility houses the administrative and Maintenance section, Reference Section and stack area. On the second floor, there is INFLIBNET lab! Internet lab, serial section ,Kashmir section and reading area.

In 1981 Prof. Y, R.Malhotra, Head of P.G. Department of Biosciences took over as Honorary Librarian .In 1983, Prof. J.S.Sharma formerly Prof.-cum -head -cum -librarian Punjab University, Chandigarh joined the university of Jammu as professor-cum-head-cum -librarian. After Prof. J.S Sharma, Sh. C.R. Sharma(Deputy Librarian) took over the charge of the library. Since 1997, Prof.. I.V.Malhan has been looking after the library as I/C librarian besides heading the Department of Library Science.

Working Hours

Library is open from 8 a.m. to 8 p.m. in all working days. On Sundays, the timings are 10 a.m. to 8 p.m. It is an open access library.

Resources and Services

The library has a collection of 333719 documents. It subscribes to 260 periodicals It receives about Rs. 14.60 lakhs of grants for books and Rs.35lakhs for periodicals. The total members of the library are 3222.(Profile of Dhanvantri Library) .They are largely university students pursuing different courses at PG level,the research scholars and the faculty. The membership is also extended to the students of different colleges of the locality on the special recommendation of the principals of the respective colleges. There is a provision of the private membership to the citizenry. This membership is limited .On an average about 400 users in all visit the library everyday to meet their daily requirements pertaining to the studies. All the members of the library have free access to the library resources.

COMPUTERIZATION OF LIBRARY

The Automation of Dhanvantri library started with the grant from UGC under INFLIBNET programme. As the automation of University Libraries is a major activity of INFLIBNET, it is also a pre-requisite for networking of Libraries and sharing under the INFLIBNET Program. The INFLIBNET has been providing grants to the Universities identified under the Programme.

The Jammu University was one of the 11 Universities in the Country, which were identified by the University Grant Commission for development of Information and Library Network (INFLIBNET) Program. Under this Program the University received a grant of Rs 4.45 Lakhs (1993-94) and Rs 1.28 Lakhs (1994-95) for raising the Infrastructure required to meet the objectives of the INFLIBNET Programme.

Since in the year 1994-95, staff working in the library was not well conversant of the latest technology, so the matter was referred to the Computer purchase Committee of the University of Jammu, Jammu. The committee appointed one professional Assistant as Scientist B on ad-hoc basis to look after the INFLIBNET programme of the university till the arrangement of the post of Computer Scientist B was made temporarily in June 1996. The required hardware/Software (Recommended by INFLIBNET) was purchased out of the grant of Rs. 4.5 Lakhs after taking the necessary approval from the computer Purchase Committee.

INFLIBNET Program also received a grant of Rs 1.04 lakhs to meet the recurring expenditure vide letter (No-F-31-9/94 dated 15Aug1998), for the financial year1998-1999 as per the details given below (Data collected from INFLIBNET Section, Dhanvantri Library, University of Jammu, Jammu ,2003):

1.Support for data entry works	Rs 36,000
2.Telephone Charges	Rs15,000 (OYT)
3.Consumables	Rs18,000
4.Maintenance	Rs 35,000

As per the UGC norms this grant was utilized for telephone Charges, maintenance and consumables and the matter was taken up with under Secretary UGC for using the rest of the grant for supporting data entry work as per UGC/INFLIBNET requirement.

In order to automate all the sections of the Dhanvantri library a minimum of 15 computers are required. Funds from various heads were provided to the INFLIBNET section in different financial years. So INFLIBNET section purchased computers and other accessories in different financial years. INFLIBNET section of the Dhanvantri library raised the infrastructure by taking a grant of Rs 1.50 lakhs out of the head B-01- journals in the year 2000-2001, and by taking a grant of Rs 2 lakhs out of the head Non Plan Grant for subscribing to electronic journals.

Keeping in view the importance of automation, the funds from the books/journals grant were diverted for developing IT related infrastructure, after taking necessary approval of the competent authorities.

Presently the section is equipped with 11 computer systems and hence the purchase of more computer systems for the INFIIBNET lab is under process. Out of these 11 systems, the INFIIBNET section uses 3 computers and rests of the computers are installed in the recently constructed Internet lab, so that electronic resources can be accessed..

INFIIBNET section of the Dhanvantri library is embarked on creation of various databases for the benefit of academia in the University. One of the major activity of the INFIIBNET section is to create the database of books and with the purchase of new books in Dhanvantri library and Departmental libraries, the size of this database is growing every year. This database contains important fields like ISBN, Title, Subject descriptor, Classification Scheme, Volume, Accession Number, etc.

INFIIBNET section has so far created the database of 20,000 books. Since the INFIIBNET section is strictly following the Common Communication Format (CCF) and as per this format each record contains 20 unique fields.

INFIIBNET section of the Dhanvantri library is not only creating the database of its current holdings, but is also involved in creating the database of departmental libraries. So far the section has created the database of books purchased by the different departments during the last three financial years. This database helps a lot in locating the books and in placing orders for the new books. To complete the retrospective conversion of library holdings, 20 new semi professionals have been appointed on contractual basis with the salary of Rs. 4000 per month. The INFLIBNET section is also looking after the prospective work of Dhanvantri library and departmental libraries with regards to automation.

The INFLIBNET section has also installed the required software in the departments like Mathematics, Sociology, Law, and Library Science for creating the databases of their collections (books purchased before 1999) as per the standards and formats prescribed by the INFLIBNET.

ACTIVITIES OF THE INFUBNET SECTION

Web PaQe and the Virtual Librarv of the Dhanvantri Librarv

The Library has developed a comprehensive web page (Webpage of the University of Jammu Library System can be accessed at http:/ /www.geocities.com\\Luniversity \julibrary.htm). The Webpage provides complete information about the University of Jammu Library system including online membership of the Library. The Dhanvantri Library maintains a Virtual Library and regularly updates this library facility keeping in view the needs of users of this region. A

Electronic Collections

The Library has started procuring reference works and other material on CD-ROM. A small collection of CD-ROM is available in the INFLIBNET lab for use. A list of CD-ROM resources is also available with the INFLIBNET lab.a CD Server is installed in the section to deliver CD access to atleast to the eleven terminals installed there.

Creation of Databases

The INFLIBNET Section has vigourously started the data capturing of the collection of the library so that data base creation of current as well as retrospective collection would be created in time .At present, following tasks have been achieved:

a) Database of Books 20,000
b) Database of thesis and dissertations 1500
c) Database of Serials 264
d) Documentation on Jammu and Kashmir (CD)
e) Directory of Ongoing Funded Projects at the University of Jammu, Jammu
f) Research Works in Social Sciences and Humanities at the University of Jammu[1977 -1999]
g) Printed Catalogue of books available in the Kashmir Section

Bibliographic Service

The INFLIBNET Section has been fulfilling the bibliographic needs of the various categories of the users who are interested in locating information resources pertaining to their courses and research projects ,etc. All possible software compatible search strategies such as keyword search, Boolean search, etc. are implied to satisfy the users query.

E-Journal Access

The INFLIBNET Section has very recently subscribed the J-Gate facility of the Informatics India Ltd., Bangalore, A leading Journal subscription company of India. Under J-gate service, the INFLIBNET Section provides online access to some leading e-Journals to the users of the university.

Internet Access

The history of Internet access in the INFLIBNET Section is the witness of informal and formal connection subscriptions in different phases. In 1997, the NICNET, Jammu provided the password of logon to Internet to the INFLIBNET Section of the University of Jammu out of mutual help on informal basis. Anyhow, the Internet usage at this place was not popular at that time. The connection access was allowed till this Section subscribed its own connection on contractual basis form the Department of Telecommunication (DOT) in 1998. Since it was a TCP/IP shell account, the provision of Internet to all the users was not possible.

Very recently, the Department of Computer Science, which has its own V-SAT extended a quite feasible bandwidth access to the Dhanvantri Library. At present the Internet access is available to the

users for about six hours a day, i.e. form 10 a.m. to 4 p. m. The University of , Jammu has the proposal to set up the computer LAN I Intranet I by the month of December 2003 and hence the Dhanvantri library will be a part of this Intranet.

Resource Sharing

The section is participating in the national level project of National Union Catalogue of CD-ROM resources which is being coordinated from Indian Institute of Technology, New Delhi. Under INFLIBNET Union Database, the INFLIBNET Programme at Dhanvantri Library serves as a part of the consortium at national level. The section is in the process of getting connected to UGC INFONET with initiative taken by UGC/INFLIBNET and will have round the clock access to electronic resources including scholarly publications. (IASLIC Newsletter, 2003)

Consultancv aiven to other Libraries

The INFLIBNET Section answers specific queries received from other libraries. Since various libraries of the region whether academic, special or public have intended to computerise their services, the INFLIBNET Section of the Dhanvantri is playing a model role as regards consultancy and awareness of library automation. The INFLIBNET Section provided the requisite consultancy to the Amar Mahal Palace Library in initiating the process of Library automation.

Training Programs

Skilled human resource to handle the automation and networking activity at each University is an essential requirement. This being one of the major activities of the INFLIBNET has been given due priority by organizing two training programs IRTPLA 26-29th Nov 2001 and SATKAL 29th -31st Jan 2002. In these training programs 5 Assistant Librarians and three professional assistants from Jammu University were also trained. The section has also trained two semiprofessional assistants, presently working in the INFLIBNET section. Besides this, the INFUBNET Centre, Ahmedabad has trained about three professionals during its national Training Programmes conducted from time to time.

INFILIBNET PROGRAMME: DEVELOPMENTAL COS1DERATION

a) Speedier conversion of all library records into machine readable form
b) Planning and execution of the Library automation activities in vibrant manner
c) Maintenance of the hardware and software in the Section keeping in view the contemporary IT advancement and necessary preventive measures in order to avoid breakdowns.
d) Routine base training /motivation of other staff and users in

use of automated systems.

e) Housekeeping /Management of Library Databases keeping in view the users' requirements.

f) Development of new databases and web based information services such as document delivery for the use of internal and external clients.

g) Participation in automation, database development and networking efforts/projects at institute, campus, Regional and National level.

h) Generation of necessary reports for an effective feedback to the Management. (Amjad Ali, 2001)

CONCLUSION

The computerisation of Dhanvantri Library has been initiated with great spirit and hence it increased the efficiency of library services. But the library still has not achieved the complete transformation as regards automation as the different aspects of computerisation in the library services have still to be exploited and explored. Since the scope of INFLIBNET activities is becoming vast and challenging ,it becomes imperative that there must be a due support in future also from the authorities who decide,plan,allocate and get the ventures executed. A constant support from the INFLIBNET Centre, Ahmedabad to the university library is, sure to make this project a success. Hence it is understood that the goals and objectives of computerisation of the Dhanvantri Library of University of Jammu, Jammu will be achieved very soon successfully.

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CONTRIBUTION OF INDIAN AND FOREIGN INSTITUTIONS TO INDIAN LIS JOURNALS FROM 1991 TO 2000

Protap Chandra Roy

ABSTRACT

This study is based on 1637 research papers in Library and Information Science (LIS) published in 10 Indian LIS journals during the period 1991 to 2000. Library science research in India is distributed over a large number of institutions spread all over India. Major portion of the contributions comes from only a few institutions, like DRTC, Bangalore; INSDOC, New Delhi; University of Delhi, Delhi; DESIDOC, Delhi; Guru Nanak Dev University, Amritsar; Andhra University, Vishakapatanam etc. Thus it can be said that Lotka's law is being followed, which means: few accounting for many.

Contributions from foreign institutes form only 12.50% of the total. Addis Ababa University, Ethiopia; University of Ilorin, Nigeria; North Carolina Central University, USA etc. are the frequently contributing foreign institutes.

INTRODUCTION

The research output of scientific literature has been increasing exponentially since world war II. New journals in specialised branches of science keep appearing and established periodicals either multiply the number of volumes per year or split in different titles covering

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narrower subject areas in order to cope with the flow of communications received for publication. The rapid rate of growth of original scientific literature makes it extremely difficult for a research worker to keep in touch with recent thought in his particular field. The policy makers also need as need continuously evaluated and analysed data on the changing nature of communication that affects researchers directly or indirectly in communicating their original research work.

In library & information science there is a broad spectrum of research activities going on. The purpose of this research, in general, is to provide data to support decision making about day to day operations in libraries or information centres, to guide the design of information systems, or to build models explaining aspects of information dissemination and use/user behaviour.

A specialized area in library & information science research is the statistical study of bibliographic information or bibliometrics. It may be subsumed under a broader field, informetrics, which covers the mathematical theory & modeling of all aspects of information.

The present study deals with the institutional productivity of Indian library science journals for the period of 1991-2000. These 10 LIS journals are listed in Annexure – 1

INSTITUTIONAL PRODUCTIVITY

Institutional productivity may simply be expressed as the total number of publications generated by the institution in a particular period of time. So the institutional productivity is a sum of the output of the individual members of the institution. Various parameters which are used to measure productivity of the individual authors and their impact are also relevant to institutional productivity. Big institutions, where large number of scientists are working, will naturally produce more publications than a small institution where only a few people are engaged.

The institutions where eminent information scientists work continue to generate appreciable number of research articles. In Indian LIS journals articles are contributed by Indian Institutes as well as foreign Institutes.

RESULTS AND ANALYSIS

This chapter has been divided into two parts. First part contains the Indian institutional contribution and second part contains foreign institutional contribution as a whole.

It has been found that 75 Indian institutions have contributed more than three articles each and 29 foreign institutions have contributed minimum two articles with in the specified period. Table 1 shows the list of Indian institutes who have published articles in the journals analysed. The top ranked institutions are DRTC, INSDOC, University of Delhi, DESIDOC etc. All regional institution of INSDOC has been put together and all contributions from various IITs have been clubbed together.

Table 1: List of Indian Institutions (More than three Contributions)

Sl No.	Rank	Name of the Institute	Freq.	%
1	1	DRTC, Bangalore	51	2.72
2	2	INSDOC, New Delhi, Bangalore, Kolkata, Madras	41	2.19
3	3	University of Delhi, Delhi	37	1.98
4	4	DESIDOC, Delhi	33	1.76
5	5	Guru Nanak Dev University, Amritsar	29	1.55
6	6	Andhra University, Vishakapatanam	27	1.44
7	7	Karnatak University, Dharwad	23	1.23
8	8	IIM, Lucknow & Ahmedabad	16	0.85
9	9	Cochin University of Sc. & Tech., Cochi	15	0.8
10	10	Jiwaji University, Gwalior	14	0.74
11	11	Gulberga University, Guiberga	12	0.64
12	11	Institute of Information Studies, Bangalore	12	0.64
13	11	Kuvempu University, Karnatak	12	0.64
14	11	North Eastern Hill University, Shilong	12	0.64
15	11	Regional Research Laboratory, Bhubaneswar	12	0.64
16	12	Banaras Hindu University, Varanasi	11	0.58
17	12	Osmania University, Hyderabad	11	0.58
18	13	University of Madras, Madras	10	0.53
19	14	IGNOU, New Delhi	9	0.48
20	14	Mangalore University, Mangalore, Karnatak	9	0.48
21	14	Utkal University, Bhubaneswar	9	0.48
22	15	ICAR Research Complex, NEH region, Meghalaya	8	0.42

Sl No.	Rank	Name of the Institute	Freq.	%
23	15	Indian Statistical Institute, Bangalore, New Delhi	8	0.42
24	15	ISRO, Bangalore	8	0.42
25	15	Kota Open University, Kota	8	0.42
26	15	Nagpur University, Nagpur	8	0.42
27	15	Regional Engineering College, Srinagar	8	0.42
28	15	University of Hyderabad, Hyderabad	8	0.42
29	16	Aligarh Muslim University, Aligarh	7	0.37
30	16	British Library, Trivandram	7	0.37
31	16	Central Building Research Institute, Roorkee	7	0.37
32	16	IASLIC, Kolkata	7	0.37
33	16	Indian Institute of Science, Bangalore	7	0.37
34	16	Punjab University, Chandigarh	7	0.37
35	16	Sambalpur University, Burla, Orissa	7	0.37
36	16	University of Kerala, Trivandram	7	0.37
37	16	University of Mysore, Mysore	7	0.37
38	16	Vidyasagar University, Midnapur, West Bengal	7	0.37
39	16	Wildlife Institute of India, Dehradun	7	0.37
40	17	Central Inst. of Eng. & Foreign Languages, Hyderabad	6	0.32
41	17	Gauhati University, Gauhati	6	0.32
42	17	Marathawada University, Aurangabad	6	0.32
43	17	Punjabi University, Patiala	6	0.32
44	17	University of Burdwan, West Bengal	6	0.32
45	18	Bangalore University, Bangalore	5	0.26
46	18	BARC, Bombay	5	0.26
47	18	Directorate of oilseeds Research, Hyderabad	5	0.26
48	18	Indian National Science Academy, New Delhi	5	0.26
49	18	Indian Public Library Association, Lucknow	5	0.26
50	18	INFLIBNET Centre, Ahmedabad	5	0.26
51	18	Jadavpur University, Kolkata	5	0.26

Sl No.	Rank	Name of the Institute	Freq.	%
52	18	MVAS College of Physical Education, Dharwad	5	0.26
53	18	National Institute of Hydrology, Roorkee	5	0.26
54	18	Rajendra Agricultural University, Pusa, Bihar	5	0.26
55	18	SNDT University, Mumbai	5	0.26
56	18	University of Rajasthan, Jaipur	5	0.26
57	18	Vikram University, Ujjain	5	0.26
58	19	Central Leather Research Institute, Madras	4	0.21
59	19	GMD University, Amritsar	4	0.21
60	19	Kurukshetra University, Haryana	4	0.21
61	19	Lucknow University, Lucknow	4	0.21
62	19	Manipur University, Imphal	4	0.21
63	19	Mumbai Metropolitan...Development Authority, Mumbai.	4	0.21
64	19	Nationai Bureau of soil survey planning, Nagpur	4	0.21
65	19	National Law School of Indian University, Bangalore	4	0.64
66	19	Sri D.M. College, Ujire, Karnataka	4	0.21
67	19	State Council of Educational Research & Training, New Delhi.	4	0.21
68	19	UGC, New Delhi	4	0.21
69	19	University of Calcutta	4	0.21
70	19	University of Calicut, Kerala	4	0.21
71	19	University of Mumbai, Mumbai	4	0.21
72	19	University of Pune, Pune	4	0.21
		Other Institutions (Contribution less than our times)	**943**	**50.5**
		Foreign Institute Contribution	**233**	**12.5**
		Total No. of Institutions	**1869**	**100**

Table 2 shows the list of foreign institutions who have contributed minimum two times. The top foreign institutes are Addis Ababa University, University of Ilorian, North Carolina Central University.

Table 2: List of Foreign Institutes (more than two contributions)

Sl. No.	Rank	Name of the Institute	Freq.	%
1	1	Addis Ababa University, Ethiopia	16	0.85
2	2	University of Ilorin, Nigeria	8	0.42
3	3	North Carolina Central University, USA	7	0.37
4	4	University of Calaber, Nigeria	5	0.26
5	5	European Commission, Brussels, Belgium	4	0.21
6	5	National Centre for Sc. Inf. System, Japan	4	0.21
7	5	University of Agriculture, Nigeria	4	0.21
8	5	University of Ibadan, Nigeria	4	0.21
9	5	University of Port Harcourt, Nigeria	4	0.21
10	6	University of Colombo, Sri Lanka	3	0.16
11	6	University of Maiduguri, Nigeria	3	0.16
12	6	University of Michigan, USA	3	0.16
13	7	Geological survey of Finland Computing Centre, Finland	2	0.11
14	7	Georgia State University, Georgia, USA	2	0.11
15	7	Library of Congress, Washington	2	0.11
16	7	London School of Economics	2	0.11
17	7	Loughborough University, U.K.	2	0.11
18	7	UNESCO, Paris, France	2	0.11
19	7	Universidad Autonoma de Madrid, Spain	2	0.11
20	7	Universiteitsplein, Belgium	2	0.11
21	7	University of Antwerp, Belgium	2	0.11
22	7	University of Dar es Salam, Tanzania	2	0.11
23	7	University of Dhaka, Bangladesh	2	0.11
24	7	University of Hawaii, USA	2	0.11
25	7	University of Malayasia, Malayasia	2	0.11
26	7	University of Nigeria	2	0.11
27	7	University of Pittsburg, USA	2	0.11
28	7	University of Sheffield, U.K.	2	0.11
29	7	University of Technology, U.K.	2	0.11
		Other Foreign Institutes (contribution less than Two articles)	134	7.16
		TOTAL	233	12.5

CONCLUSION

From this study, it is found that top institutions conducting research in this field are DRTC, Bangalore; INSDOC, New Delhi; DESIDOC, Delhi; Guru Nanak Dev University, Amritsar; Andhra University, Vishakapatanam etc. The frequently contributing foreign institutes are Addis Ababa University, Ethiopia; University of Ilorin, Nigeria; North Carolina Central University, USA etc.

Annexure - 1

Journals selected for present study

Sl. No.	Journal Name	Published by	Address	Year of Establishment	Frequency	Change of Name with	Subject Content year
1.	Annals of Library & Information Studies. V.37, No.4, 2001	NISCAIR New Delhi	NISCAIR, 14, Satsang Vihar Marg, New Delhi-110067	1954	Quarterly. March, June, September, December.	Annals of Library Science Vol.: 1, Yr.: 1954 Annals of Library Science & Documentation. Vol. 11, Yr. 1964. Annals of Library & Information Studies. Vol. 48, Yr.2001.	Publishing original contributions, survey reports, reviews, short communications, letter, pertaining lib. Sc., Inf. Sc., Computer applications in these fields
2.	Library Herald, Vol.37, No.2, July-Sep.-1999	Delhi Library Association., Delhi	Library Herald, Post Box 1270 Ranganathan Bhavan, 'C' Block, Community Centre, Near C.G.H.S. Dispensary, Naraina Vihar, New Delhi-28	1959	Quarterly, April, July, October, January		Publishing original contributions in the field of Library Science & services

3.	Herald of Library Science. Vol.40, No.3-4, July-Oct-2001	Prof. Kaula Endowment for Library & Information Science, Lucknow	Herald of Library Science. C-239, Indira Nagar, Lucknow-226016	1962	Quarterly, January, April, July, October		Publishing Article, Interview, Conference, Seminars, workshops, Refresher courses, Reviews.
4	ILABulletin, Vol. XXXVIII, No.1, March-2002	Indian Library Association, Delhi.	Indian Library association, A/40-41, Flat No. 201, Ansal Building, Dr. Mukherjee Nagar, New Delhi-110009	1965	Quarterly, April-July, Oct.– March.		Research Articles & Book review, Letter to editors.
5	IASLIC Bulletin, Vol.46, No.1, March-2002	Indian Assiciation of Special Libraries & Information Centres, Kolkata.	IASLIC Bulletin, P291, CIT Scheme, No. 6M, Kankurgachi, Kolkata-700054	11956	Quarterly, March, June, Sept., Dec.		Research paper, Book review, letters to editor, reproduction of special lectures, short communicatios, proceeding & reports.

6	Information Studies, Vol.7, No.3-4. Jul-Oct-2001	Ranganathan Centre for Information Studes, Chennai	Ranganathan Centre for Information Studies, 5, Sivaganga Road, Nungambakkam, Chennai-600034	1995	Quarterly, January, April, July, October.		Publishing original articles in all areas of Inf. Sc. , Informatics & telematics, covering the technical, economic, social, policy & professional aspects
7	SRELS Journal of Information Management, Vol. 38, No.4, Dec.-2001	Sarada Ranganathan Endowment for Library Science, Bangalore.	Institute of Information Studies, 702, upstairs, 42nd Cross, III Block, Rajajinagar, Bangalore.	1964	Quarterly, March, June, September, December	Library Science with a Slant to Documentation. Vol.1, Yr.1964 Library Science with a Slant to Documentation & Information Studies. Vol.31, Year-1994 SRELS Journal of Information Management. Vol.37, Yr. 2000	Contributions should invariably focus on the result of research, reports of significent developments in working practice & discussions which are concern to the Library & Inf. Profession.

8	DESIDOC Bulletin of Information Technology, Vol. 22, No.2, March' 2002	Deffence Scientific Information & Documentation Centre, Delhi	Deffence Scientific Information & Documentation Centre (DESI DOC), Metcaefe House, Delhi-110054	1981	Bi-monthly, January, March, May, July, Sept., Nov.	DESIDOC Bulletin. Vol.1, Yr. 1981 DESIDOC Bulletin of Information Technology. Vol. Yr.	The Bulletin invites original research & review papers relating to Inf. Technology as applied to library activity, services & products
9	Lucknow Librarian , Vol.26, No. 1-4, 1994	UP Library Association, Lucknow.	Uttar Pradesh Library Association (Lucknow Branch), Post Box No. 446, Lucknow-226001	1962	Quarterly, March, June, Sept., December.		Publishes paper dealing with all aspects of Librarianship, documentation, & Information work & service in India & else where.
10	International Information Communication & Education (INICE), Vol.18, No.1-2, March-1999	Prof. Kaula Endowment for Library & Information Science Lucknow	International Information Communication & Education (INICE), C239, Indira Nagar, Lucknow-226016	1982	Quarterly, January, April, July, October.		It is a International multidisciplinary Journal. Contains Article, Survey reports, Symposium , workshops.

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IMPORTANCE OF SUBJECT GLOSSARY IN HINDI LANGUAGE TO UNDERSTAND THE NEEDS OF HINDI SPEAKING USERS AND THEIR BIBLIOMETRIC STUDY.

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B. Mall

ABSTRACT

Discuss about the importance of Hindi as Mother tongue and their role for education and research for Hindi speaking users. Also emphasized the importance of Hindi subject glossaries for Information retrieval to Hindi speaking users. A bibliometric study have been made by analysis of available reference tools and find out the subject areas which do not have any glossary in Hindi Language. This study also covers the analysis of available glossaries on their Publishers, Place of Publication, Year of publication and Subjects.

INTRODUCTION

Information is dominant power for any country and the language is a strong medium of information communication. Without availability of information and literature any country of world cannot develop in modern era of science and technology. India has many languages for mutual communication and Hindi is one of them, which is being used by 40.2%[1] population of India. In 1965 Hindi got the status as National language in Indian Constitution.

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Hindi is the mother tongue of 40.2% population of India. Mother tongue have most important role as medium of learning and thinking of human mind. Prof. C.V. Raman was said that our teaching and research should be in mother tongue. Ex-president Dr. Shankar Dayal Sharma[2] also defined relation between mother tongue and a person in such a way that "As mother creates affections in her child in the same way mother tongue creates ability to communicate and awareness towards surrounding. The bond between mother and child is such a emotional and intellectual bond which a person feels, this bond is based on a combinations of service at one end and total dependency at the other end. Similarly a bond between a mother tongue and the speaker of that mother tongue is the first and foremost art of communication learn by a person after inception an art which enables him to understand his surrounding and his own inner thought process. Individuals mother tongue is a such a technique of communication which embedded to the voice, thought and emotions of his mother tongue. It therefore naturally follows that every individuals ought to love his mother tongue in a similar way as he or she loves his or her mother."

IMPORTANCE OF HINDI AS MOTHER TONGUE FOR HINDI SPEAKING USERS

In India, Hindi as a mother tongue for 40.2% people of population for using speaking, studying, teaching and research work. There is no any single developed country of the world which used other language for education, teaching and research except her mother tongue. Russia is also a multilingual country but they provides cover to cover translation to scientists with the help of translators. Intelligence is divine. Mother tongue proved to be more convenient to connect with intelligence. We can do self thinking deeply with the help of mother tongue easily understand the complexity of any subject.

Importance of Hindi Subject Glossaries for Information retrieval to Hindi Speaking Users

The Librarian's glossary define the term glossary as :-

1. An alphabetical list of abstruse, obsolete, unusual, technical, dialectical or other, terms concerned with a subject field, together with definitions. 2. A collection of equivalent synonyms in more than one language.

Information Retrieval process is a very complex process. Without understand the semantic contents of user's need appropriate information cannot be given. In the age computerized information storage and retrieval semantic content can be expressed by the help

of subject keywords. Glossary is an important tool to express the exact meaning of keyword. This is useful for the user as well as the information retrieval system to decide the key word for search. Unfortunately in Hindi language different author(s) are using different keywords for the same concept of the same subject and this will create problems to users community. Subject glossary can only solve this problem. In the age of Electronic information communication keywords are playing very important role for searching. For complete information retrieval this is necessary that user's keyword and information retrieval system's keyword should be same for their semantic contents.

In India, for the preparation of subject glossaries in Hindi language some efforts have been made before Independence and after Independence. But in future point of view this is necessary that comprehensive glossaries should be compiled by the subject experts.

BIBLIOMETRIC STUDY OF SUBJECT GLOSSARIES IN HINDI LANGUAGE

This study have been made by the analysis of publisher's catalogues of Hindi books of India, Thesis[4] and bibliographies[5,6] of related subjects. After analysis and classification of collected data the results are categorize as subject wise, publisher wise, year wise and place of publication wise mainly and summarized data arranged in tables.

SUBJECT WISE ANALYSIS

TABLE 1: Subject wise Distribution

S. No.	Subject	No.	S. No.	Subject	No.
1.	Agriculture	03	26	Law	03
2.	Archaeology	01	27	Library Science	01
3.	Art	01	28	Logic	01
4.	Botany	02	29	Manas Shastra	01
5.	Charitri	01	30	Map	01
6.	Chemistry	02	31	Mathematics	02
7.	Coal Mining	01	32	Mausam	01
8.	Commerce	01	33	Medical Science	03
9.	Court	01	34	Mineral Science	02
10.	Cultural Anthropology	01	35	Modern Algebra	01

11.	Drama	01	36	Modern Physics	01
12.	Earth Science	03	37	Music	01
13.	Economics	04	38	Philosophy	02
14.	Education	01	39	Post & Telegraph	01
15.	Electricity	01	40	Psychology	03
16.	Electronics	02	41	Public Administration	04
17.	Engineering	01	42	Religion	01
18.	Finance	01	43	Rail	01
19.	Fluid Mechanics	01	44	Science	08
20.	Geography	02	45	Social Science	01
21.	Home Science	02	46	Sociology	01
22.	Human Anatomy	01	47	Space Science	01
23.	Humanities	02	48	Statistics	01
24.	Inorganic Chemistry	01	49	Technology	01
25.	Judiciary & Revenue	01	50	Zoology	02

The data represented in Table 1 indicates that maximum number of glossaries are published either by government organizations, professional and private organizations or individual efforts on several subject fields in which 8 glossaries on general science, 4 in economics & public administration; 3 in Agriculture, Earth Science, Law, Medical Science and Psychology ; 2 in Botany, Chemistry, Electronics, Geography, Home science, Humanities, Mathematics (elementary), Mineral Science, Philosophy & Zoology. Even though so many subjects having no glossary as per study reveals it need an urgent attention of subject experts, Authors, Publishers & planners etc. to compile the glossaries on following subjects:

Computer science, Museology, International Relation, Tourism, Military Science, Social Work, Criminology, Jurisprudence, Cosmology, Astrology, Palmistry, Physical Education, Environmental Science, Microbiology, Biochemistry, Biotechnology, Pharmacy, Tunnel Engineering, Civil Engineering, Biophysics, Animal husbandry, Management, Industrial Engineering, Metallurgy, Dress Designing & Fashion, Architecture, Performing Arts, Neurology, Biomathematics, Office Management, Indian History, Political Science, Organic Chemistry, Analytical Chemistry, Physical Chemistry, Information Technology, Synthetic Chemistry, Operation Research, Mining Engineering, World History, World Politics, World Economics, Ancient History, Sculpture, Painting, Mass Communication & Journalism, Telecommunication and Broadcasting etc.

PUBLISHERS WISE ANALYSIS

TABLE 2 : PUBLISHERS WISE DISTRIBUTION

S. No.	Publisher's Name	No. of Publications
1.	Vaigyanik Tatha Takniki Shabdawali Ayog, Delhi	25
2.	Rajkamal Prakashan, Delhi	05
3.	Nagri Pracharini Sabha, Varanasi	04
4.	Hindi Prakashan Samiti, Varanasi	04
5.	Bihar Govt., Patna	03
6.	Kendriya Hindi Nideshalaya, Delhi	03
7.	S. Chand & co., Delhi	02
8.	M.P. Hindi Granth Academy, Bhopal	02
9.	Delhi V.V. Hindi Madhyam Karyanvayan Nideshalaya	02
10.	Hindi Book Centre, New Delhi	02
11.	Hindi Sahitya Sammelan, Allahabad	02
12.	Dr. B.R.Ambedker, University, Agra	01
13.	Almora Prakashan, Almora	01
14.	Bharat Sarvekshan Vibhag, Dehradun	01
15.	Bhasa Anubhag Vibhag, Patna	01
16.	Bhasa Anubhag Vibhag, Lucknow	01
17.	Bhartiya Granthmala Karyalay, Allahabad	01
18.	Bombay Book Depot., Bombay	01
19.	Chaukhamba Bhavan, Varanasi	01
20.	Dharmik Sahitya Samiti, Ranchi	01
21.	East India co., Calcutta	01
22.	Hindi Vidyapeeth, Agra	01
23.	Hindustani Academy	01
24.	Indian Press, Allahabad	01
25.	International Acedamy of Indian Culture, Nagpur	01
26.	India, Publication Div., N. Delhi	01
27.	Kanoon Press, Kanpur	01
28.	Kitab Mahal, Allahabad	01
29.	Lok Sabha Sachiwalay, Delhi	01
30.	Nagar International Academy of Indian, Delhi	01

31.	Pandulipi Prakashan, Delhi	01
32.	Ram chandra Sangitalaya, Gwalior	01
33.	Saligram Bhargava, Allahabad	01
34.	Sarthak Prakashan, Delhi	01
35.	Vani Publication, Delhi	01
36.	Vishwabharti Anusandhan Parishad, Kanpur	01
37.	Unknown	03

Publisher wise distribution of data (Table-2) reveals that the maximum number of publications emerge from Vaigyanic Tatha Takniki Shabdawali Ayog (45) , Rajkamal Pub (05) , Nagri Pracharini Sabha and Hindi Prakashan Samiti accounted for 4; Bihar Government & Kendriya Hindi Nideshalay for 3; S. Chand M P Hindi Granth Academy, Hindi Book Centre, Delhi V.V. Hindi Madhyam Karyanvayan Nideshalaya & Hindi Sahitya, Sammelan accounted for 2 publications individually while 25 publishers accounted for 1 publication each and in case of 3 data the publishers names are not accertained.

YEAR WISE ANALYSIS

Table 3 : Year wise Distribution

S.No	Time Period	No.	S.No	Time Period	No.
1.	Upto 1900	02	8.	1961 – 1970	05
2.	1900-1910	01	9.	1971 – 1980	08
3.	1911-1920	01	10.	1981 – 1990	Nil
4.	1921-1930	03	11.	1991 – 2000	34
5	1931-1940	01	12.	2001 – 2003	05
6.	1941 – 1950	04	13.	Unknown	06
7.	1951 – 1960	12			

The year wise distribution of classified data (Table – 3) reveals that the maximum publications 34 emerges during the decade 1991 – 2000 while 12 in 1951 – 1980, 5 each in 1961 – 1970 & 2001 – 2003 , 4 in 1941 – 1951 respectively. In all classified data reveals that after independence the maximum number of publications either by government agencies or by professional bodies have been published during 1950 to 1990. The independent publishers efforts accounted in this field is too less in comparison to the other publications, it may be due to negligence of writers.

PLACE WISE DISTRIBUTION

Table 4 : Place wise Distribution:

S. No.	Place	No	S. No.	Place	No.
1.	Agra	02	9.	Gwalior	01
2.	Almora	01	10.	Kanpur	02
3.	Allahabad	06	11.	Lucknow	01
4.	Bhopal	02	12.	Nagpur	01
5.	Bombay	01	13.	Patna	04
6.	Calcutta	01	14.	Ranchi	01
7.	Dehradun	01	15.	Varanasi	10
8.	Delhi	45	16.	Unknown	03

Table 5 : State wise Distribution

S. No.	State	No. of Publishers
1.	M.P.	03
2.	U.P.	21
3.	Maharashtra	02
4.	West Bengal	01
5.	Uttranchal	02
6.	Bihar	4
7.	Jharkhand	1
8.	Delhi	45
9.	Unknown	03

The analysis of geographical state wise distribution of classified data (Table-5) indicates that maximum publications emerges from Delhi(45) while utter Pradesh accounted for 21 publications; Bihar (5) , Madhya Pradesh (02) , Uttranchal (02) , West Bengal and Jharkhand(01) respectively. Place wise distribution of data (Table-4) indicates that the maximum publications came out from Delhi (45) , while Varanasi (10), Allahabad (6), Patna (4), 2 each in Agra, Bhopal & Kanpur and 1 each in Almora , Bombay, Nagpur, Calcutta, Dehradun, Gwalior, Lucknow, Ranchi. The maximum publications from Delhi may be due to central place of India and efforts of Vaigyanik Tatha Takniki Shabdawali Ayog too.

CONCLUSION

As above study shows that glossaries are very important tool for complete information retrieval in the age of computerized information storage and retrieval. It helps to understand the user's needs and keywords for searching. Hindi subject glossaries will be helpful to establish standard vocabulary control and preparation of thesauruses. But it is necessary that compilation of subject glossaries should be a cooperative effort, because the selected words in glossary should have adaptability for all the Hindi speaking people. The national association of different subjects in India can play important role n this regards. Primarily subject experts discussed about the particular words, their meanings and definition then finalized. If we love our mother tongue then we should try for our best.

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INFORMATION NEEDS AND INFORMATION SEEKING STRATEGIES OF AGRICULTURAL SCIENTISTS

Keshava
Kiran Savanur

ABSTRACT

Provides information about University of Agricultural Science (UAS) and its library. Describes information needs and information seeking strategies of users of UAS Library.

INTRODUCTION

Agriculture is the most vital sectors in India that controls the economy of the country. The Indian "National Agricultural Research Systems" (NARS) is a vast network for research and education in India. Agricultural education is comprehensive. It encompasses crop technology, animal sciences, fisheries, agricultural engineering, forestry and rural home sciences, including crafts.

The University of agricultural Sciences, Dharwad was established through the Karnataka and came into existence from the 1st October 1986.

The University confines itself to the whole of Northern Karnataka. Totally 10 districts of Karnataka, i.e., Dharwad, Uttara Kannada (North Canara), Bellary, Belgaum, Raichur, Bijapur, Gulbarga, Gadag, Bidar, Haveri, are under the preview of this University. University has 112 faculty members and 533 students (total) which includes 421 under graduates, 228 postgraduates, and research scholars. From 1st October 1986 onwards it has became as independent University Library. Its collection is nearly to a lakh. It subscribes 275 journals out of which 225 are Indian and 50 foreign, in addition, it also receives

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96 journals on gratis and 36 on exchange basis. Totally four hundred seven journal and procured were subscribed by the library. The total budget of the library for the academic year is 41,05,700/-.

OBJECTIVES

The major objectives of the study are:

a. To investigate the method adopted if the documents are not available.
b. To know the time taken by the library staff to purchase the documents and to make reprographic services.
c. To highlight th e-users opinion about library services, facilities etc.,
d. To know the attitude of reference staff.

METHODOLOGY

For data collection questionnaire method was adopted. Two different set of questionnaires were prepared and distributed it to users and the librarian . Among users 70 questionnaires were distributed out of which 67 (95.71%) received back. They were 11 (16.42%) faculty members, 18 (26.87%) research scholars and 38 (56.71%) students. Other relevant data was also collected from the annual report of the U.A.S and its Library and other outside sources like India 2003, A Reference Annual, and official records of the Library.

DATA ANALYSIS

Table - 1

Status wise distribution of users

Status	No. of Users	Percentage (%)
Students	38	56.71
Research Scholars	18	26.87
Faculty Members	11	16.42

The above table shows that more than 50% users are students followed by research scholars 26.87% and faculty members 16.42%.

It is clear that faculty member are less use the library.

Table - 2

Alternative methods adopted to procure the documents not available in the Library

	Status of the users		
Alternate Methods	**Faculty Members**	**Research Scholars**	**Students**
Requesting the library to purchase	8 (72.72%)	12 (66.67%)	25 (65.79%)
Requesting the Library to borrow from other library	1 (9.10%)	-	4 (10.53%)
Borrowing personally from other library	2 (18.18%)	8 (33.33%)	3 (7.89%)
Purchasing by one self	-	-	6 (15.79%)
Abandoning	-	-	-

In case, if the document required by a user is not available in library, few alternate methods, likely to be adopted by the users. The table -2 indicates that most popular method among faculty members is requesting the library for purchase, followed by borrowing personally from other libraries. Meanwhile, most (66.67%) of the research scholars request the library for purchase, followed by borrowing personally from other library (33.33%). Students also request the library for purchase, followed by purchasing by oneself.

Table - 3

Acquisition of documents

(Figures in parentheses is %)

Acquisition	Faculty Members		Research Scholars		Students	
	Yes	No	Yes	No	Yes	No
A. Request made	8 (72.72)	3 (27.28)	14 (75.78)	4 (22.22)	22 (57.89)	16 (42.11)
B. Satisfaction with the response to the request by the library staff						
Highly satisfactory	- (7.14)		2 (13.64)		3	
satisfactory	5 (62.5)		8 (57.14)		17 (77.27)	
Not Satisfactory	3 (37.5)		4 (28.58)		2 (9.09)	
Poor	- -		1 (7.14)		-	

The library follows an approved book selection policy according to which user community recommends the books in the areas of their interest. The analysis in table - 3 reveals that 72.72% of faculty members recommend the books of which 62.5% of them purchased. Regarding research scholars more than 75% of recommend the books of which more than 55% procured. Some research scholars said that their demands are still not fulfilled. Students also recommend the books of which most of them one purchased. Furthermore, it is also clear from the table that some were not happy with the response for their request made.

Table - 4

Time taken to procure documents

Status	Less than week	One week	More than one week	No response
Faculty Members	1 (12.5%)	-	7 (82.5%)	3 (27.27%)
Research Scholars	2 (12.5%)	3 (18.75%)	11 (68.75%)	2 (11.11%)
Students	-	4 (13.79%)	25 (86.22%)	9 (23.68%)

The table - 4 shows that only 12.5% faculty members and 12.5% research scholars have indicated that time taken is less than a week whereas most of the users (82.5% faculty members, 68.75% research scholars and 86.21% students) said that the library take, more than a week. 27.27% faculty member, 11.11% research scholars and 23.68% students were not answered to the question.

Table - 5

Growth of of periodicals.

years	no. of periodicals	increase/ decrease	% growth annual	avg. subscribed % growth
1997-98	557	-	-	-
1998-99	578	21	3.77	3.77
1999-00	580	2	3.55	3.55
2000-01	533	-47	-8.1	-8.1
2001-02	407	-126	-23.64	-23.64

The table - 5 reveals the growth of periodicals from 1997 to 2002. The growth at the highest rate 3.77% during the initial phase i.e., 1997 to 1998 when the number of periodicals subscribes became more (1.03 times). The number of periodicals on the subscription list increased continuously from 1997 - 1998 to 1999 - 2000. However, from 2000-2001 onwards there was a sudden fall in the subscription of periodicals from 580 to 533. During 2001 - 2002 the number of subscription of periodicals had come down further to 407, this may be due to rising cost of periodicals, lack of increase of periodicals budget and rate of inflation.

Table - 6

Opinion on Library services, facilities, etc.

(Figure in parenthesis is percentage)

Library Services	Faculty Members				Research Scholars					Students		
	E	VG	G	P	E	VG	G	P	E	VG	G	P
Library working hours	4 (36.36)	6 (54.54)	1 (9.10)	- -	11 (61.11)	7 (38.39)	-	-	14 (36.84)	15 (39.47)	8 (21.05)	1 (2.64)
Physical facilities	2 (18.18)	5 (45.46)	4 (36.36)	- -	9 (50)	4 (22.22)	3 (16.67)	2 (11.11)	4 (10.53)	14 (36.34)	20 (52.63)	- -
Arrangement of Library collections	2 (18.18)	6 (54.54)	2 (18.18)	1 (9.10)	6 (33.33)	6 (33.33)	4 (22.22)	2 (11.11)	6 (15.79)	10 (26.31)	16 (42.11)	6 (15.79)
Reference Service	2 (18.18)	4 (36.36)	4 (36.36)	1 (9.10)	7 (38.39)	3 (16.67)	7 (38.39)	1 (5.56)	7 (18.42)	13 (34.21)	11 (28.95)	7 (18.42)
User education	1 (9.10)	2 (18.18)	4 (36.36)	4 (36.36)	3 (16.67)	3 (16.67)	10 (55.55)	2 (11.11)	1 (2.64)	8 (21.05)	22 (57.89)	7 (18.42)
Reprographic service	2 (18.18)	3 (27.26)	6 (54.54)	- -	3 (16.67)	5 (27.78)	9 (50)	1 (5.56)	1 (2.64)	8 (21.05)	23 (60.52)	6 (15.79)
Translation Service	- -	- -	4 (36.36)	7 (63.64)	3 (16.67)	4 (22.22)	1 (5.56)	10 (55.55)	3 (7.89)	10 (26.31)	17 (44.74)	8 (21.05)
S.D.I Service	3 (27.26)	-	7 (63.64)	1 (9.10)	3 (16.67)	5 (27.28)	7 (38.39)	3 (16.67)	4 (10.53)	11 (28.94)	18 (47.37)	5 (13.16)
Book display	3 (27.26)	6 (54.54)	2 (18.18)	- -	6 (33.33)	8 (44.44)	1 (5.56)	3 (16.67)	8 (21.05)	11 (28.94)	15 (39.48)	4 (10.53)
Current Awareness Service	1 (9.10)	7 (63.64)	3 (27.26)	- -	5 (27.78)	4 (22.22)	8 (44.44)	1 (5.56)	10 (26.32)	9 (23.68)	16 (42.11)	3 (7.89)

(E = Excellent, VG = Very Good G = Good P=Poor) ++

Table - 7

Rating of library collections

LIBRARY COLLECTIONS	FACULTY MEMBERS			RESEARCH SCHOLARS			STUDENTS		
	MA	A	IA	MA	A	IA	MA	A	IA
General books	- (90.90)	10 (9.10)	1 (27.77)	5 (61.11)	11 (11.11)	2 (28.94)	11 (50)	19 (21.06)	8
Text Books	3 (63.64)	7 (63.64)	1 (9.10)	6 (33.33)	11 (61.11)	1 (5.56)	11 (28.94)	21 (55.27)	6 (15.79)
Reference Books	2 (18.18)	9 (81.82)	- -	5 (27.78)	9 (50)	4 (22.22)	9 (23.68)	19 (50)	19 (26.32)
Periodicals	1 (9.10)	5 (45.45)	5 (45.45)	6 (33.34)	8 (44.44)	4 (22.22)	6 (15.79)	20 (52.63)	12 (31.58)
Reports	1 (9.10)	8 (72.72)	2 (18.18)	5 (22.78)	8 (44.44)	5 (22.78)	9 (23.68)	21 (55.28)	8 (21.06)
Patents/Standards	- (36.36)	4 (63.64)	7 (11.11)	2 (33.33)	6 (55.55)	10 (2.64)	1 (34.21)	13 (63.15)	24
Indexing / abstracting journals	4 (36.36)	4 (36.36)	3 (27.28)	6 (33.33)	12 (66.66)	- -	15 (39.48)	11 (47.36)	12 (13.16)
Thesis/ Dissertations/ Projects	7 (63.64)	4 (36.36)	- -	14 (77.77)	4 (22.22)	- -	22 (57.89)	14 (36.85)	2 (31.58)
Seminar/ Conference papers	4 (36.36)	5 (45.46)	2 (18.18)	6 (33.34)	9 (50)	3 (16.67)	15 (39.48)	11 (28.94)	12 (31.58)
Maps/Atlas, Charts/ Diagrams	2 (18.18)	7 (63.64)	2 (18.18)	5 (27.78)	11 (61.11)	2 (11.11)	8 (21.06)	20 (52.62)	10 (26.32)
Non book Materials	- (54.56)	6 (45.44)	5 (11.11)	2 (55.55)	10 (33.34)	6 (5.26)	2 (39.48)	15 (55.26)	21

(Ma - Most Adequate, A= Adequate, I = Inadequate)

The data in the table - 6 clearly shows the opinion about the library services and facilities. Most of the users (i.e., 54.54%) faculty members, 88.89% research scholars and 39.47% students) opined the working hours of the library are very good. Regarding reference service some of the users said the service is poor.

Table -7 shows the user's opinion about adequacy of library collection. It reveals that higher percentage of user have rated the collection of general books, text books, reference books, periodicals, reports, maps/atlas, charts/diagrams to be adequate. Most of the users stated that the collection of patents and standards, non-book materials has been inadequate. However, it is also noted that 63.64% faculty members, 77.78% research scholars and 57.89% students stated that the collection of thesis, dissertation, projects have been regarded as most adequate.

Table -8

Rating of the attitude of reference staff

(Figures in parenthesis is percentage)

Status	Rating of Attitude of Reference Staff		
	Most Helpful	Helpful	Not Helpful
Faculty Members	3 (27.28)	8 (72.72)	-
Research scholars	4 (22.22)	13 (72.22)	(5.56)
Students	10 (26.32)	27 (71.05)	1 (2.63)

The above table indicates that most of the user communities are happy with the attitude of reference staff.

Table-9

Average time taken for Xeroxing services

(Figures in parenthesis is percentage)

Status	**Average time taken**				
	Few Minutes	One Hour one hour	Less than one day	One Day	More than
Faculty Members	4 (36.36)	4 (36.36)	2 (18.18)	1 (9.10)	- -
Research Scholars	6 (33.33)	2 (11.11)	5 (27.78)	5 (27.78)	- -
Students	21 (55.26)	7 (18.42)	1 (2.63)	4 (10.53)	5 (13.15)

Table - 9 gives information about average time taken for the work given for photocopying, majority of the users (36.36% faculty members, 33.33% research scholars and 55.26% students) have stated that it takes few minutes for required material to copy followed by one hour (36.36% faculty members, 11.11% research scholars and 18.42% students). Thus it is clear that the library provide xerox service to its users within no time.

Table - 10
Use of Foreign Language Literature

(Figures in parenthesis is percentage)

Status	Yes	No
Faculty Member	2 (18.18)	9 (81.82)
Research Scholar	4 (22.22)	14 (77.78)
Students	6 (15.79)	32 (84.21)

The Library does not have panel of translators. But it subscribers foreign language other then english literature. A question was asked about the use of foreign language literature. Table - 10 indicates that majority of users (81.82% faculty members, 77.78% research scholars and 84.21% students) do not use foreign language literature, only small number of users (18.18% faculty members, 22.22% research scholars and 15.79% students) use the same. This may be because of two reasons. a) No panel of translators b) Some users have the knowledge of foreign language

Table - 11
Approaches to the documents

(Figures in parenthesis is percentage)

Approaches	Faculty members	Research scholars	Students
Consulting Catalogue	9 (81.82)	17 (94.44)	27 (71.06)
Consulting Library Staff	-	1 (5.56)	6 (15.79)
Direct Access	2 (18.18)	-	5 (13.15)

Catalogue card is the tool to locate the documents in the library. The data analysis in the table - 11 shows that higher percentages of users (81.82% faculty members, 94.44% research scholars, 71.06% students) approach the documents through catalogue cards. Only small number of research scholars and students consult library staff. Moreover, 18.18% faculty members and 31.15% students approach the documents directly.

MAJOR FINDINGS

1. In case non-availability of documents higher percentage of users request the library to purchase.
2. It is found that majority of users (72.72% faculty members, 75.78% research scholars and 57.89% students) recommend books and most of them are purchased.
3. Majority of users (82.5% faculty members, 68.75% research scholars and 86.21% students) stated that the library takes more than week to procure the recommended documents.
4. It is found that higher percentage of users stated that library services and facilities like Physical facilities, Reference Services, Reprography Services, SDI Service etc., are good.
5. Majority of users stated that the attitude of reference staff is helpful and moreover they are satisfied with the services provided by them.
6. Regarding reprographic service the quality of reprographic work, chargesand time taken is satisfactory.
7. Majority of users consult catalogue to locate the documents in the library.

SUGGESTIONS

1. In case of non-availability of documents the library authority should make possible arrangements as soon as users made the request.
2. The library Book Selection Committee should give due priority to the recommendations made by the users to acquire their interested reading materials.
3. The library should keep panel of translators so that the foreign language resources are utilized optimally.

CONCLUSION

Agricultural libraries in India are in the initial stage of development. Modern technologies in the libraries are now being utilized to satisfy the information needs of the users. There is an urgent need to plan the allocation of resources and services at all level so as to avoid duplication of efforts. The staff working in these libraries need training and exposure to new techniques available at national and international levels. The budget available in these libraries is not sufficient for the overall growth of these libraries. Some formula has to be developed for library budget based on the total budget allocated to the organization. Emphasis at this stage is for the development of LAN in the libraries. There is a need to develop the culture of inter-library loan service, and electronic transmission of documents, particularly articles. The bibliographical details of theses, journal articles, and library catalogues must be available at a web site for the use of readers.

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INFORMATION SEEKING BEHAVIOR: AN OVERVIEW

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ABSTRACT

Information is the basic material for the decision making process. The essential purpose of every decision is to transform information into action efficiently and effectively. Information seeking is a kind of communication behavior, which would be influenced by many factors. This paper describes various factors of information sources and information seeking behavior has been discussed.

INTRODUCTION

Information a vital commodity, an amorphous concept, less susceptible for a precise definition, but every one has to deal with it in many ways throughout one's life. Indeed, Crawford (1978) has described information as the fifth need of human beings ranking after air, water, food and shelter. Information collection, transfer and use are all pervasive and universal in all walks of life. Information brings people and thoughts together. It is the exchange of ideas, news and data that makes a society what it is. As a matter of fact, in post – industrial society, what counts is not raw muscle power or energy but information. In fact, the advanced economies of the world have already become information intensive and rich. In recent times the developing countries like India have realized the importance of information and are investing in the design and development of information infrastructure and enhancing the efficiency and effectiveness of the existing information systems.

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USE OF INFORMATION

Study and understanding of information seeking and information use are necessary not only for planning and designing of information systems and services, but also for their effective and efficient operation and use too. A systematic and comparative study often reveals un anticipated data, which may prompt hitherto unconsidered courses of action. There will be many surprises even to an experienced librarian about his users, as he would not have heard them all in a systematically planned set up in his day-to-day work. Foskett (1984) has said ' it is not enough for librarians merely to respond to new ways of serving and disseminating information'. A more creative approach will come from a much greater involvement with both producers and consumers of information.

OBJECTIVES OF USER STUDY

- To identify the levels and kinds of user needs,
- To enhance the quality of resources and services,
- To judge the limitations of the library system and its services;
- To design and develop need-based and user–oriented information systems and services,
- To reduce the time spent on information gathering work.
- To whether information-gathering work is delegated and the reason for delegation and non-delegation.
- To Use made of libraries and their services.....etc.,

DEFINITION OF TERMS

There are several terms of information seeking behavior and information need. Some of the terms are explained below and few definitions to some of the terms used in this study would be of much help in understanding the implications.

Information Need

Line (1974) emphasis that information need arises when a person requires a gap in his/her state of knowledge is to be resolved and wishes to resolve the anomaly. Information need arises out of a desire to meet one or another of the three basic human needs: -physiological needs (food, shelter etc) Psychological needs (security etc) and cognitive needs (to plan, to learn a skill etc). A need is a potential demand for information.

Information Want

Brittain (1971) has proposed in his draft definitions of need, want etc. As a 'Want is what an individual would like to have, whether or not the want is actually translated in to a demand on the Library. Individuals may need an item they do not want, or want an item they do not need. A want, like a need, is a potential demand.

Information Demand

Information demand is what an individual asks for, more precisely, a request for an item of information believed to be wanted. Individuals may demand information they do not need, and they may not demand information, which they actually need. Demand is partly dependent an expectation, which in turn depends partly on existing provisions of library and information service. A demand is a potential use. It is also said that demand is an expressed need.

Information Use

Information use is what an individual actually uses. A use may be satisfied demand, or it may be result of browsing or information recognized and received accidentally, which is not previously articulated in to a demand. Individuals can only use what is available, use is therefore heavily dependent on provisions and availability of information sources and information services.

INFORMATION SEEKING BEHAVIOUR

Information seeking is a behavior of human activity like writing a memo, driving a car, talking on the phone. Since it is a behavior, it is logical to propose that it stems from sources common to all behaviors. Psychologists try to determine why people need? What do they need? Why people behave differently and how do they behave?. Librarians, though differently involved in observation of information seeking behavior, on professional as well as personal level, have paid little attention to the psychological reasons for such behavior. The information seeking behavior is used here to include all activities comprising information seeking, information gathering, and information retrieving and communication activities performed in the library environment.

An individual may seek information as stimulus and to obtain reaction to his own work. He may provide information in order to advance his own ideas, projects, career or reputation. Thus, information transfer is intertwined with many other personal reasons for communication. Information seeking is a goal-driven activity in which

needs are satisfied through problem solving (Brown, 1991). According to Krikelas (1983), information seeking behavior begins with a "perceived need," which is like "anomalous state of knowledge,"(Belkin 1980) or what Taylor (1968) identified as" a vague dissatisfaction". The information seeking behaviour involves activities that will satisfy the information need. When the need is no longer perceived, the individuals quit the chosen information seeking process. The process is dynamic, and methods of collecting information consume time and demands for immediate results. The ways of selecting and collecting information are related to the personal habits and styles of the information seekers. (Rouse and Rouse, 1984).

ROLEOF LIBRARIAN IN INFORMATION SEEKING BEHAVIOR

The value of information, a socio-economic product, generated, organized, transferred and used in shaping the socio-economic development of any society needs no emphasis. In the information transfer business the librarian act as an information intermediary, who modulate the complexities and find a match between the information sources and user needs. Indirectly satisfying the five laws of Library Science. Numerous studies have been carried out on the information needs of specialist users like social scientists, scientists, physicians and engineers. Many significant contributions have been made by psychologists, sociologists, behavioral scientists and Library and Information science personnel. As a result, literature on user studies is scattered across many disciplines and forced the Librarian to scan several sources for locating relevant literature. Therefore, Librarian role is very important to provide a brief review of important studies and their findings in relation to information seeking behavior of library users.

CONCLUISON

Different terminologies are being used like user studies, information-need studies, information-transfer studies, communication behavior studies, information seeking behavior studies etc., without having a definite, clear cut definition for expression. All these phrases are closely related and often used synonymously. When looked at from the users point of view, information seeking behavior study is nothing but the study of flow of information among the users and information system. This flow starts with purposes and motives and ends with satisfaction or dissatisfaction.

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LIBRARY AND INFORMATION SERVICES IN SHIVAJI UNIVERSITY'S BARR. BALASAHEB KHARDEKAR LIBRARY : A SURVEY

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Sandhyarani Patil

INTRODUCTION

No university can claim to promote research without the provision of adequate and well-balanced collection of books and periodical related to the research needs of the university both immediate and potential and without rendering a prompt and effective service to its research scholars. An adequate knowledge about the users and their demands is necessary to make the library and information services more effective. Hence, there is need to study the attitude of scholars toward library and information service facilities. Survey is a means for the systematic study of the characteristics of the existing system and behavior of research scholars using the system and its services. The present study is mainly concerned with information search activities of research scholars their information needs, we behavior and use pattern. It also helps to find out the extent to which the existing library has organized and disseminated information to suit the needs of the users.

OBJECTIVES

The study was undertaken to find out the existing library and information service facilities in the Shivaji University Library, Kolhapur,

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for the year 2001-2002. The specific objectives of the study are as follows: -

1. To find out the method that the readers of the library adopt to locate the required information sources.
2. To identify the problems faced by the user in using the library.
3. To as certain the opinion of the users regarding the adequacy of information resources and services available in the library.
4. To study the information needs of the research scholars.
5. To find out the types of information sources required by the research scholars.

BARR. BALASAHEB KHARDEKAR LIBRARY

Shivaji University was founded in 1962. The library of this university was started with the initial collection of 2777 issues of periodicals, 12618 books and 255 manuscripts. Rs. 44301 were spent during 1963-.64. Today library has collection of 2, 19, 337 books, 30, 971 bound volumes of journals, 6300 manuscripts, 7293. These and dissertations i.e: total 2, 69, 544. Total number of readers is 3677. Total 9 administrative staff is working in the library and in the library and information science department 4 teaching staff is working. In the university there are total 30 of various subjects, total 145 research scholars were studying for the year 2001-2002.

METHODOLOGY AND DATA COLLECTION:

The methodology adopted for this study was descriptive survey method. Questionnaire technique was adopted for data collection. A questionnaire consisting of 21 questions was designed to get the opinions of the research scholars. There were more than 145 research scholars working in the 30 various departments of university. For sample selection 2 research scholars getting junior research fellowship from every department were selected for distribution of questionnaire 5 departments have no research scholars. So the questionnaires were distributed among these selected groups of 50 scholars. Out of which 40 research scholars responded.

ANALYSIS OF DATA COLLECTION

Use of library

Frequency of library visit of users is the best way to measure the use of the library. Following table No 1 shows the % of responses.

TABLE 1

Frequency of Visits to the Library

Sr. no	Frequency of library visit	No of responses	Percentage of responses
1	Daily	12	30%
2	Once in a week	—	—
3	Twice in a week	28	70%
4	Once in 15 days	—	—
5	Once in a month	—	—
6	Occasionally	—	—

From above table it was seen that the majority of scholars visited the library twice in a week to meet their information needs.

PURPOSE OF VISIT TO THE LIBRARY

Purpose of the visit to the library gives necessary information to the library authorities on the documents and the type of information that the library users are interested in. this helps then in developing need document collection and also in developing other services and facilities to give better service to its readers.

TABLE 2

Purpose of visit to the library

Sr. no	Purpose	No. of responses	% Of responses
1	To borrow books	32	80%
2	To consult periodicals	28	70%
3	To read news papers	16	40%
4	To use thesis and dissertation	36	90%
5	To consult reference tools	32	80%
6	To read reports	16	40%

Above table shows that these and dissertation section in the library is mostly used by research scholars. Second preference is given to books and reference tools.

LIBRARY TIMING

To find out whether library timing is suitable for research scholars

this question was included in the questionnaire. 80% of researchers opined that the current timing is suitable for them and remaining 20% want that thesis and dissertation section should be kept open from 8 a.m. to 8 p.m. 70% researches spent more than half an hour in the library and only 30% spent maximum half hour in the library. This shows that use of the library is maximum.

LIBRARY CIRCULATION SYSTEM

In this library there is a open access for the research scholars. Research scholars opined that this system is very satisfactory. For circulation of books brown system is used. 100% research scholars opined that this is the best system used in the library for circulation.

USE OF LIBRARY RESOURCES

For university library all the library resources such as books periodicals, reports, thesis and dissertations, newspapers etc are very important. Users use these varied kinds of information resources for their information needs. Table no 3 shows the preference of users forwards various kinds of documents in the library of Shivaji university.

TABLE 3

Users' preference to library resources

Sr. no	Resource type	User's order of preference					
		1	2	3	4	5	6
1	Reference books	16	12	4	4	4	4
		40%	30%	10%	10%	10%	10%
2	Theses and dissertation	12	20	4	4	—	—
		30%	50%	10%	10%	—	—
3	Reports	8	—	20	4	8	—
		20%	—	50%	10%	20%	—
4	Books	4	4	4	16	4	8
		10%	10%	10%	40%	10%	20%
5	Periodicals	8	—	8	4	16	4
		20%	—	20%	10%	40%	10%
6	Newspapers and magazines	—	4	4	8	4	20
		—	10%	10%	20%	10%	50%

The above table indicates that among others reference books followed by thesis and dissertations were the most preferred resources used by the researches. Next reference is given to the reports, fourthly books, fifthly periodicals and lastly newspapers and magazines.

LIBRARY COLLECTION

The university library has to fulfill the needs of the postgraduate students, research scholars and the teaching members of the university. This class of readers need highly specialized and advanced material on the subject of their research which consists of information resources like books, periodically reports, encyclopedias, dictionaries, handbooks, yearbooks, directories bibliographies abstracting and indexing journal, theses and dissertation etc. Therefore it is necessary to know whether the existing collection of Shivaji University library is adequate enough to meet the information requirements of its readers in their academic, research development and publication work. Following table no 4 shows the Adequacy of library collection

TABLE NO 4

Adequacy of library collection

Sr. No	Type of collection	Adequate Adequate	Partially	Inadequate	Not Responded
1	Books	8 (20%)	24 (60%)	— —	8 (20%)
2	Periodicals	12 (30%)	8 (20%)	16 (40%)	4 (10%)
3	Reports	4 (10%)	4 (10%)	16 (40%)	16 (40%)
4	Conference proceeding	— —	12 (30%)	16 (40%)	12 (30%)
5	Research report	4 (10%)	12 (30%)	12 (30%)	12 (30%)
6	Reference Documents	24 (60%)	8 (20%)	— —	8 (20%)
7	Dictionaries	24 (60%)	8 (20%)	— —	8 (20%)
8	Handbook	16 (40%)	8 (20%)	12 (30%)	4 (10%)
9	Yearbook	16 (40%)	8 (20%)	10 (25%)	6 15%)

10 Directories	20 (50%)	8 (20%)	4 (10%)	8 (20%)
11 Bibliographies	16 (40%)	12 (30%)	— —	12 (30%)
12 Monographs	8 (20%)	8 (20%)	— —	24 60%)
13 Text books	12 (30%)	16 (40%)	20 (50%)	10 (25%)
14 Abstracting and indexing journals	4 (10%)	8 (20%)	12 (30%)	16 (40%)
15 News papers	24 (60%)	8 (20%)	— —	8 (20%)
16 Magazines	12 (30%)	12 (30%)	4 (10%)	12 (30%)
17 Maps and atlases	4 (10%)	4 (10%)	20 (50%)	12 (30%)

From the above table no.4 it is seen that —

1. Books:

   According to 20% research scholar's collection of books is adequate but 60% of them opined that it is partially adequate.

2. Periodicals:

   30% research scholars opined that periodical collection is adequate but 40% of them expressed that it is inadequate.

3. Reports, Conference proceedings, research reports :

   40% research scholars opined that collection of reports, conference proceedings research reports is inadequate.

4. Encyclopedias & Dictionaries:

   60% research scholars are satisfied with the collection of encyclopedias and dictionaries.

5. Hand books:

   40% research scholars opined that the collection of handbooks is satisfactory, 30% research scholars opined that it is inadequate.

6. Year books:

   40% research scholars are of the opinion that yearbook collection is adequate and 25% opined it is inadequate.

7. Directories:

50% of the research scholars are of the opinion that the collection of directories is adequate.

8. Bibliographies:

   40% research scholars opined that it is adequate.

9. Monographs:

   60% research scholars not responded the question and from the remaining 40%, 20% opined that the collection is adequate.

10. Text books:

    30% research scholars opined that collection is adequate.

11. Abstract and indexing journals

    Only 10% respondents opined that this collection is adequate and 40% of them have not responded the question.

12. Magazines:

    30% research scholars opined that this collection is sufficient.

13. Maps and atlases:

Only 100% research scholars opined that this collection is adequate. 30% research scholars not responded the question and 50% opined that it is inadequate.

LITERATURE SEARCH

Information is a basic resource for any kind of professional activity. Every researcher wants specific information depending upon their nature of work. The study of users approach to locate needed documents or information helps to improve the information service. Following table no 5 attempts to identify the methods used by the research scholars in locating the needed documents or information.

TABLE NO 5

Method used in locating the needed documents/information.

Sr. no	Method	No of responses	Percentage of responses
1	Assistance of the library staff	16	40%
2	Consulting catalogue	32	80%
3	Guidance of teachers	8	20%
4	Help of friend	—	—
5	Guidelines	4	10%
6	Self	28	70%

Table no. 5 demonstrates that the research scholars locate the needed reading material by consulting catalogues (80%), seeking assistance from the library staff (40%) and on their own (70%). This denotes that the assistance of the library staff and the library catalogue are the first priority to locate the documents needed by the researchers.

USE OF LIBRARY CATALOGUE

The catalogue reflects the collection of documents in the library and indicates where to locate them. The users usually develop their own strategy for searching the documents required by them. The majority of respondents used the library catalogue (32 out of 40) to search and locates the required document that means catalogue is an indispensable tool in the library.

Mostly in libraries various sequences of catalogues such as classified sequence author sequences, title sequence and alphabetical sequence of the catalogues are maintained. Hence it is necessary to study what forms of catalogues the users prefer to approach.

TABLE NO 6

User's Approach to library catalogue

Sr. no	Type of library catalogue	No of Responses	% of respondents
1	Subject	20	50%
2	Author	24	60%
3	Title	16	40%
4	Classified	4	10%
5	Series	4	10%

Above table no.6 denotes that the majority of research scholars (60%) followed author approach to find the documents. The next in order were subject and title approaches respectively.

Library catalogue is an effective tool, which provides access to the collection of the library and promotes its use. Hence knowledge about consultation of catalogue is essential for the users. It is essential for the university libraries to offer proper training to the users.

GUIDANCE TAKEN IN USING LIBRARY CATALOGUE

Following table no.7 indicates the guidance taken by the research scholars in using library catalogue.

TABLE NO 7

Sources of Guidance for using library catalogue

Sr. no	Source	No of responses	% of responses
1	Library staff	12	30%
2	Friends	20	50%
3	Teachers	8	20%
4	Guide	16	40%
5	Chart in the library	8	20%

Above table indicates that majority of research scholars got the guidance from the friends i.e. 50%. Followed by this guidelines are helping the researchers. This fact makes it clear that the use of library catalogue depends basically ion the help of friends.

LIBRARY SERVICE

In addition to reading material the university libraries and the service organizations which brings users and ideas together irrespective of geographical limitations. The modern academic libraries should use modern information techniques and services.

Following table no.8 shows that how this university library is providing library services to research scholars.

TABLE NO. 8

Rating of Satisfaction with the Library services

Sr. no	Library & information service	Satisfa-ctory	Unsatisfa-ctory	Not responded
1	Reference service	36 (90%)	4 (10%)	— —
2	Circulation service	36 (90%)	— —	4 (10%)
3	CAS	—	—	—
4.	Reader guidance/assistance	38 (95%)	2 (5%)	—
5	Inter library loan	4 (10%)	—	36 (90%)
6	Reprographic service	20 (50%)	10 (25%)	10 (25%)
7	OPA C	——	——	——

From the above table the majority of researcher's were of the opinion that reference and circulation services were satisfactory to meet their needs. CAS service was not responded. Also readers, guidance/ assistance was satisfactory.

ARRANGEMENT OF LIBRARY COLLECTION

The proper arrangement of reading material is most important in university libraries to give maximum benefit to its users. Following table no 9 shows usurer's opinion regarding arrangement of reading material.

TABLE NO 9

Arrangement of reading material in the library

Sr. no	Type of document	Satisfa-ctory	Unsati-sfactory	Not responded
1	Text books	28 (70%)	10 (25%)	2 (50%)
2	Periodicals	32 (80%)	8 (20%)	— —
3	Books in stacks	36 (90%)	4 (10%)	— —
4	Reference books	36 (90%)	4 (10%)	— —
5	Reports	32 (80%)	8 (20%)	— —
6	Theses/dissertation	38 (95%)	2 (5%)	— —

This table denotes that a large number of respondents expressed their satisfaction about the arrangement of document of different types in the library. Only textbooks are not properly arranged.

LIBRARY FACILITIES

The library has to maintain cleanliness, proper ventilation, and appropriate space for reading and drinking water and toilet facilities. A good environment in the library with encouraging facilities provides a comfortable atmosphere for reading and using the library resources effectively.

Following table shows the opinions regarding library facilities.

Table no 10

User's opinion about facilities in the library

Sr. no	Facilities	Satisfac-ctory	Unsatisfa-ctory	Not responded
1	Space for reading	36 (90%)	—	4 (10%)
2	Cleanliness	34 (85%)	6 (15%)	—
3	Lighting	30 (75%)	10 (25%)	—
4	Ventilation	S28 (70%)	12 (30%)	—
5	Equipments	28 (70%)	10 (25%)	—
6	Drinking water	32 (80%)	8 (20%)	—
7	Toilet	16 (40%)	20 (50%)	4 (10%)

It is evident from above table that a majority of library facilities were satisfactory. Only toilet facility was not satisfactory.

SUGGESTIONS

1. Most of the research scholars (70%) are visiting twice in a week to the library. Therefore librarian has to find the reason behind this situation and give all the facilities to them.
2. The collection of advanced books and journals in all disciplines should be strengthened to support study, teaching and research work.
3. Inter library loan facility should be improved.
4. Documentation services like CAS and SDI and content page should be provided to research scholars
5. Reference books are referred on priority basis by research scholars than journals because periodical collection is not adequate. So periodical section should provide all the facilities and current journals.
6. Proper guidelines and instruction charts and should be displayed regarding use of catalogue. Also library can offer proper training for consultation of catalogue. OPAC should be introduced after computerization
7. Newspaper clipping service should be introduced.

8. Computerization of library collection and other operations should be ensured to meet the users need quickly and promptly.
9. Non book material collection should be strengthened
10. Toilet facility should be improved.

CONCLUSION

The majority of research workers were found to be aware of the services such as reference services and circulation services offered by the university library. But documentation services like. CAS, SDI, reprographic services, inter library loan should be provided to fulfill the needs of research scholars. Non-availability of current journals is another finding , hence library has to improve the periodical section service to meet the requirements. Library facilities like space for reading, cleanliness lighting ventilation, equipments drinking water is satisfactory. Computerization of library collection and other operations is the prime need to improve the library services.

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II- 2

LIS EDUCATION COURSES IN AGRICULTURE UNIVERSITIES : A CASE STUDY

Neena Singh
J Dominice

ABSTRACT

Discusses the LIS education in twelve agriculture universities of India. Objectives of these courses, duration and course contents are discussed based on the data available in the syllabi followed by these universities. Concludes that attempts made by agriculture universities LIS staff in devising a suitable course curriculum on user education is a commendable and encouraging step.

INTRODUCTION

Agriculture libraries and information centers have been playing a vital role in complementing teaching research and extension function of these universities. They provide scientific information supports and function as nerve centers for research and teaching activities. In order to bring qualitative improvements in agriculture education, the agriculture universities unlike the traditional universities are offering a unique one credit course on user education to educate the students and develop their skills on library use, retrieval of information and to acquaint them with the various sources of information available in their library.

As the libraries and information centers are going hi tech with

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digitization of information, the relevance of such courses has become important. To use these automated libraries consisting of several databases, online databases and other digital collection, the users need to be educated on OPACS and other relevant techniques.

The main objective of these courses is not only to acquaint the users on various sources of information but also develop their skill/ competence to get self trained in searching and locating /retrieving information and to be less dependent on staff guidance. The agriculture university libraries are thus a step ahead of the traditional universities and are discharging the dual function of teaching as well as administrative function of the library.

OBJECTIVES

The present study was undertaken with the following objectives.

1. To analyze the duration and credit hours of various LIS user education courses .
2. To discuss the objectives of LIS user education courses in agriculture universities.
3. To analyze and evaluate the syllabus/ contents of these courses.
4. To ascertain the suitability of the courses in achieving the objectives laid down.

SCOPE SOURCES OF DATA AND LIMITATION

Access to data and timely completion are the two vital factors for success and accomplishment of prerecorded objectives of any investigation; hence keeping the limited time span the present study is based on the data available in the syllabus followed by 12 agriculture universities in the country . The idea of carrying out this study is to provoke further discussion and reflection rather than to sharply draw any conclusion.

METHODOLOGY

The data collected from the syllabi of various agricultural universities has been classified grouped and analyzed to determine the various dimensions of the study. For the purpose of the present study the course contents obtained from 12 agriculture universities across the country has been analysed.

ANALYSES AND INTERPRETATION OF DATA

To get the best possible view of the objectives and reality of LIS

user education courses in agricultural universities the data has been analysed as follows.

Duration and credit hours of the courses

The user education courses devised by the agriculture university libraries are offered for a semester particularly in the first or second semester generally to the PG students . Some universities like Dr YS Parmer university of Horticulture and Forestry, Solan (HP), Acharya Narendra Dev University, of Agriculture & Technology, Faizabad and CCS Haryana Agriculture University, Hisar are offering these courses to the PhD students also. Surprisingly the Rajasthan Agriculture University, Bikaner, is offering this course only to undergraduate(UG) students. The course content of all the agriculture universities analysed in the present study reveals that the course is of one credit hour and has been made compulsory for all students. On the other hand only G B Pant University of Agriculture and Technology offers the course on optional basis . In most of the agriculture universities the course is graded in the final examinations. However, in Assam Agriculture University, Jorhat the course is of nongradial nature. Annexure I indicates the list of universities offering the courses at UG /PG /Ph.D. level along with the course title.

The objectives of LIS education

The basic objectives of offering the LIS education courses by agriculture universities is to acquaint the users with principles of library use, to get trained in library state of art their functions particularly in storage and retrieval of scientific information . In brief the objectives of the course may be summarized as follows:

1. To acquaint the students with the principle /ethics of library and information centers and its importance in university educational system.
2. To acquaint the students with various sources of information available in the library.
3. To train the students in the skills of using library catalogue for information retrieval both manual and OPAC in automated environment.
4. To provide knowledge of various National and International Agriculture Information System and Networks .
5. To train the students in using electronic databases in CD ROM/ DVD ROMS, and searching online databases.
6. Information explosion and problem associated with scientific literature, scatter language etc.

7. Knowledge of compiling bibliographies preparing thesis/ dissertations writing scientific reports proof reading etc.
8. Bibliographical control knowledge of abstracting and indexing periodicals, preparation of Index etc.
9. Classification and cataloguing system followed in the library, CAS and SDI services.

The agricultural universities offering these courses have combined the course content of library and information sciences with technical writing. The technical writing part provides knowledge about technical jargons used in compiling bibliographies, indexing , writing scientific references, preparing thesis, proof reading etc. Hence, the course has been designed with a blend of LIS instruction and technical writing.

Course Content /course curriculum

The syllabus for one credit course has been designed keeping in view the basic idea of user education. The course content has been divided into two parts. The first part deals with topics of library and information sciences with slant to user education and the other part deals with technical writing. The library and information science part centers around area like library in university education, types of libraries its utility and functions, library rules and ethics, knowledge of classification scheme, cataloguing systems use of library catalogues and OPACS; sources of information, knowledge of several national and international agriculture databases, e-mail and internet; library services, CAS, SDI etc.

Technical writing part included in the course content trains the students in preparing their dissertations, writing scientific references, knowledge of compiling bibliographies, technical jargons like use of Latin abbreviations , writing footnotes, proof reading etc.

The course content adopted by /followed by various agriculture universities has been suitability tailored catering to the needs of the user community on library use. How ever, there is no proper balance between the topics included in the library and information sciences and topics of technical writings . The analysis of Annexure-II reveals that course content of G B Pant university of Agriculture and Technology, Pantnagar; IARI, New Delhi and Y S Parmer University of Horticulture and Forestry, Solan, have given reasonable coverage to library and information science topics. The course content of Bikaner Agriculture University, Rajasthan, is completely focussed on Library service and does not include any content on technical writing. The Assam Agriculture university has emphasized more on technical writing giving major share of the course to the topics on technical writing.

Agricultural universities have suitably covered the relevant LIS topics on user education in their syllabi, however, the course content of some universities have not been modified/updated according to the present requirements, for example, Jawahar Lal Nehru Krishi Viswavidhalaya University, Jabalpur; CCS Haryana Agriculture University, Hisar; Rajasthan Agriculture University, Bikaner; Indira Gandhi Krishi Viswavidhalaya Raipur, Dr Panjab Rao Deshmuk Krishi Vishwavidhalaya are yet to include Information Technology (IT) in their course content, particularly in terms of using electronic databases, computerized search formulations, e-mail, online information retrieval from networks, etc. perhaps the libraries of these institutions are not automated.

It is noted that, most updated course content of LIS education is offered by Dr. Y S Parmer University of Horticulture and Forestry, Solan, providing knowledge on use of OPAC, National and International Information System and centers, networking, use of e-mails, Internet etc. followed by the G B Pant university of Agriculture and Technology. Some universities have included topics that are not relevant from users point of view, for example Rajasthan Agriculture University, Bikaner is offering practicals on preparing catalogue cards, added entries etc., using AACRII. Indira Gandhi Krishi Viswavidhalaya, Raipur, is teaching cataloguing codes, particularly Classified Catalogue Code and Anglo American Cataloguing Rules. Similarly five laws of library sciences have been included in the course content of Dr. Punjab Rao Deshmukh University. Similarly the Indian Agricultural Research Institute teaches the students about document collection, acquisition, and their technical processing, etc. these topics are relevant to the students of Library and Information Science than to the students trained for using the library.

Some universities like University of Agriculture Sciences, Dharward has included interesting topics in their course content like complexities of books and periodicals, technically reading a book, etc. Similarly Indira Gandhi Krishi Vishwavidhalaya has included studies of some model thesis maintained In their library. Dr. Panjab Rao Deshmukh University has included studies of various agencies in the field of Agriculture Sciences and Technology.

Regarding Technical writing, most of the universities except Rajasthan Agriculture University, Bikaner have included the techniques of compiling bibliographies, use of scientific references, preparation of thesis and scientific reports, use of Latin abbreviations, foot notes, proof reading etc.

OBSERVATION AND DISCUSSION

The following observations can be drawn on the basis of the findings of the present study.

1. The study indicates that LIS courses offered by various agriculture universities is an encouraging step towards user education. These courses have been designed /developed to acquaint the students with various sources of information, retrieval of information from library's holdings, and preparing them to use the library independently for self study.
2. The LIS courses followed by the agriculture universities is divided into two parts. One aspect deals with topics on library and information science from users point of view and the second aspect deals with technical writing which covers topics like writing of bibliographical references, preparing thesis, writing scientific reports, foot notes etc.
3. The LIS education courses are offered by the university libraries and as such there is no department of library and information sciences. In some universities like the G B Pant University of Agriculture and Technology the course is offered by the department of Humanities and Social Sciences but taught by the staff s of the university library.
4. The course content followed by most of the agriculture universities is more or less same except for Rajasthan Agriculture University, Bikaner. The course curriculum followed by the said university is exclusively focused on library sciences and does not include any part of technical writing the obvious reason for this state is perhaps due to the fact that the course is offered at under graduate(UG) level.
5. The LIS courses offered by all the agriculture universities covered in the present study is of one credit hour and is generally offered in the first or second semester. The course title varies from university to university for example Indian Agriculture Research Institute, New Delhi offers the course by the title "Agriculture Information System" ; G.B Pant University of Agriculture and Technology by the title " Storage and Retrieval of Scientific Information"; University of Agriculture Sciences, Dharward by the title "Library and Information Usage". Similarly Himachal Pradesh Krishi Vishwavidhalaya, Palampur offers the course by the title "Literature and Technical Writing" ; CCS Haryana Agriculture University by "Library Science and Technical Writing" and Y.S Parmer University of Horticulture & Technology, Solan by "Literature and Technical Writing" etc.

6 The LIS staff working in agriculture universities unlike the traditional universities share the responsibilities of teaching, administrative and technical works of the library management.

SUGGESTIONS

1. In order to achieve the objectives of user education in agriculture universities efforts should be made to bring uniformity in the course content. There should be proper distribution of topics in library and information sciences and technical writing. This is suggested as some of the universities either emphasis more on library sciences aspects (eg. the Rajasthan Agriculture University) or Technical Writing (eg. Assam Agriculture University).
2. The course contents followed by the universities should be updated frequently keeping in view the ongoing changes in the library management with regard to the fast developments in application of Information and Communication Technology.
3. The course may be offered to Post Graduate and Ph.D. students who are likely to be more dependent on library resources for their thesis and research work. Besides it should be graded and made compulsory for all students.
4. The course outline, like practical works on cataloguing and classification, Cataloguing codes/rules, laws of library sciences, document selection, acquisition, technical processing, etc. should be discouraged as these topics are not relevant from user's point of view.
5. As the libraries are automating their house keeping activities and getting complex in nature with electronic and digital collections, it is suggested that a separate one credit course should be offered on information retrieval and library use. The technical writing part may be combined with the courses offered by English department of the universities.

CONCLUSION

Attempts made by the Agriculture University LIS staff to device a suitable course curriculum on user education is commendable and an encouraging step. The basic objectives of these courses is to acquaint the students with library literature and develop some skills in techniques of retrieving information from the library collection and use of electronic databases. Besides the course also prepares the students for self study and to be less dependent on LIS staff.

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10. Syllabus "Scientific Report Writing and Use of Library -613" Dr Panjab Rao Deshmukh Krishi Vidhapeeth, Akola (Maharastra).
11. Syllabus "Storage and retrieval of Scientific information "GB Pant University Of Agriculture and Technology, Pantnagar (Uttaranchal).
12. Syllabus "Introduction to library Science "Rajasthan Agriculture University Bikaner" (Rajasthan).
13. Syllabus "Use of Scientific and Technical Literature -511" Acharya Naredra Dev University of Agriculture and Technology, Faizabad (UP)

ANNEXURE-I
LIST OF AGRICULTURE UNIVERSITIES OFFERING LIS COURSES

Sl. No.	Name of the University	Title of the Course	UG/PG/ Ph.D.	Compulsory Optional
1.	Acharya Narendra Dev University of Agril. & Technology, Faizabad.	Use of Scientific and Technical Literature	PG & Ph.D.	Compulsory
2.	Assam Agriculture &Tech. Univ. Jorhat	Technical writing & Library Use (TWL)	PG	Compulsory
3.	CCS Haryana Agril. University, Hisar (HAU)	Library Science and Technical writing	PG & Ph.D.	Compulsory
4.	Dr. Panjab Rao Deshmukh Krishi Vidhyapeeth, Akola	Scientific Report Writing and use of Library AG,Extn-613	PG	Compulsory
5.	Dr Y S Parmer Univ. of Horticulture & Forestry, Solan	Literature and Technical writing –501	PG & Ph.D.	Compulsory
6.	G B Pant University of Agril. & Technology Pantnagar	Storage and Retrieval of Scientific Information- 610	PG	Compulsory
7.	Himachal Pradesh Krishi Vishwavidhya aya Palampur	Literature and Technical Writing –501	PG	Compulsory
8.	Indian Agricultural Research Institute (IARI) New Delhi	Agriculture Information System (AIS)	PG	Compulsory
9.	Indira Gandhi Krishi Vishwavidhyalaya, Raipur	Biological Literature and Reference work	PG	Compulsory
10.	Jawaharlal Nehru Krishi Vishwavidhyalya, Jabalpur	Agril Information System (AIS)	PG	Compulsory
11.	Rajasthan Agriculture University, Bikaner	Library and Information Usage	UG	Compulsory
12.	University of Agricultural Sciences, Dharward	Introduction to Library Sc. (Lib-14)	PG	Compulsory

ANNEXURE-II

COMPARITIVE LIST OF SYLLABUS FOLLOWED BY THE AGRICULTURE UNIVIRSITIES

Acharya Narendev Krishi Vidhyapeeth (Faizabad)	Assam Agricul-ture University (Jorhat)	C.C.S Haryana Agril. Unvivers lty. (Hisar)	Dr Panjab Rao Desh-mukh Krishi vidhyape-eth,Akola)	Dr. Y. S Parmer Univ of Horti & Forestry (Solan)	G.B Pant Univ Of Agril & Tech Pantnaga	H.P Krishi Viswavid Halya (Palampur)	IARI (New Delhi)	I.G Krishi Vishwa Vidhlya (Raipur)	J.N Agril. Univ. Jabal-Pur	Rajasthan Agril. University (Bekaner)	Univ of Agril. Science, (Darward)
Role of Lib In Univ. Education	Library in Education	Role of Services in Univ. Edu	Role of Lib. In Higher Education	Role of Lib. in Univ Edu.	Role of Lib. in Univ. Edu.	Role of In Univ. Edu.	Role of Lib. in Society	Library Types of Library	-	Concept of Lib. Science	Role of Lib in In Edu.
Functions of Library		Orgnisat-ion of Univ. Lib.	Function of Univ. Library Services	Rules, ethics of library	Function of Lib. seff study	-	Functio ns of Lib. utility	Functio ns of Library/ utility	Introdu ction to various section of lib.	Lib organizati on Lib rules	Function of Univ. Library
Library organization	-	Classifica tion & organizati on of Lib Collection	Library classific ation & Techniq ues Used	Classificat ion of Major Scheme	Library Classifica tion/know edge Clas ification	-	-	Library Classifica tion DDC, UDC CC	Library Classifica tion Scheme	Library Clssific tion, DDC, class number	Lib. Cllasificat ion development of Subjects

-	-	Use of Catalogue & Kardex	Catalogu ing & & Entries, conflict of authorship	Retrieval of docu ments from catalogue	Use of Catalogue Call No. Book No.	Use of Catalogue	-	Catalog uing, CCC AACR ALA	Catalog uing sys tem Call No.	Library cataloging practical	Catalog uing, main & added entries ACRII
Info. Explosion, problems of Language Scatter	Informati on age	Scientific literature Type	-	-	Scientific Literature Info. Explosion Language scatter	Scientific Lit. Info. Explosion language barrier	Scientific Lit. Fund amental Categori es of Docu- ments		-	-	Info Explosion Lit. Scatter Barrier For Info. Flow
Sources of Information Primary Secondary Tertiary	Sources of Infomati-on Primary Secondary Tertiary	Sources of Information Primary Secondary Tertiary	Sourcesof Scientific Information	Sources of Information Primary Secondary Tertiary	Sources of Information Primary Secondary Tertiary	Information Source Primary Secondary Tertiary	Source of Information Primar Secondary Tertiary	Sources of information & refere nce tools	Informati onsources Primary Secondary tertiary	Sources of Informati- on Primary Secondary Tertiary	Sources of Information Primary Secondary Tertiary
Use of Computer in Agriculture	-	-	-	CD Rom Search &Online search ing	Machine Readable Database CDROM Online Informa tion Retr ieval	Knowledge of CD ROM Databa ses & Search	CD ROM Literature Search System Database	-	-	Computer Handling in library Informati -on Storage Devices & Services	-

-	-	-	-	Network ing National International Information system E-mail & Internet	Networks INFLIB-NET NICNET Etc	-	Electronic Publishing	-	-	-	-
Abstracting and Index ing Services	-	Bibliogra phical control, Abstract ing and Indexing Services	Bibliogra phical Control Abstract-Ing Index ing	Abstracts Definition & Types	Bibliogra phical control Abstract ing Index ing services	Bibliogra phical Control abstract ing Index ing Services	Library Tools Service Docume ntation	Abstrac ting and indexing service	Bibliogra phic control Abstract ing & Indexing	-	Use of reference tool Indexing
Compilation of Bibliogra phy Use of National & International Codes	Technique of Compil ing Bibliogr aphies	Prepara tion of Bibliogr aphies	-	Techniq ues of writing Bibliogra phical	Techniq ue of compiling Bibliogra phies	Techniq ue compil ing Bibliogra phies	Document Selection Technical Proces sing	Compiling Bibliogra phies Tec chiques	Techn ques Compi ling of bibliog raphy	Compilati on of Bibliogra phies	Compilati on of Bibliogra phies
Writing Thesis and compiling Abstract, use of opcit, ibid Footnote	Preparation of Thesis Use of Latin Abbrevia tions	Preparation of Thesis Technical paper writing Footnotes Use of	Preparati on of Scien-tific report. Writing research articles	Preparation of Thesis/ Dissertation proof reading	Preparation of Dissertat ion/ Thesis	Preparation of Dissertа-tion Use of foot notes ibid, Op Cit etc Latin abbre viation	Scientific Report writing	Studies of Model Thesis maint ained in the library Thesis Writing	Prepara tion of thesis and Scientific manuscr ipt	-	Technically reading a book complexit ies of books and journal

OVERALL SATISFACTION OF USERS' IN THE COLLEGE OF EDUCATION LIBRARIES IN MAHARASHTRA

Veer D.K.

ABSTRACT

Researcher has taken users' survey of 654 users'. Of the 654 users', there were 76,227 and 351 users' were of Govt., Private Aided (PA) and Private Un-Aided (PUA) colleges of education in Maharashtra respectively. The paper analyzes the users' responses in regard to arrangement of books, methods of identifying and location of books, size of library, library timing, display and new arrivals and overall collection and services etc. This paper is based on the partial part of Ph.D. thesis.

INTRODUCTION

College of education has been defined by International Dictionary of Education[1] as "College, either a separate institution or a constituent part of a university, specializing in teacher education and training". In essence, it would mean that colleges of education are nothing but educational institutions where Bachelors as well as Masters couses in education are offered to teachers who are working in Primary, Secondary & Higher Secondary Schools as well as the students who want to take up the profession of teaching. In other words, the college, which offers courses in the branch of Edcation at various levels such as B.Ed., MEd., & doctoral programme. This survey covers 109 such Colleges of Education in the state of Maharashtra.

Dr. Veer D.K., Librarian, Govt. CoBele of Education, PARBHANI (Maharashtra)

College of Education Library

College library means) "A library established, maintained and administered by a college to meet the needs of its students and faculty"[2]. Consequently, a College of Education Library is one, which is run or administered by the teacher education institution.

User is very important factor in the library therefore care should be taken at a right time. B.K. Datta[3] says "As a librarian I suggest that we should care more for the students who do not care for a long time we neglected them, and concentrated all our energies for the use of a handful for scholars and students in comparison widl die total. This way of centralizing academic energies has its disastrous effect in the long run it is high time to think the problem & change our attitude".

Hence present study wanted to concentrate on tile mass of student's community.

OBJECTIVES

1. Identifying die actual strength and weakness of library resources and services.
2. To elicit and analyze users' opinion on the facilities and services provided by these libraries.
3. Identifying the limitations or problems, which seem to discourage the use of library.

METHODOLOGY

The steps in the medlodology includes:

a) Data Collection

b) Data Analysis

Data Collection

"Data are the raw materials of reflection until by comparison, contrast and evaluation they are stepped up to successively higher levels of generation".[4]

Present study was done with the help of survey method. This method plays a significant role in research as can be seen from the statement. "The survey method is one of the most effective & sensitive instrumets Its of research...survey research can produce much needed knowledge".[5]

The Researcher prepared a questionnaries for users of the concerned college libraries.

Background Information about the respondents

Size of Sample

Of the 144 colleges, response was received from 109 colleges, i.e

75.69%, which is relatively good for a study of this nature. Of the 109 colleges there are 12 (i,e. 100%) Government. 36 (i.e. 100%) Private Aided and 61 (i.e. 63.54%) Private Un-aided colleges.

The Questionnaire was administered to 5% of users of each college. In all, one thousand Questionnaires were distributed among the users' of College of Education Libraries. The response was received from 654 users, which comes to 65.40%. Of the 654 users', there were 76.227 and 351 users' were of Govt, Private Aided and Private Un-aided colleges respectively. Random sample technique is used for the selection of users.

The data of response received was analyzed & presented in Table 1

Table No.1 .

Quantum of QuestioDnaire Distributed and Respomes Received

Category	Total Members	Questionnaire Mailed	% to Total	Response Received	% to Mailed Questionnaire
Students	14921	750	5.03	436	58.13
Teachers	1878	250	13.31	218	87.2
Total	16799	1000	5.95	654	65.4

It can be observed from the Table 1 that near-about 65.40% of the total sample selected for the present study, response received was 65.40%.

Distribution of Respondents by College Management wise

The total questionnaire received from respondents were analyzed by each category of colleges are presented in Table 2.

Table No.2

Distribution of Respondent by College Management wise

Category	Respondents				Total	%
	Students	%	Teachers	%		
Govt.	52	11.93	24	11.01	76	11.62
P.A	155	35.55	72	33.03	227	34.71
P.U.A	229	52.52	122	55.96	351	53.67
Total	436	100	216	100	654	100

Note: PA =Private Aided; PUA= Private Un-aided.

It is seen from the Table 2 that maximum respondents were of PUA college libraries as number of PUA colleges is also large.

Data Analysis

Collected data has been analyzed and presented in tabular form. In addition to that statistical techniques used for analyzing the data i.e. chi-square.

Cbl- square

"The square of a standard normal variable is called a chi-square"[6] Chi-square analysis for testing the equality of proportion was carried out as per standard procedure explained in satisfactory level of significance with regard to various variables such as collection & services, number of copies, physical condition of books, arrangement of books, size of collection etc.

The chi-square statistic was used to test the equality of proportion for various categories of variables for Govt., Private Aided (PA) & Private Un-aided (PUA) colleges. The chi-square statistics was also used for testing the r-elationship of different attributes of the contingency table.

SCOPE & LIMITATIONS

Present study is limited to B.Ed. students and teachers in the Colleges of Education Libraries in Maharashtra only.

OVERALL SATISFACTION

The overall satisfaction was analyzed with the following variables

a) Arrangement of books (AB)
b) Method of identifying & location of books (MILB)
c) Size of library (SL)
d) Facilities such as tables, chairs etc. (F)
e) Personal guidance (PO)
f) Library Timing (LT)
g) Display & New arrivals. (DNA)
h) Overall Collection & services. (OCS)

Percentale Analysis

The percentage analysis of overall satisfaction with above-mentioned variables is presented in Table 3

Table No.3

Overall Satisfaction

Variables	Govt. n = 76		PA n = 227		PUA n = 351	
	S	NS	S	NS	S	NS
Arrangement of books	74 (97.37)	2 (2.63)	224 (98.68)	3 (1.32)	61 (17.38)	290 (82.62)
Medlod Identifying & Locatmg Books	74 (97.37)	2 (2.63)	220 (96.92)	7 (3.08)	16 (4.56)	335 (95.44)
Shre of library	54 (71.05)	22 (28.95)	204 (89.87)	23 (10.13)	126 (35.90)	225 (64.10)
Facilities such as tables, chairs etc.	73 (96.05)	3 (3.95)	217 (95.59)	10 (4.41)	61 (17.38)	290 (82.62)
Personal guidance	74 (97.37)	2 (2.63)	224 (98.68)	3 (1.32)	26 (7.41)	325 (92.59)
Libnuy Timing	56 (73.68)	20 (26.32)	187 (82.38)	40 (17.62)	161 (4S.87)	190 (54.13)
Display & new arrivals	68 (89.47)	8 (10.53)	120 (52.86)	107 (47.14)	26 (7.41)	325 (92.59)
Overall Collection & services	44 (57.89)	32 (42.11)	176 (77.53)	51 (22.47)	55 (15.67)	296 (84.33)

Note: Figures in brackets indicate percentage to n; S=Satisfied; NS=Not Satisfied.

It can be observed from Table 3 that proportion of satisfied respondents was highly significant in case of arrangement of books, method of identifying & location of books, size of library, facilities, personal guidance, library timing and display & new arrivals etc. with regard to Govt. & PA college libraries. While the exact reverse result is observed in case of PUA colleges.

With regard to overall collection & services, maximum respondents are satisfied in case of Govt. & PA colleges, however, not satisfied respondents was highly significant over satisfied respondents in case of PUA college libraries.

Chi-square Test

The proportion of satisfied and not satisfied respondents were

compared with regard to Govt., PA & PUA college libraries for above mentioned different indicators and analysed by using chi-square test which is presented in Table 4

Table No. 4

Chi-square Analysis: Overall Satisfaction

Category	Variables							
	AB	MLIB	SL	F	PG	LT	DNA	OCS
	x^2	x^2	x^2	x^2	x^2	x^2	x^2	x^2
Govt.	68.21	68.21	13.41	64.41	68.21	11.05	41.36	1.89
P.A	215.15	199.86	144.32	188.16	215.15	95.19	0.14	68.83
P.U.A	149.40	289.91	21.92	149.40	254.10	2.39	254.10	165.47
Overall	6.26	1.16	19.87	3.52	0.49	36.26	18.09	16.53

Base: Table 3

It can be observed from table 4 that the proportion of satisfied respondents was significantly higher in case of govt. & PA college libraries over non-satisfied respondents for all the indicators studied. Whereas, the proportion of not satisfied respondents was higher over satisfied respondents, which was significantly higher for PUA in case of arrangement of books, methods of identifying books, size of library, library facilities. Personal guidance, library timing display & new arrivals and overall collection & services. This indicates that there is a scope for improvement in the services for these variables of PUA colleges.

Chi-square test: overall level of satisfaction.

The data was further analyzed by using chi-square test with level of satisfilction about different indicators for overall satisfaction among Govt., P A & PUA college libraries. The results of analysis are presented in Table 5

Table No.5

Chi-square test: Overall level or satisfaction

Variables	Govt.		P.A		P.U.A		Total	
	O	E	O	E	O	E	O	X^2
ArTangement of books	74	41.71	224	124.61	61	192.68	359	194.26
Medlod Identii'jing & Locating Books	74	36.02	220	107.60	16	166.38	310	293.38

Size of library	54	44.62	204	133.29	126	206.09	384	70.61
Facilities such as tables, chairs etc.	73	40.79	217	121.83	61	188.38	351	185.91
Personal guidance	74	37.65	224	112.46	26	173.89	324	271.50
Library Timing	56	46.95	187	140.23	161	216.82	404	31.71
Display.& new arrivals	68	24.87	120	74.28	26	114.85	214	171.67
Overall Collection & services	44	31.95	176	95.46	55	147.59	275	130.58

O=Observed value; E -Expected value; x^2 Chi-square

The analysis of chi-square test revealed significant value of chi-square implying thereby the proportion of satisfaction differed significantly.

As regards arrangement of books, the observed respondents were higher as compare to expected, whereas in case of PUA the level of satisfaction was considerably lower as compared to expected value.

Similarly in case of method of identifying & locating books. Out of 310 respondents only 16 were satisfied with the method of identifying books in case of PUA. This level of satisfaction was significantly lower as compared to expected frequency of 166. Thus, it can be concluded that respondents were satisfied with Govt. & PA colleges, however the differences were significant.

As regards size of library there were 384 respondents who have expressed satisfaction out of 654. The proportion of satisfactory respondent differs significantly with regard to three categories. There was significant difference between observed & expected frequency of respondent in case of PUA The observed frequency is 206. The category-wise differences were also highly significant.

As regards library facilities the proportion of satisfied respondents was significantly lower who were satisfied to PUA colleges as compared to expected value of 188.

Similarly result was observed in case of personal guidance. Library timing, display & new arrivals. In case of personal guidance there were only 26 respondents out of 324 only from PUA who were satisfied

as against desired nunlber 174.

In case of library timing out of 404 satisfactory respondents only 161 respondents were satisfied as against 217 expected for PUA.

Similarly the satne result was observed in case of display & new arrivals. There were only 26 respondents who were satisfied out of 214 expected level of respondent was 115. Thus there was significant gap between observed & expected values. In general significantly lower proportion of satisfied respondents was observed with regard to all categories. The gap between observed & expected values was also significantly higher.

CONCLUSIONS

1. Levels of satisfaction by chi-square analysis by various indicators such as arrangement of books, method of identifying books, size of library, facilities of library, personal guidance, library timing and display of new arrivals indicate that majority of the users of Govt. & PA college libraries were satisfied, but the same is not the case with PUA.
2. From the foregoing account, it can be observed that there many PUA Colleges are not observing norms laid down by National Council of Teacher Education (NCTE) in regard to dis-satisfaction of users in all aspects of collection & services makes it clear that the growth of Colleges of Education Libraries in the State of Maharashtra is far from satisfactory in case of PUA Colleges.

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READING HABITS OF POST-GRADUATE (PG) STUDENTS IN BUNDELKHAND UNIVERSITY, JHANSI: A SURVEY

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ABSTRACT

Installing the reading habits and providing an adequate supply of books to its users are considered as the fundamental duty of any Library and Information System. Present study concentrates on the role of Library and Information System in order to highlight the reading habiti among the users and their problems on various aspects. It has been conducted in the form of a 'User Survey' using questionnair method. Also suggests the steps to develop healthy reading habits among the users, through which librarians may ensure maximum use of library collection within the avaiable resources.

INTRODUCTLON

Bundelkhand University is streadily surging ahead as an eminent centre of excellence of hgher learning in the country with the sacred mission to impart quality knowledge. It was incepted n 26 Aug. 1975 under the dynamic leadership of the then Chief Minister Shri Hemnati Nandan Bahuguna.

Intially, an affiliating university B.U. acquired the status of a residential institution in the year 1986. The university had a rare priviledge of starting its journey under the very able leadership of Prof. Wahid U. Malik. The guest house of the Bundelkhand Degree College is credited to become

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The first office of the University. There after, till June 1982, it was housed in a rented building at Nandanpura, Jhansi. It began to function in its own building in the present campus w.e.f. 4 June 1983.

The University library was established in 1982 and shiffted to its new state-of-the-Art Building in 1999 under the very able leadership of Prof. Ramesh Chandra as its Vice-Chancellcr.

The present separate building covers a plinth areas of 1823 sq. meter, located in the midst of the academic complex of the University. It has a rich collection of books of different desciplines. To make it more useful, the library is planned to be fully computerised.

IMPORTANCE OF THE STUDY

In the modem era, reading is considered essential for achieving something, mostly in the materialistic world. There is no greater pleasure than that of reading books. It removes dullness and recreates one and all. They are our never failing friends, which stand by us through thick and thin. Francis Bacon stated, "Reading stimulates imagination, arouses healthy emotional responses, achieves better understanding, increase one's enjoyment and appreciation of great men and women of past and present civilization" This study concentrates on the role of library and the library services in the promotion of user's reading habits and an examination or a survey of how it is fulfilling or satisfying he information needs of its user's community.

OBJECTIVES

The objective of the study are as follows:-

i. To identify the information requiremunts of users at all levels.

ii. To assess the user's satisfaction and dissatisfaction with library services.

iii. To assess the attitude and behaviour of the users towards the library services and collection.

iv. To find out the awareness of library services among the users.

v. To identify the relationship between the library services and the users.

vi. To find out thc trends in reading habits of users.

METHODOLOGY

Out of 200 questionnaire only 157 were received back duly filled in by respondants. INterview technique was also use to obtain information from the users. The analysis of data collected is as follows:—

Number of Respondants

Out of 200 questionnaire only 157 questionnaire were received back duly filled in by espondants, which reveals a good response. Interview technique was used to obtain information from the ursers Details about the users from whom the responses have been received are given in the following.

Table-1

Sr. No	Category of Users	Number of Question naire Distributed	Questionnaire back	Percentage
1.	Post-Graduate Students	200	157	78.5%

The above table indicates that the percentage of PG Students in different desciplines of regular courses is only 78.5%.

Sexwise Category of Users

The number of users sexwise is indicated in Table-2. The Table shows that out of 157 P.G. Students, 87 (55.41%) are male while 70 (44.59%) are female.

Table-2

Sr. No.	Category (Sexwise)	P.G. Students	Percentage
1.	Male	87	55.41%
2.	Female	70	49.59%
	Total	157	100%

Language Known

The number of users having knowledge of Hindi or English or Both is indicated in Table 3.

Table-3

Sr. No.	Language	Respondents	Percentage
1.	Hindi	12	7.65%
2.	English	05	3.18%
3.	Both	100	89.17%
	Total	157	100%

Table-3 indicates that 140 (87.17%) users are having the knowledge of both language ie. Hindi & English. While 12(7.65%) students are having knowledge of Hindi and only 5(3.18%) students known Englush as wel.

Location of the Library

B.U. Central Library is located at the midst of academic campus which caters to the need and is easily accessible to all its users either residing in staff quarers or hostels. The data collecte in this regard is being given in the Table-4.

Table-4

Sr. No.	Place of Residence	Users	Percentage
1.	Hostel	040	2.55%
2.	Staff Quarters	060	3.82%
3.	Outside the campus	147	93.63%
	Total	157	100%

The above table shows that the users of centrally library reside in the campus and their place of the stay are quite near. While 147 (93%) a majority of users stay outside the campus.

Duration of the library use

Table-5

Sr. No	Time Spent	Users	Percentage
1.	Less than one hour	51	32.49%
2.	One hour	52	33.12%
3.	Two-Three hours	45	28.66%
4.	More than three hours	157	100%
	Total	157	100%

The above table indicates that a majority ie. (33%) of the users stay in the library for one hour or less than one hour. While 45 (28.66%) of users the library for more "tahn two-three hours" and 9 (5.73%) of users stay in the library for more than three hours.

Library Visit

The users were asked about the frequency of visits to the library. The answers received from respondants are indicated in Table-6. It was found that 74 (47.13%) of users visit library "Almost daily". 56 (35.67%) vist 'Several time in a week'. only a small percentage of users ie. 1.28%. Visit 'once in a month' While 6(3.82%) of users, who

rarely visit the library, Thus, it is clear that a majority of users are regular visitor visitors of the library.

Table-6

Sr. No.	Frequency of Visit	Users	Percentage
1.	Almost Daily	74	47.13%
2.	Several Time in a Week	56	35.67%
3.	Once in a Week	19	12.10%
4.	Once in a Month	02	1.28%
5.	Rarely	06	3.82%
	Total	157	100%

Purpose of the library visit

Keeping view the frequency of visits to the library the users were asked to indicate the purpose of their visit to the library. Their responses is given in the following table.

Table-7

Sr. No.	Purpose of the Visit	Users	Percentage
1.	For studying Course Material	95	60.51%
2.	For Competitive Exam.	24	15.28%
3.	For Counsulting Research Material	49	31.21%
4.	For Borrowing Material	42	26.75%
5.	For any Other Purpose	07	4.45%

It was found that 95(60.51%) of users visit the library for studying their course material 24(15.28%) visit to perpare for competitive examination. 49(31.21%) for consulting reading material, 42(26.75%) visit the library for borrowing the books. Only 7 (4.45%) of users visit the library for other purposes. Thus, the visit to the library and its use indicate that most of the users consult the library for study mateirals.

Library Hours

Table-8 indicates that 107 (68.15%) of users feel that opening hours of the library a adequate for their study whereas 50 (31.85%) of them are not satisfied.

Table-8

Sr. No.	Adequate of Lib. Hours	User	Percentage
1.	Adequate	107	68.51%
2.	Inadequate	50	31.85%
	Total	157	100%

Reading Space Facility

Adequate space reading facility is an important perrequesite for an effective function of a library. Hence, the data is collected in this regard and analysed in the following table.

Table-9

Sr. No.	Adequacy of Reading Space	Users	Percentage
1.	Adequate	83	52.86%
2.	Inadequate	74	47.14%
	Total	157	100%

Table-9 indicated that 83 (52.86%) of users satisfied with reading space of the library is adequate, while 74 (47.14%) users are not satisfied with it, because of the furniture, reading space and seating arrangement of the library is not according the their needs.

Types of Sources used

Table-10 shows taht 55 (35.03%) of users are using News papers, 36(22.92%) used magazine, 87 (55.41%) of users using text books, 20 (12.73%) used sources for Genral Knowledge, 61 (38.85%) consult reference books while 16(10.16%) of users used Journals for Information. Thus, it is clear that 38.85% of users consult the reference book.

Table-10

Sr. No.	Types of the Sources Used	Users	Percentage
1.	News Papers	55	35.03%
2.	General Magazine	36	22.92%
3.	Book of the Genral Knowledge	87	55.41%
4.	Competition Magazine & Book	38	24.20%
5.	Text Books	20	12.73%
6.	Reference Book	61	38.85%
7.	Journals	16	10.19%

User's opinion about the Document not available in the library

The respondants were asked 'Do you ask for the document not available in the library' answers given by them is showing in Table-11

Table-11

Sr. No.	Asked for Documents	Users	Percentage
1.	Yes	103	65.60%
2.	No	54	34.40%
	Total	157	100%

It was found that 103 (65.60%) of users asked the document not available in the library while 54(34.40%) of ousers do not ask for the document not available in the library.

Condusiveness of Atmosphere

A good library should have a condusive atmosphere. Therefore, users were asked about the atmosphere of a library. The opinion given by them have been collected any analysed in the following Table.

Table-12

Sr. No.	Copndusiveness of Atmosphere	Users	Percentage
1.	Condunsive	84	53.50%
2.	Not Condunsive	73	46.50%
	Total	157	100%

The above table indicates that 84 (35.50%) of users are of the opinion that the atmosphere of the library is condnsive while 73 (46.50%) users say that noise and crowd disturb them which results in a lack of concerntration in their study.

Attitude of the library Staff

Table-13 shows that 99 (63.05%) of users indicate that the attitude of the library staff is extremely good and they are quite satisfied with it. While only 58(36.95%) users say that the library staff should be polite and are not satisfied with the attitude of the library staff.

Table-13

Sr. No.	Attitude of the Library Staff	Users	Percentage
1.	Friendly	99	63.05%
2.	Not Friendly	58	39.95%
	Total	157	100%

Library Collection

An A adequate collection of a library play a significant role in its use. The users were asked in this regard and their respond have been given in the following table.

Table-14

Sr. No.	Adequacy of Library Collection	Users	Percentage
1.	Adequate	80	50.05%
2.	Inadequate	77	49.05%
	Total	157	100%

Table-14 indicates that 80 (50.95%) of users are satisfied with the library collection, while 77(49.05%) with a slightly difference of users are not satisfied due to reading material and indequate number of copies of text books and other important books. They emphasise on maximum literature on course material and demanded for Periodical/ Journals, so that they can keep them selves uptodate.

Suggetion about sources to be consulted

Table-15

Sr. No.	From where do you get the suggestion about sources to be consulted	Users	Percentage
1.	Friends	47	29.93%
2.	Teachers	64	40.76%
3.	Libraries	21	13.37%
4.	Self Experence	64	40.76%

Table-15 indicates that 64(40.76%) a majority of users get suggetions from the teachers and through their experience. 47 (29.93%) of users are helped by their friends while 21 (13.32%) are uided by the libraries.

Available of Sources

The respondants were asked 'Do you get all required material'. The response received have been given in Table-16. It was found that 15(9.55%) of users almost all material, 26(16.56%) of users get most all material. Whereas 64(40.77%) and 46(29.30%) of users get some and few of their required while only 6(3.82%) users responded none.

Table-16

Sr. No	Opinion about the required Material	Users	Percentage
1.	Almost All	15	4.55%
2.	Most	26	16.56%
3.	Some	64	40.77%
4.	Few	46	29.30%

Available of Information Sources at one place

The responses regarding the availablety of Information Sources at one place is given in Table-17.

Table-17

Sr. No.	Available of Information Sources at one place	Users	Percentage
1.	Yes	37	23.56%
2.	No	120	76.44%
	Total	157	100%

The above table indicates that 120 (76.44%) of users are not getting their required material at one place while one-third of the users are getting their required material at one place.

Sources of getting required material.

The respondants were asked from where do they get required material. The rewponses in given in the following table.

Table-18

Sr. No.	From where do they get required material	Users	Percentage
1.	Libraries	66	42.03%
2.	Market	63	40.12%
3.	Friends	55	35.03%
4.	Any Other Scurces	24	15.28%

It was found from the above table that 66(42.03%) of users get their required material from the libraries, 63(40.12%) users get their material from the market, 55 (35.03%) from their friends. While 24(15.28) of users get their material from any other sources.

User's Awareness

The awareness given by the respondants about the awareness of the information services provided in the B.U. Central library are indicated in table-19. It shows that out of 157 respondants, 94(59.55%) of users have awareness about the infromation Service. Whereas 63(40.12%) are not aware about it.

Table-19

Sr. No.	Awareness about the Inf. Services	Users	Percentage
1.	Yes	94	59.88%
2.	No	63	40.12%
	Total	157	100%

Adequacy of Loan Period

Issuing of books for study at home indicated in Table-20. It is found that 80 (50.95%) users are satisfied with the loan period. While 77(49.05%) of users are not satisfied with it provided by the library.

Table-20

Sr. No.	Adequacy of Loan Period	Users	Percentage
1.	Adequate	80	50.95%
2.	Inadequate	77	49.05%
	Total	157	100%

Expectation of the facility given in the library

The respondant were asked "What facilities do you expect from such a Centra"? The responses are given in Table-21.

Table-21

Sr. No.	Expectation of the facility	Users	Percentage
1.	Reading Room Facility	65	41.40%
2.	Circulation Facility	34	21.65%
3.	CAS/SDI Facility	33	21.01%
4.	Advisory Facility	44	28.02%
5.	Reprographic Facility	46	29.29%
6.	Internet Facility	87	54.41%

The above table shows that 87(54.41%) of users expect the internet facility and 65 (4.40%) of users need reading room facility. 46(29.29%) users are in favour of Reprographic facility, while 3(28.02%), 34(21.65%) and 44(28.02%) users expect Circulation, Advisory and CAS/SDI Services from such a centre.

FINDINGS

One the basis of the analysis of data the following interesting finding came out:—

- The number of male users is more than of female users.,
- A majority of the users have knowledge of both Hindi & English.
- Most of the users consult Reference books and text books for their study course material.
- A majority of the users visit the library almost daily.
- Users were found aware about the Information Services provided by the central library.

- A majority of users are satisfied with the adequacy of the collection and with the attitude of the libraries staff.
- 95% of users expect the Internet facility and reading room facility from such a centre.

SUGGESTIONS

All steps that are necessary to encourage the reading habits in students should be taken. A few of them are suggested below.

i. **Book Collection:** Books to be added to the library should be selected very carefully to suit the tastes and needs of the students. Development of the book-collection would impart knowledge to the students and put them on the right track.

ii. **Book-Exhibition:** Book exhibition if counducted from time to time will create a better impact on the nature of reading books for development purpose.

iii. **Physical Atmosphere:** The physical atmosphere of the library should be made as attractive and inviting as possible essentially required funiture should be provided so that the student sit comfortably and utilise the maximum collection of the library.

iv. **Opening Hours:** The B.U. Central library remains open from 8.00 am to 8.00 pm through out the year except Saturdays, Sundays & Gazetted holidays. However, it has been suggested that library be opened on Saturdays and Sundays and for longer hours.

v. **Display:** To keep students abreast with latest information about various services, journals, books etc, it is necessary to bring the latest information to the notice of the users through desplay, broachure, lectures etc.

vi. **Borrowing Books:** Students are encouraged to borrow books from the library through their class teachers.

vii. **Reprographic Service:** The library may have its own arrangement for reprographic service as 30% students demanded it.

viii. **Library Catalogue :** Users are very often desappointed with the library catalogue. Therefore, it should be suggested that library catalogue should be updated and library should develop a computerised retrival system for documents.

ix **Weeding Out:** Weeding out of old and little used documents improve the quality of the collection.

x. **Computerization:** A majority of students expect the internal

facility so, Computerization and Information.

CONCLUSION

It may be pertinet to state that the success and failure of a library depend upon adequate man power resouces, Information resources and Communication facilities, Reprographic facilities, good organisational machinery and so on. An understanding of the use of libraries for reading material and for information proclaims the sound fact of our comman ignorance while it promises steady progress towards continuing enleghtenment. Reading roots the brain. It is a skill that makes libraries important to the user.

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USE OF SCIENCE AND TECHNOLOGY INFORMATION BY THE RESEARCH SCHOLARS: A CASE STUDY OF KARNATAK UNIVERSITY, DHARWAD

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ABSTRACT

In this paper an attempt has been made to elicit opinions from the research scholars as the users of the Karnatak University library. A questionnaire method is used to identify the impressions of research scholars towards the adequacy of library resources, their use of the library and their views on library and information services. Finally, it highlights the findings and offers suggestions for the future planning of the library.

INTRODUCTION

The libraries being communication centers attached to various institutions endeavour in providing relevant information to its users at the time when required. The importance of library use for research work cannot be over emphasized. Research is an activity, which is directed to see something new, to find out what was not known before and thus expand man's fund of knowledge. Research scholars are the specialists working in the narrower areas of a particular subject. Naturally their information requirements are also of special nature to

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be supplied in a special way. Newly generated information constitutes an essential resource for the research worker.

Today, through the impact of team relay research, research and multidisciplinary nature of the subject, there is seepage of literature. The documents in every field especially in Science and Technology are publishing of accelerated rate. At this situation it is not possible for any library especially university library to acquire every thing, which is needed by its users, as almost all the libraries are facing financial constraints. Therefore it is becomes necessary for every library to develop need-based collection. Thus it is necessary to understand the user's needs, so that one can provide best services

NEED FOR THE STUDY

The present study focuses on the information seeking behaviour of the research scholars of science and technology faculty of Karnatak University, Dharwad. In which an attempts has been made to know the information requirements of the research scholars and how these are met with satisfactorily. The main focus of this study is to describe the needs and requirements in general and analyse the research scholar's information search activities, their use behaviour and use pattern. And also to find out the extent to which the existing library has organised and disseminated information to satisfy the needs of the research scholars

OBJECTIVES OF THE STUDY

The specific objectives of the study are as follows;

a. To know the frequency of visits to the library by the research scholars,
b. To find out the information needs of the research scholars,
c. To identify the types of information sources required by the research scholars,
d. To trace the utility of existing dissertations and thesis in their field of study,
e. To understand the extent of help sought by research scholars and the services offered by the library staff,
f. To identify the different methods of literature search used by the research scholars,
g. To know the use and adequacy of the information sources by the research scholars; and
h. To suggest the ways and means for the improvement of the library.

METHODOLOGY

For this study to collect the comprehensive and relevant data, a questionnaire method was applied. A list of questions was formulated keeping in view, the objectives of the study and personally distributed to the research scholars of science and technology faculty of Karnatak University, Dharwad. Sufficient time was given to fill up the questionnaire and return the same. Totally 60 questionnaire were distributed, out of which 45 were received back, with response.

SCOPE AND LIMITATIONS

The scope of the present study is confined to only the research scholars. The study population limited to 60 researchers of science and technology faculty. Which consist of the research scholars working in the departments like Botany, Zoology, Sericulture, Chemistry, Physics, Geology of Karnatak University, Dharwad.

ANALYSIS AND INTERPRETATION OF THE DATA

Table: 1

Gender wise distribution of research scholars

Gender	No. of research scholars	%
Male	31	68.88
Female	14	31.12
Total	45	100

Table 1 shows the sex wise distribution of research scholars. The study population contains more numbers of male researchers i.e. 68.88% than the female researchers i.e., 31.12%.

Table: 2 Department-wise Distribution

Department	No. of research scholars	%
Botany	5	11.11
Zoology	5	11.11
Sericulture	4	8.88
Geology	7	15.56
Physics	**2**	**4.44**
Bio-Chemistry	10	22.23
Organic Chemistry	10	22.23
Inorganic Chemistry	2	4.44
Total	45	100

In the above table, the study population has been divided into 8 groups on the basis of their departments. It is found that majority of the respondents i.e. 22.23% and about 22.23% are from Biochemistry and Organic Chemistry respectively; Followed by Geology(15.56%), Botany(14.11%), Zoology(11.11%), Sericulture(8.88), Physics (4.44%), and Inorganic Chemistry(4.44%).

Table: 3 Duration of Research

Research Duration	No. of Responses	%
One Year	9	20
Two Year	21	46.66
Three Year	10	22.23
More than three years	5	11.11
Total	45	100

In the above table, the study population has been divided into 4 groups viz., 1 year, 2 years, 3 years and More. It is found that majority of he respondents are doing research since in two year(46.66%), followed by three years(2.23%), one year (20%)and more than three years(11.11%.)

Table: 4 Frequency of Visits to the Library

Frequency of visit	No. of Responses	%
Daily	11	24.43
Twice in a week	10	22.23
Once in a week	7	15.56
Once in 15 days	7	15.56
Once in month	5	11.11
Occasionally	5	11.11
Total	45	100

Looking into the data given in the above table majority of respondents visit to the library daily(24.45%), followed by twice in a week(22.23%), once in a week(15.56%), once in 15 days(15.56%), once in a month(11.11%), and occasionally(11.11%).

Table: 5 Purpose of Visit

Purpose of visit	No. of Responses	%
Barrow books	26	57.77
Consult periodicals	20	44.44
Read news papers	8	17.77
Refer theses & dissertations	16	35.55
Consult reference sources	30	66.66
Use Reports / Conference proceedings	9	20.00

It is evident from Table 5 that majority(66.66%) of the researchers visits the library to consult reference sources followed by those who wanted to borrow books(57.77%). Next in order were periodicals (44.44%). Theses and dissertations were used by 35.55% of researchers, use of reports / conference proceeding and news papers were 20% and 17.77% respectively.

Table: 6 User's preference to types of documents

Types of	User's order of preference						
documents	1	2	3	4	5	6	7
Periodicals	20 (44.44%)	14 (31.11%)	5 (11.11%)	3 (6.66%)	2 (4.44%)	1 (2.22%)	- -
Books	15 (33.33%)	8 (17.77%)	11 (24.43%)	2 (4.44%)	4 (8.88%)	5 (11.11%)	-
Abstracts / Indexes	7 (15.56%)	8 (17.77%)	6 (13.33%)	9 (20%)	5 (11.11%)	6 (13.33%)	4 (8.88%)
Reference Books	2 (4.44%)	9 (20%)	15 (33.33%)	12 (26.66%)	5 (11.11%)	2 (4.44%)	- -
Theses & Dissertations	1 (2.22%)	2 (4.44%)	4 (8.88%)	8 (17.77%)	12 (26.66%)	10 (22.23%)	8 (17.77%)
Reports	-	4 (8.88%)	2 (4.44%)	7 (15.56%)	8 (17.77%)	18 (40.00%)	6 (13.33%)
News pape rs & Magazines	-	-	2 (4.44%)	4 (8.88%)	9 (20%)	3 (6.66%)	27 (60.00%)

The analyses of the responses furnished by the respondents in respect of their preferences to various kinds of information resources indicates that periodicals, and books were the most preferred resources by the researchers. Next in order are the abstracts / indexes, reference books, theses and dissertations and reports. Newspapers

and magazines were the least preferred resources.

Table: 7 Methods used to locate needed documents

Methods	No. of Responses	%
OPAC	28	62.22
Assistance of library staff	13	28.88
Guidance of Teacher	5	11.11
With the help of friend	-	-
Self	23	51.11

Table 7 demonstrates that the researchers locate the needed documents by consulting OPAC(62.22%),followed by self(51.11%), assistance of library staff(28.88%) and guidance of teacher(11.11%).

Table : 8 User's approach to library catalogue

Type of catalogue	No. of Responses	%
Subject	8	17.77
Author	28	62.22
Title	16	35.55
Classified	5	11.11
Dictionary	2	4.44

Table 8 shows that the majority of researchers (62.22%) follow author approach to locate the documents, followed by title(35.55%) and subject approaches(17.77%) respectively, classified(11.11%) and dictionary(4.44%) approach.

Table: 9 Adequacy of library collection

Types of collection	Adequate		Partially Adequate		Inadequate		Not Responded	
	No.	%	No.	%	No.	%	No.	%
Books	25	55.55	15	33.33	5	11.11	-	-
Periodicals	8	17.27	22	44.88	11	24.44	4	8.88
Reports	9	20	18	40	15	33.33	3	6.66
Conference proceedings	7	15.56	17	37.77	17	37.77	4	8.88
Research reports	10	22.22	11	24.44	15	33.33	9	20
Reference documents	15	33.33	18	40	12	26.66	-	-
Indexing & Abstracting journals	13	28.88	15	33.33	10	22.33	7	5.56

Collection of each and every library is going to play a vital role in users career, without which they cannot obtain their required information for their study and research.

Table 9 presents the opinion about the collection of the library. It reveals that books in the library are adequate(55.55%), 33.33% partially adequate, and 11.11% inadequate. About periodicals 44.88% partially adequate, 24.44% inadequate, 17.77% adequate. Regarding reports 40% researchers said partially adequate, 33.33% inadequate, 20% adequate, and 6.66% not responded. In case of conference proceedings 37.77% researchers said partially adequate and inadequate. 15.56% adequate and 8.88% not responded. Regarding research reports 33.33% inadequate, 24.44% partially adequate, 22.23% adequate and 20% not responded. In case of reference documents 40% partially adequate, 33.33% adequate, 26.66% inadequate. Regarding indexing and abstracting journals 33.33% said partially adequate, 28.88% adequate, 22.33% inadequate and 15.56% not responded.

Table: 10 Difficulty in finding the documents

Types of collections	YES		NO		Not responded	
	No.	%	No.	%	No.	%
Books in stock	27	60	18	40	-	-
Reference books	25	55.55	20	44.44	-	-
Periodicals/Journals	21	46.66	23	51.11	1	2.22
Text books	19	42.22	22	48.88	4	8.88
Reports	20	44.44	23	51.11	2	4.44
Theses/Dissertations	19	42.22	26	57.77	-	-
Conference proceedings	25	55.55	20	44.44	-	-
Indexing & Abstracting journals	22	48.88	18	40	5	11.11

From the Table 10 it is found that 57.77% of the respondents said that they are not facing any difficulty in finding theses and dissertations followed by reports(51.11%), periodicals / Journals(51.11%), text books(48.88%) reference books(44.44%), conference proceedings(44.44%), books in stock 40% and abstracting and indexing journals 40%. But more than fifty percent of respondents said that, they are facing difficulty in tracing books, followed by reference books and conference proceedings

Table: 11 Frequency of use of different information/reference sources

Information sources	Frequency of use							
	Always		Sometimes		Rarely		Not responded	
	No	%	No	%	No	%	No	%
Periodicals	35	77.77	8	17.77	2	4.44	-	-
Dictionaries	7	15.56	30	66.66	8	17.77	-	-
Encyclopedias	6	13.33	25	55.55	14	31.11	-	-
Hand books	4	8.88	12	26.66	29	64.45	-	-
State of art reports	11	24.44	9	20	17	37.77	8	17.77
Conference proceedings	7	15.56	25	55.55	13	28.88	-	-
Theses/Dissertations	17	37.77	23	51.11	5	11.11	-	-
Patents/Standards	6	13.33	18	40	21	46.66	-	-
Maps,Charts,Tables	5	11.11	8	17.77	32	71.11	-	-
Pamphlets	2	4.44	11	24.44	32	71.77	-	-
Books	36	80	9	20	-	-	-	-

Table 11 depicts that the majority of the research scholars(80%)used books as primary document for their research purpose at the same time more or less same percentage(77.77%) of them used periodicals, followed by dictionaries (66.66%), encyclopedias and conference proceedings(55.55%), theses and dissertations(51.11%). From the same table it is further findout that most pof research scholars(71.11%) rarely used maps, charts, tables, pamplets etc., for their researchb purpose

Table: 12 Satisfaction with the existing reference collection

Responses	No. of responses	%
Satisfied	29	64.45
Not satisfied	16	35.55
Total	45	100

Table 12 reveals that 64.45% of researchers were satisfied with existing reference collection in the library, where as 35.55% of them are not satisfied with it.

Table: 13 Personal subscription of periodicals

Answers	No. of responses	%
YES	15	33.33
NO	30	66.67
Total	45	100

A question was asked to know whether the researchers subscribe any personal copy of journal in their subject field. For that 66.67% of researchers responded as No and remaining 33.33% Yes.

Table 14 : Attending conferences/seminars, etc.

Answers	No. of responses	%
YES	30	66.67
NO	15	33.33
Total	45	100

The above table reveals that more than fifty percent of the research scholars attend conferences/seminars etc., and 33.33% of them not attending the same

SUMMARY OF FINDINGS:

The need for information whether it required by scientists, technologists or technicians have several sources. there is a need to be aware of what is currently going on in one's field of subject and need to keep watch on current progress. For which more and more responsibility is lying on both the part of the system, one side the library and its resources, the another side the thirst of the scientists and his/her seeking behaviour. To satisfy their need, it should be necessary to know their needs and requirements and their information seeking behaviour. Here an attempt has been made to study the information seeking behaviour of researcher scholars in Karnatak University, Some of the important findings are listed below.

1. A majority of respondents visit the library with the purpose of consulting books, periodicals, magazines and reference documents.
2. More than 85% of the researchers use library catalogue, and more than 60% use OPAC to locate the required documents, but more than 50% of them facing difficulties in locating documents in existing arrangement of library.
3. The study identifies that 62.22% respondents approach the

documents through the author in the author catalogue and 35.55% approach through title.

4. To collect required information they are making use of resources like books, reference books and abstracting and indexing journals etc.
5. The collection of the library must meet the needs of the users. In the library collection, the study identified that, books, encyclopedias, dictionaries are sufficient to meet the academic and research needs, and that of periodicals and report literature are not adequate enough to meet their academic and research needs. Another important finding is that the majority of researchers(more than 60%) have complained about the non-availability of current journals in the library.
6. More than 70% of the researchers making use of the information sources like review of articles followed by periodicals(53.33%).
7. The researchers felt that the resources of the university library are inadequate to meet needs and requirements. In this regard they have suggested for inter library loan(ILL) service among the other libraries situated in the region.
8. Most of researchers undertake literature search on their own to gather information. The method for which followed by them is the references given at the end of the article and consulting the indexes given at the end of the document.
9. More than 65% of the research scholars attending the seminars, conferences etc.

CONCLUSION

The library is the medium where the information generated, is gathered, processed and is disseminated to the required users to generate new information. So library personnel should know the information seeking behaviour of its users. So that it can give better services to help the user to gather there required information. The library staff should take into account the suggestions that are given by the researchers. And help in promoting the information seeking behaviour and gathering habits of researchers. The library should provide the orientation programmes and user education programmes for the users of the library. Finally the investigator has suggested the library authorities to provide some of the specialized services like SDI, CAS and referral services etc., to help the researchers.

SUGGESTIONS

1. The existing library collection should be increased in order to provide maximum number of books on loan and purchase of advanced level books, reference books, light reading materials and popular science books, etc.,
2. Application of information technology will certainly improve the quality of library services. Therefore the multimedia computer with 24 hours Internet and E-mail facilities should be made available both in the university library and departmental laboratories.
3. Many researcher scholars unhappy with the existing ILL service. Therefore, it is strongly suggested that to strengthening ILL service. The concept of Library Co-operation, Resource Sharing and Networking of university libraries may be achieve to join with INFLIBNET programme.
4. Libraries must realize the important routine all the queries asked by research scholars through a single window. Information desk or reference desk is very practical idea which is working efficiently, but only where it has an adequate staff. Librarian and authorities of university should take this with utmost care and deploy competent staff to address reference queries. The quality of reference desk enhances the image of library, as courteous and cooperative support service of the university.
5. With regard to photocopying services it is strongly suggested that the coin operated photocopying machines may be installed to operate the self service to cut down the time and personnel lag.

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USER EDUCATION IN AGRICULTURAL LIBRARIES WITH SPECIAL REFERENCE TO IARI LIBRARY, DELHI

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ABSTRACT

This article describes Users of agricultural libraries and their needs in the library. The paper contain agricultural libraries in India with special reference to IARI library, Delhi. User education is a prime responsibility and one or the important function of library. The purpose of user education is to orient, educate and guide about the organization of literature resources. Indian Agricultural Research Institute is the premier institute in the agro-biological field. For the last 98 years the library has expanded to meet the ever growing needs of the scientific and student community of the Institution and of the country as a whole.

User is an important component of a modern library or an information system because it is the user who draws maximum benefit from the system. Therefore it is very much pertinent to a library or an information system to have an in depth information about the user, his need, approaches to information, so that the user could be provided with required services and also the methods and the techniques to equip the user could also be devised so as to enable him to draw maximum benefits from the system. Different

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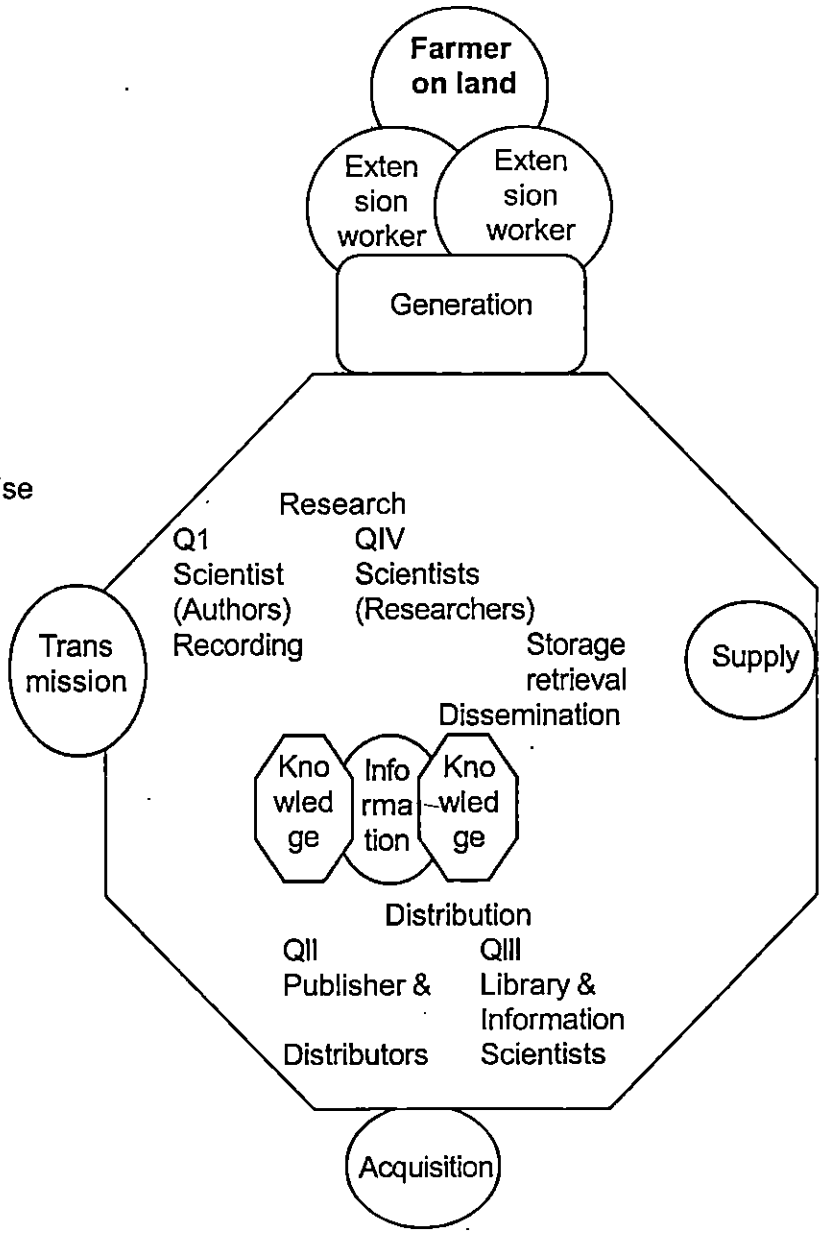
categories of users of a library from the library clientele. The clientele of an agricultural university library consist of scientists engaged in active research and teaching, graduate and post graduate student, policy makers, research managers and progressive educated farmers.

A new user in a library is a welcome person. He should meet the Library Officer on information desk. The information officer takesdifferent library collection/sequences relevant to his area of interest and orients into the organisation land use of library catalogue scheme of classification, methods of information retrieval from different sequences of catalogue, electronic sources of information and their handling, and organisation of material on shelves. The use of library resources and services is explained to faculties and scientist members of library, copies of library rules, or library.information bulletins are distributed, if available for the purpose.

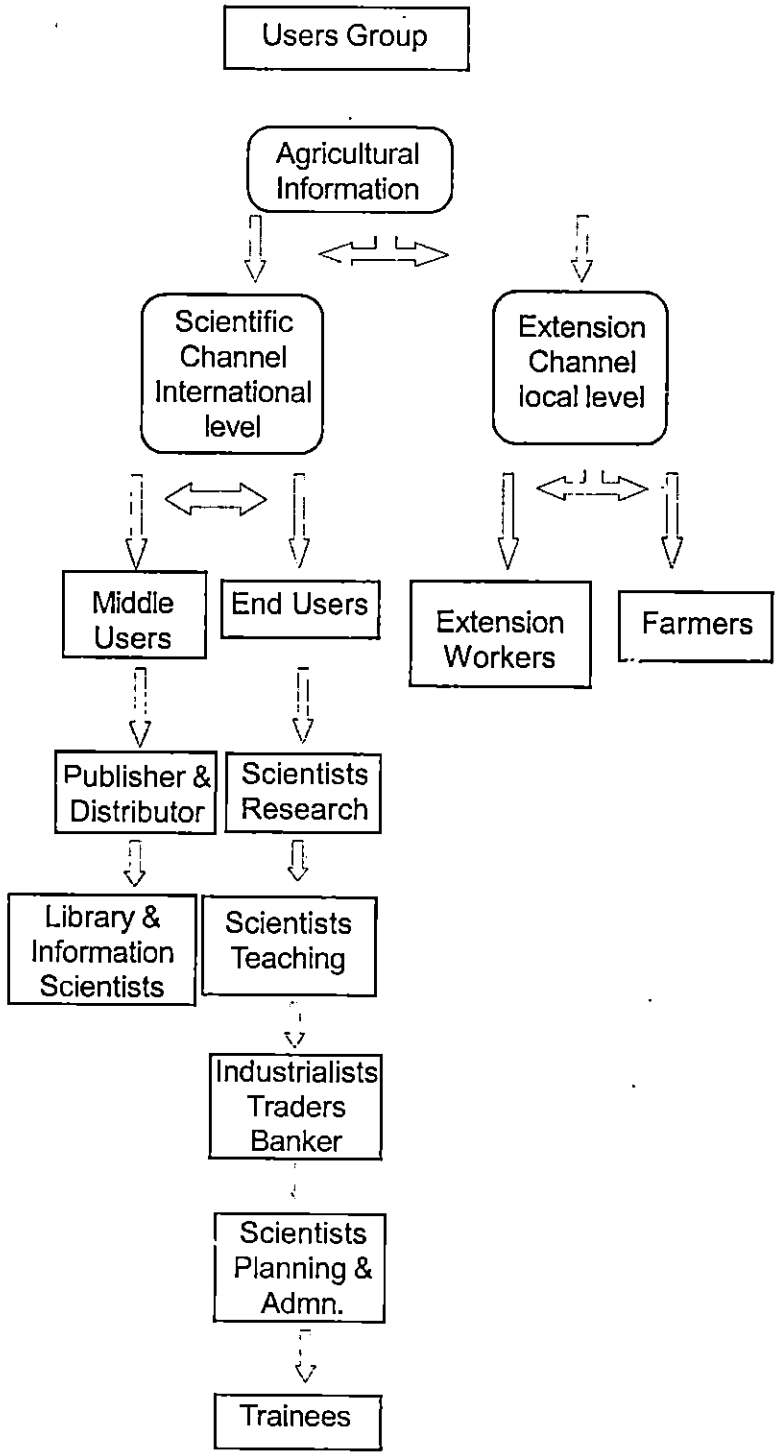
Purpose of User Education

1. To orient, educate and guide the library users about the organisation of literature resources in the library.
2. To educate them as how to use and retrieve the desired information from the library catalogue, electronic sources, microforms, published and unpublished source, and
3. Guide them from where and how to get it if it is not available in that library. In order to achieve these objectives, libraries adopt different methods to educate their users, which result into the higher use of libr ary services and literature resources.

Conceptual model for the generation and transfer of agricultural information and users groups of agricultural information (Agricultural Library Users by Dr. R. Subbaiah, 1989 p.19, Metropolitan, New Delhi)



Users Group of Agricultural Information



Agricultural Libraries in India

Agricultural librarianship in India is a fairly recent phenomenon, hardly a 100 years old. The origins of agricultural education and research can be traced to the last century with the establishment of an agricultural college at Coimbatore in 1878 and at Poona in 1879. IVRI founded in 1903 and IARI in 1905 were early efforts. Now almost all agricultural institutes and agricultural universities and colleges have their libraries, though the collections, the services and facilities very from one to the other, representing all shades of good, bad and indifferent. The agricultural library is therefore, a special collection of books, journals. pamphlets, films and other material organised to serve the needs of those in teaching, research, learning, extension or in growing crops or in the involvement of agricultural production or marketing.

Objectives of the Agricultural Library

The joint Indo-American team (Indian council of Agricultural Research, 1969) suggest the following objectives for Indian Agricultural library.

a. The library as an integral part of the institution
b. The library is a special library
c. Function and policies (Clear, written statement of the purpose, function and policy of the library)
d. Adequate staff
e. Staff motivation
f. characteristic of librarians
g. Building
h. Collection
i. Maintenance of collection
j. User's needs
k. Dialogue and profile
l. Library services
m. Indian National Agricultural library
n. International network

Introduction of IARI Library

The IARI Library is the heart of the Institution. For the last 97 years the library has expanded to meet the ever growing needs of the scientific and student community of the Institution and of the country as a whole. IARI library by virtue of having large and rich agricultural classical collection had been playing the role of leadership in the National agricultural library system. After making serious efforts library in 1989 was designated as the National depository and National focal center for CGIAR institute publication and in 1993 it was also made a member of FAO's agricultural library network (AGLINET) as a result library has built further and international collection of agricultural research material available in CGIAR institutes comprising of monograph, reports, bulletins etc. By becoming a member of AGLINET it is providing information services through photocopies to about 50 libraries of the world including Library of Congress and National Agricultural Library (USA).

The IARI library was established as an organ of the Institute at PUSA (Bihar) in 1905 with a small collection of 5000 publications donated by the Department of Agriculture, Govt. of India. In 1934 the severe earthquake caused damaged to the main building Phipps Laboratory and Government decided to shift the institute to its present campus in New Delhi. In 1936 the institute was inaugurated by the then Viceroy Lord Linlithgo and library was named after him as Linlithgo library with 70000 volumes.

Some libraries have developed course contents, teaching kits or package on user education. Such course package become part of syllabus of the university or organisation. As many as 16 agricultural institutions and universities have user educations courses offered by libraries viz. GB Pant University of Agriculture and Technology, Pant Nagar, HPKVV, Palampur, NDRI, Karnal, Punjab Agricultural University, Ludhiana. IARI library provide a user's education programme entitled Agricultural Information System. It is a one credit compulsory course for M.Sc. and Ph.D students. Faculty member of the library provide instruction about library rules and regulation, type of collection, a brief study of classification , cataloguing scheme, use of computer in library, internet, intranet and E-mail systems. On user education, IARI libraries have the following common course contents:-

i. Role of library in the field of Agricultural Research
ii. Fundamental categories of publications
iii. Acquisition & Procurement of documents
iv. Library Tools & literature of documents
v. Current awareness Services/SDI

vi. Agricultural Information System (National/International purview)
vii. Networks and Networking: concepts
viii. Practical Demonstration Internet/Email & CD/ROM workstation of library
ix. Report Writing
x. Agricultural Database

LIBRARY PUBLICATIONS

1. Catalogue of serials in IARI Library 1905 to 1967
2. Catalogue of serials in IARI Library, supplement 1969 to 1987
3. Bibliography of IARI Publications (Scientific Conrtibutions) 1905 to 1963
4. Bibliography of theses in IARI library 1939 to 1969 and supplement 1961 to 1980
5. Guide to information sources in IARI Library 1985
6. Library has published a bulletin "National Agricultural Library-Users guide: (1998) which contains information like library rules, library activities, services, scheme of classification and cataloguing systems, organization of literature on shelves etc.

LIBRARY SERVICES

A library function as nerve centre of an academic institution. It is a Think tank of a research organization. Libraries provided popular services like reference and circulation, bibliographic and documentation, current awareness, inter-library loan and reprographic services, etc. some example are given below:

1. Current Awareness Services: IARI library brings out one such service fortnightly entitled "*Current Contents in Agriculture* (CCA) in 4 series, namely,
   CCA – General
   CCA – Crop Improvement
   CCA - Crop Production
   CCA – Crop Protection
2. News Paper Clipping Services: Library brings out "*Agricultural Press Bulletin*" with full text every month and maintains those clippings in bound form for future reference published up to 2002.

3. Bibliographic and Documentation Services: compiles a *Bibliography of Indian Agriculture* (bi-monthly) circulate them among agricultural institutes.

4. Reprographic Services: Library provide photocopy services to his users on cost basis and free of cost to Scientific and Teaching staff of IARI.

5. CD-ROM Services : The IARI library had spend a handsome amount to the twin of Rs. 50 lakh on the purchase of CD-ROM's databases and CD NET system for providing database search facilities to its scientists/Technical and PG Students as well as outsider for their research. The method of literature search has been revolutionized with the advent of CD-ROM technology. The aim or library to make the CD-ROM based databases available to maximum number of users is fulfilled with the help of network implementation.

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COMMUNITY INFORMATION SERVICES FOR RURAL AREAS: NEED FOR ATTITUDINAL CHANGES

J. N. Gautam
Sunil Kumar

ABSTRACT

The article mentions the need for attitudinal change towards the Community Information Services (CIS) of rural library in the changing scenario. Defines community information and considers Information and Communication Technologies (ICTs) as a powerful tool and instrument for organizing information, retrieval and dissemination of information to the local people of villages. Making the provisions of Information Technology in rural libraries, rural communities can access any type of information globally for their vocations and daily lives with in the library using information services. Emphasizes the need for establishing Rural Library and Community Resource Centre (RLCRC) in rural areas to serve the special needs of the rural community at village level only. Briefly presents some efforts of centre/state governments, private and public institutions to make information accessible with the help of Internet for self-help rural poor in rural areas. Suggests some new information services to look a fresh on rural library service and its goals in changing rural development scenario.

COMMUNICATION TECHNOLOGY AND LIBRARY

Information and Communication Technologies (ICTs) have ushered

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new era in every field of activity now-a-days. ICTs are a powerful tool of storing, retrieving and disseminating information at faster rate from anywhere any time. Today, information could be made available from various types of communication networks, which have transformed the world into a "Global Village". With the use of ICTs, information can be accessed globally in a short span of time irrespective of geographical boundaries. It may establish the contact between the information seekers and information at the right time and in

The right way using library service in rural areas. In villages, mostly information reaches through various efforts of extension personnel, government offices, radio, T. V., posters, leaflets, pamphlets, etc. but it is not sufficient for proper development of villages. Most of the times, it is found in an unorganized manner and outdated in terms of contents. ICTs can make available information instantly in an effective way. Applications of ICTs in public library service may serve the rural community globally to meet the local needs at village level. Therefore, the provision of Rural Library and Community Resource Centre (RLCRC) is the need of the hour in each village of the country.

The RLCRC could perform various useful activities for rural community and disseminates such types of information related to new innovations in agriculture and farming tools, health awareness programmes, weather, kinds of seeds and fertilizers, rural development schemes and programmes for rural poor, etc. to fulfill needs of rural population using computer, Internet, CD-ROMs, etc. Rural people can also be trained to obtain the useful information using the services available at RLCRC. In RLCRC, Librarian will not only serve the traditional types of services but also to train the villagers in searching skills and use of information already available from specific information systems. In this way, it will strengthen and empower the rural community to control of their lives and livelihood using ICTs and applying them in their vocations in a better way. It will lead to self-reliance and self-help of rural population in new emerging era.

NEED FOR CIS

Access to global information in rural areas is still a dream in developing countries like India. As rural areas are lacking basic minimum infrastructure facilities and resources as compared to urban areas despite several government rural development programmes to raise standard of living of rural population. Political upheaval, illiteracy, lack of apathy of government functionaries/institutions towards upliftment of rural poor and language are the major obstacles in rural areas. Besides, local information needs of villagers are also varied in

nature. Their needs could be met through the establishment of various agencies like RLCRC at village level only. The RLCRC could be the best source of information and for educating them in use of library collection. The concept of Information Literacy is becoming more popular now-a-days in a public library. Therefore, the traditional role of the librarian is being transformed into information provider with the support of Information Technology (I T). He organizes knowledge available in the print and non-print media and further generates and disseminates information through various modes for the benefit of the community. He may also provide training to rural community to get the desired information from electronic sources by their own and make aware the benefits of I T for rural development.

To define Community Information Services (CIS), the working party of Library Association published a book entitled: "Community information: what libraries can do"[1] in 1980 as, "Services which assist individuals and groups with daily problem-solving and with participation in the democratic process. The services concentrate on the needs of those who do not have ready access to other sources of assistance and on the most important problems that people have to face, problems to do with their homes, their jobs, and their rights".

NEED FOR INTEGRATING I T

The greatest challenge, today, is to access and disseminate the information to cater the needs of those who actually require. Access to online databases, availability of electronic information in various formats such as CD-ROM, etc. and Internet have made far-reaching impact on libraries. A large number of government, private/public information systems are busy to develop data bank on matters concerning agriculture, health and family welfare, projects and programmes for rural poor, etc. on Internet. With the help of Internet, rural people may access information on computer using public library services of the area free of charge. By surfing Net, they can access information on new agriculture products and tools of farming, etc and research being carried out on such issues at any point of time from any place of their choice. Thus, the application of I T on rural libraries may assist in accessing global information and resources on existed information networks. The following reasons are suggested for application of Information Technology (I T) in rural areas:

1. Breaking barriers to knowledge because the Internet and World Wide Web can deliver information the poor and the rich alike.
2. Breaking barriers to participation.
3. Breaking barrier to economic opportunity.

With the use of I T, Rural library may provide timely information services to rural people at their door steps and access global information irrespective of geographical boundaries. Application of I T in a library has certain advantages. Some of them are:

1. It facilitates faster access to information through different information system. In other words, it converts information system into knowledge systems;
2. It helps to introduce new approaches of learning and knowledge management;
3. It facilitates resource sharing through networking. People/ institutions can generate and exchange information and knowledge among themselves; and
4. It helps to increase the efficiency and effectiveness in library operations.

Rural Electronic Libraries

Keeping in view, Centre/State Governments of India especially the Ministry of Information Technology, National Informatics Centre and some Non-Government Organisations have undertaken several initiatives for rural development. These may be considered as electronic libraries of the village to provide information on their land records, government market rates of their products, variety of seeds, programme and policies for rural poor, etc. Some of them [2] are described below:

Community Information Centres (CICs)

With the efforts of the Ministry of Information Technology, CIC project has been launched for providing I T facility in each and every block of Sikkim and other Northeastern states of India. Each CIC will have one server computer system and five client configuration computer system linked in a local area network and connected to a V-SAT for internet access. It will help the government functionaries to use e-mail and Internet for communicating with the district and state level officers. The I T infrastructure at CICs is to be used to capture information about local information of the block and make them available worldwide through the Internet.

Samadhan Kendra (Solution Centre)

As the name itself is self-explanatory, these centres attempt to provide information, which may require solving the day-to-day needs of rural population. This pilot project is being implemented in Tamil Nadu. The

aim is to have four types of services available under one roof:

i. An information Centre with a number of decision support systems for various categories of users; a large, updated information bank, with web connectivity to serve the information needs of rural areas;

ii. Need based Continuing Education packages to identified target groups;

iii. Message Centre;

iv. Vocational Training Centre to promote basic computer and I T skills among the youth of that area.

Three more similar pilot projects have been initiated for implementation in Madhya Pradesh and Andhra Pradesh.

Warna Information Village

An I T revolution is sweeping 70 villages in Maharashtra with farmers thrilled to the core. A farmer can now monitor various processes sitting at his village. The Warna Wired Village project connects 70 villages attached to the Tatyasaheb Kore Cooperative Sugar Factory of Warna Nagar with each other and the rest of the world through the Internet.

Gyandoot Project Scheme

The Madhya Pradesh Government has started pilot project 'Gyandoot' in Dhar district of the state on January 1, 2000. Computers at 21 major centers in five blocks of the districts connected through an Internet networks. These computers have been established in the Gram Panchayats (Village self-governing bodies), which have been named, the Soochanalayas (Information Centres), providing user-charge based services to the masses. This Internet has been appropriately named Gyandoot (Messenger of Knowledge). These 21 Soochanalayas are located conveniently either at block headquarter or at prominent market places or on major roads close to bus stations. Thus, each Soochanalaya effectively caters to approximately 15 Gram Panchayats and about 25 to 30 villages. Their benefits covers wide-ranging information needs of all villagers and not merely those of the cooperative. Thus, the Gyandoot network benefits over half a million villagers living in 311 Gram Panchayats and over 600 villagers.

M. S. Swaminathan Research Foundation

A pilot study undertaken by MSSRF in villages in the Union Territory of Pondicherry has evoked encouraging results on the impact of I T on rural societies. The integrated knowledge system has 14

components, seven dealing with food production and seven dealing with consumption and nutrition. The system will be operated by local youth both male and female. They will continuously update the information and enrich it further according to local needs, demands and opportunities.

MODERN RURAL LIBRARY : New Innovative Services

The traditional concept of library service is in transitional phase. To meet the society's changing needs and demands, librarians should be ready to accept the new responsibility to educate the community in a wider perspective. Free access to information in rural public library through traditional and technological assisted services is major concern today. Considering illiteracy, the villagers less requires printed source of information. They rarely read books but they often listen, observe and enjoy communication. Therefore, they deserve special attention to assist them in getting the desired local information with the use of library services. Such kind of community information services may be given by the library at the place of the villagers and may lead to empowerment of villagers for solution of their daily problems.

Reaching unreached rural people, library will have to integrate the I T application in library and information services to cater to the needs of rural poor at their doorsteps. At the same time it should have a close contact with government departments, extension workers of the village to pool their resources for maximum utilization of information under one roof. This may be termed as RLCRC. It may provide the following innovative services to assist the rural community for raising their living standard:

1. Advisory and counseling services related to variety of fertilizers, seeds, pesticides, breed of animals, loans advances, weather forecasting, etc.
2. Community walk and announcement through traditional folk media etc.
3. Information on local festival and fairs.
4. Documentary films on social, political, economic, and agricultural problems and their solutions.
5. Organisation of debates, seminars on government programmes and rural problems, discussions with the experts on related issues at village level, and so on.
6. Displaying big charts, maps, posters, photographs illustrating rural development schemes, etc.
7. Arranging story-telling hour to make aware the challenges

facing in rural areas and to cope up the problems at the village level and so on.

In this context, Prof. Vashishth has rightly said in his I LA presidential address [3] that, "The people should have timely access to relevant information, pertinent knowledge and opportunities to learn and adopt appropriate technologies. No development will ever be succeed if people for whom it is meant do not understand, appreciate and participate. The provision of RLCRC can provide necessary base for all development programmes aimed at raising the standard of living of our rural people."

CONCLUSION

Thus, RLCRC may offer such opportunities to facilitate dialogue between rural communities and those who influence their communities such as government, planners, researchers, educators and so on. This kind of approach is a low cost method of providing library services to access timely, relevant information from electronic data bank. This is the high time to establish RLCRC at each village of the country providing modern facilities to harness the available resources for rural development as also suggested in the National Policy on Library and Information System.

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CONSTRAINTS IN FREE FLOW OF INFORMATION IN RURAL AREAS

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ABSTRACT

The article deals with the constraints that arise in free flow of information in rural areas in India scenario. The major constraints are : language, financial constraints, education factors, geographical factors, lack of library and information centres, lack of access to technologies,. cultural differences, social problems, lack of time, electricity factors, inability to join telecommunication networks, ir-responsibility from librarian's side, lack of awareness, negative attitude of personnel's. Related facts and figures are included in the article. This articles emphasises on the grass root level constraints in the free flow information, based on practical expereience and real life situation.

INTRODUCTION

In view of Indian context, majority of Indians are living in rural areas, engaged in Agriculture or small scale industry. In India 74.3 percent population lives in rural areas and 25.7 percent population lives in urban areas. The agriculture sector provides livelihood to 64 percent of the labour force and its contribution to gross national product is 27.4 percent.

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For the development of the country, it is very important to emphasise on the development of rural community. Information is one of the most important factors for the process of development of any sector. If we want development of the rural community, we must emphasise on information communication, the people should be made aware of the latest developments relating their field, e.g. latest developments in irrigation; storage facility; new farming techniques, and new methods adopted in animal husbandry.

For providing latest information to rural community if we consider, what are the problems these people are facing and what is the solution to these problems, only then we can succeed in developing the rural community, by fulfilling their information needs. Some of the constraints that arise in free flow of information are following;

LANGUAGE

For smooth flow of information a common language should be used between the source and the user. The information should be given in simple language, if given in local language, it is best for them to understand. And even if they are facing problem in understanding the information, it is advisable to appoint a person in public library, who can translate and explain the information needs, in their language.

Now a days most of the literature is available in English. Sos.there is a great problem of information flow between English speaking and non-English speaking world. Particularly rural people are suffering a lot due to the problem of English based literature.

FINANCIAL CONSTRAINTS

In rural community majority of people is poor and backward. They are not having money to purchase newspaper, magzines, television, books etc. So they are not able to cope up with latest developments relating to their own field. In spite of the according to Nanda Fernando (1). "The resource in public libraries are limited and can serve only a limited clientele. Most of the public libraries lack regular financial support". Generally people are working in agriculture and allied activities and their income is less and irregular. So money and time factor do not allow these people to go to district head quarter and get required informaton.

EDUCATIONAL FACTORS

India is facing big problem of illiteracy. One third illiterate people of the world live in India, According to census 1991, 20 crore illiterate people live in India. And a majority of them is living in rural areas.

Illiteracy is one of the major obstacles in getting information by rural folk. People in villages are illiterate, they are not able to get information by reading newspapers, magzines and books. They can not take advantage of public libraries. While seeking the nature of information. Analysing the behaviour of rural people, Bikika Tariang Laloo (2) says "the educated and uneducated may have differing methods of seeking information, the educated person resorting to more formal means (information systems while the uneducated one depending more on informal methods. (i.e. other people)."

GEOGRAPHICAL FACTORS

The geographical aspect is an important factor, coming in the way of free flow of information. Particularly in rural areas, distance has become a big problem. Most of the people of rural areas do not aware of the facilities and schemes of the government for their development because all government offices or zila panchayats or Janapad panchayats are established at distrit or Tahsil level. Those who are residing 40 or 60 KM from district head quarters can not come to these offices regularly.

They are facing conveyance problem, as many villages are not connected to cities by roads. And moreover they are not having money to go about or to purchase vehicles for travelling.

LACK OF LIBRARY AND INFORMATION CENTRES

A number of villages are lacking public library. Adult literates and neo-literates are not having source of information due to lack of a good public library.

And even if a public exists, there is lack is sufficient literature relating to their use. Due to lack of desirable literature, their need for information is not satisfied. Under Madhya Pradesh Panchayat Raj Act, no specific provision is provided for the establishment and development of libraries in villages. Libraries are expenditure institutions, they need recurring grants. Without statutory basis libraries can not be developed. Act provides proper governance and management. In india 11 state are having public library act, but in Madhya Pradesh there is no public library Act without such act library can not get sustainable financial support. In madhya Pradesh panchayat Raj Act, there should be provision for financial clauses. Ministery of Social Welfare, Government of Madhya Pradesh order No. F-2/5/95/26-2 dated 21-11-1996 states that it gives grant to panchayats for the development of rural libraries. Panchayat can apply for this grant, but this grant is very nominal. A shortcoming of library services according to H.N. Prasad (3) "existence

of barriers that serve to diminish or deter the effective linkage between information provider and seeker", is seen commonly.

LACK OF ACCESS TO TEHCNOLOGIES

Apart from illiteracy, people are suffering a lot due to lack of technology. It is playing an important role in social, economical and political sphere, of everyday life. Professor P. Purushotham (4) sasy "an essential step in this regard is redesigning the rural education and vocational training so that school leavers and undergraduates acquire basic skill in IT applications leading to their productivity enhancement and better employability".

CULTURAL DIFFERENCES

In the lifestyle of urban and rural people, there is a great difference. Blkika Tariang Laloo (5) States that "a lot of useful information may be stranded on account of cultural differences between the given and the recipient".

SOCIAL PROBLEMS

Information relating to such topics as sex-education, fashion, music etc, (openly available in other societies), is not considered good in villages due to backwardness and narrow approach of attitude. In this regard, Dr. K. Sarada (6) highlights that, "rural citizens have several situational and human handicaps that will not help them to use library services" so, people of rural areas are in need of better library services.

LACK OF TIME

Villagers are engaged in agricultural and allied activities, and so they have acute shortage of time. it is not possible for them to go to cities and gather relevant information due to lack of time and due to their hectic schedule of agrarian activities.

ELECTRICITY FACTOR

In urban area 75.93 percent, housholds have electricity facility, in comparison to it, rural area is having only 31.10 percent electricity. So information available through telecomunication, Radio or other means like internet facility etc. is inaccessible for them.

INABILITY TO JOIN TELECOMMUNICATION NETWORKS

Now- a-days media is playing a significant role in communicating the information. Internet, Television, Radio, Telephone are playing

important role in the communication of information. Illiteracy problem which is a major hurdle in village people for getting information, can be covered by audio-visual means like television and Radio etc. Illiterate people are suffering a lot in getting information, through inability to join telecommunication, network, because of lack of proper electricity supply.

IR-RESPONSIBILITY FROM LIBRARIAN'S SIDE

The librarians in rural service are unaware of the needs of rural people. Rural people, due to lack of education are unable to express their requirements. so it is the duty of librarians to analyze their needs and give them suitable material.

LACK OF AWARENESS

One of the major stumbling blocks among the rural peoole is lack of awareness of the benefits of information. They do not know how crucial role is played by information even in their daily life and needs. People must be motivated and make aware of the importance of information in their life S.N. Khanna (7) says in this regard, "motivation and awareness in near by rural areas was therefore, first necessity in the month following libraries establishment".

NEGATIVE ATTITUDE OF PERSONNEL'S

The persons who are responsible for information communication among the rural people are not doing their duty honestly. People do not want to share information with others, specially with the socially and economically backward classes. Persons who are responsible for dissemination of information, must change their attitude, towards rural people, so that these people may be benefited from policies and scehmes of government designed specially for them.

CONCLUSION

We have tried to highlight no some of the major constraints that are coming in the free flow of information in rural areas. We (the government, policy makers, executives, etc.) must try to remove these hurdles. It will give benefit to the rural people, and help them to acquire information. By means of which development in rural sector is possible and in nut shell it will ultimately help in the progress of our country.

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CURRENT AWARENESS SERVICE IN NRCS AN EXPERIENCE WITH SOYA INDEX

Surendra Kumar
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Abstract

Introduces current Awareness services & its need. Given brief account of NRCS and Soya research. Given details of Soya Index, a mend, content list prepared & distributed by NRCS library. Coverage, scope, preparation, entries, Hardware & software used, distribution of list and future plan are discussed.

INTRODUCTION

The current awareness service is a service given by a library or an information center to keep the users or clientele up to-date with the latest development in their respective fields. It is known by different names, like alerting service or service for keeping Up – to- date etc. It is a part of documentation service, and an activity for information dissemination. The libraries or information services. The information services, which are rendered by the libraries, involve some form of dissemination. To quite Rowley and Turner, " By dissemination is dissemination is meant a Service that actually takes the information to the user, preferably before he has to formulate a demand for it . In other words, current awareness services, in the broader sense of the word, are those parts of management information systems that involve published data".[1]

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Current awareness service in its early years was also known as 'Reference Service'. This was one of the methods of provide information service. To quote Suseela Kumar,[2] " Most libraries also provide information irrespective of whether there is a demand for it or not. This aims at making known to the users of the library , existing or prospective, the resources of the library in which they are likely to be interested as and when they become available and thus meeting a possible demand . Various methods are adopted. List of recent accessions, special documentation lists, contents pages of periodicals, state of the art reports, and special annotated subjects list." In a sense the current awareness publication is an extension of the reference service which the libraries have been rendering since long.

The current awareness service can be explained using the analogy of a very wide conveyer – belt , representing the information publishers, on which books, periodicals and reports appear at random. The user of information is on a platform just above the belt and as the informatio0n material passes underneath he can up and read anything that he thinks might be of interest to him. One can imagine the frustration as user realizes that for every item he takes time to examine , hundreds of others of possible interest to him have passed by . To overcome such a frustration the current awareness service is necessary[3].

The current awareness service is rendered by various methods. The methods include

i Subscribing to centralized and commercial service;
ii. Preparation and distribution of current awareness bulletin;
iii. Selective Dissemination of Information (SDI) service ;
iv. Circulation of contents pages
v. Routing of periodicals:
vi. Display of new arrivals: and
vii. Telephoning to individuals

HISTORY & IMPORTANCE OF SOYBEAN

The earliest record of soybeans is in a series of books by the emperor Sheng Nung in 2838 BC, in which he described the various plants of China. Soybean plants were domesticated between 17th and 11th century BC in the eastern half of China where they were cultivated into a food crop.

From China, the soybean first landed on American shores in 1765, brought over as dead weight to stabilize a ship. Soybeans, however, didn't make their way to Canada until 1893. This delay could have been due to the unawareness of the fact that soybeans can be

grown during Canada's warm seasons. In the 1940s, China's soybean fields were devastated by World War II and internal revolutions. This allowed the United States, who had been growing the crop for food since the late 1800s, to become the world's leading soybean producer and exporter.

Soybean was known to Indians since ages. Black - seeded soybean was sporadically grown under the names like 'Bhatt', 'Bhatmash' of 'Kalitur' in north - Indian Kumaon and Garwal hills of Uttar Pradesh and scattered pockets of the central India (now Madhya Pradesh). Soybean was being utilised as a source of food in the Kumaon hills and also in the Naga hills. The earlier documents established that the plant was known to the Angami Nagaes as Tza Dza, a name not unlike Soja. The fact that this cultivated plant possesses, even among the aboriginal tribes name which are original and in no way modern derivatives, points to an ancient cultivation (Watt, 1890). Introduction of soybean in the country dates back to 1000 A.D. It is belived that the crop entered in northern part of Indian sub continent from central china and subsequently reached northern India from north - west or directly trough north - eastern region of the country. Around the same time, distinctly different germplasm was grown in Central India, which is supposed to have been introduced from Japan , South China and South - east Asia (Hymowitz and Kaizuma, 1981). In due course of time may varieties have evolved.

Soybean has attained a vital status in agriculture and oil economy of India. The country presently produces about 6 million tones of soybean per annum. Out of this 5% is used for food and feed, 10% for seed and 85% for oil extraction. Recovery of oil is about 17.65 % and that of soyameal is about 82.35%.

NATIONAL RESEARCH CENTRE FOR SOYBEAN (NRCS);

National Research Centre for Soybean (NRCS) was established in 1987 at Indore, (M. P.), at state of central India under the aegis of Indian Council of Agricultural Research (ICAR) to provide centralised support to the production system research with basic technologies and breeding material of soybean (Glycine max. L. Merrill). for *complementary* strengthening of soybean R&D with inter - disciplinary and multi - locational research all over the country. The headquarter of All India Co-ordinated Research Project on Soybean (AICRPS) was shifted in 1987 from G B Pant University of Agricultural & Technology, Pantnagar (Uttranchal) to NRCS, Indore. The NRCS / AICRPS were also given the responsibilities to organise production of breeding seed of different varieties of soybean to meet its national demand.

The centre undertakes the basic and strategic research. co-ordinating unit of All India Co-ordinated Research Project on Soybean (AICRPS). Soybean Breeder Seed Production (BSPS) and National Active Germplasam Site (NAGS) for soybean are located at NRCS. Twenty - eight other AICRPS centres are also located in different agro - climatic regions of the country, engaged in the development of specific production technology in soybean. These centres also participate in the production of breeder seed of soybean to meet the need based national requirement. These centres are at (1).

Main Centre (7)	Sub - centres (13)	Others (8)
Pantnagar (Uttaranchal)	Lam (A.P.)	KVK,Chindwara(M.P.)
New Delhi	Raipur (MP)	KVK,Sarasam,Ranipool- Sikkim
Sehore (MP)	Ludhiana (Pun)	KVK,Ranichauri(Utranchal)
Pune (Magharastra)	Kota (Rajasthan)	KVK, Kullu, (H.P.)
Parbhani (Maharastra)	Coimbotore (Tamilnsdu)	KVK, Dooghar,(Jharkhand)
Bangalore (Karnataka)	Ranchi (Jharkhand)	Amravati,(Maharastra)
Dharwad (Karnataka)	Palampur (HP)	Avindo Asharam, (Panedicheri)
	Jabalpur (MP)	
	Nagpur (Maharastra)	
	Jorhat (Assam)	
	Imphal(Manipur)	
	Almora (UP)	R& D Unit, Ugar Sagar Ltd.,
	Shillong (Meghalaya)	Ugarkhurd, (Karnataka)

NRCS is situated at a distance of 4 kms from Indore city and 6 km from railway station in the village Piplyarao of district Indore. It which lies in Vidhyanchal range of Malwa Plateau of M.P. at 22° 4'37"N latitude and 75° 52'7"E longitude placed at an altitude of 540 meter above the mean sea level. The research centre is spread over an area of 56.7 hectares with a large building of its own.

METHODOLOGY

The Soya Index stared just on January since Jan. 2003 . NRCS library subscribe both journals 60 Indian and 13 Foreign journals every years. The articles on soybean crop, soybean processing and Soya food published in the journals, magazine, and pamphlets, are indeed Phamlate etc. The Soya index in Authors, Titles, Name of Journal, magazine, Pham late etc., Volume, issue no., page no. Institution, University, College. Numbers of tables, diagrams, reference. etc.

DEVELOPMENT IN SOYA INDEX. – CURRENT CONTENT LIST

The Soya index is being prepared by National Research Centre , Library, Indore. The Soya Index since January, 2003. It is published every month for use of Soya Scientist ,Technical Officer and Research person at NRCS & others interested in Soya research.

Coverage

The index cover documents such as journals subscribed Journals, popular magazines & Pamhlats of soya research organization , Institution. It included articles published in English & Hindi

Scope

Articles related to various as parts of soybean crop are included. It includes, Plant breeding, Plant Genetics, Germplasm, Seed Technology, Agronomy, Soil science, Plant Pathology, Plant Physiology, Entomology, Biochemistry, Microbiology, Agricultural Engineering, Agricultural Extension Education , Food Science and Soya Food processing ,Food Use. ect.

Index Preparation

It includes documents received from 1st to last day of every month by NRCS library. An index is prepared every week which is cumulated for the month

Entries

Each entry includes , Author(s), name (year of publication). Title. Name of journal. Volume number (issue number). Pages. Author affiliation & address. (Number of Tables, diagram & reference).

(i) Ved Prakash, S.Kundu, B.N.Ghosh, R.D.Singh and H.S.Gupta. .(2002). Annual nitrogen input to the soil from left – over biomas of soybean (*Glycine max*) in a long- term fertilizer experiment in mid- hill of north- west Himalayas. Indian Journal of Agronomy. Vol. 47 (2) : 262-268.Division of crop production , Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora, Uttaranchal-263601. (Tab.2 Dig.3 Ref.7).

(ii) jkeVsds] jktdqekj ,oa vkse izdk'k tks'kh-¼2003½-lks;kchu& fodkl ds u, dne- [ksrh]o"kZ 55 ¼12½- 7&10- jk"Vªh; lks;kchu vuqla?kku dsUnz] bankSj ¼e-iz-½ ¼ Vsfcy-& Mk;xzke& jsQjsUl &½

(iii) Oudhia, P.(2002). Medicinal weeds in soybean fields of Chhattigarh. Legume. 25 (3) :215-218. Depatt. of Agronomy, Indhira Gandhi Agricultural University, Raipur Tab.2 Dig:- Ref.3 (SC:)

(iv) Bhatia, V.S., S.P.Tiwari and Sushil Pandey. (2002). Soybean seed quality Scenario in India : A Review. Seed Research. 30 (2): 171-185.National Research Centre for Soybean, Indore. (Tab. - Dig.- Ref.141).

(v) Sharma, Rakesh K. and U.K.Shrivastava (2002). Weed control in soybean (*Glycine max*) . Indian Journal of Agronomy. Vol. 47 (2) : 269-272. Krishi vigyan Kendra, Jawahar lal Nehru Krishi Vishwa Vidyala, Khandwa (M.P.). (Tab.2 Dig.- Ref.5).

(vi) Essah, S.Y.C [1] and U.R.Bishnoi. (2003),. Glyphosate application timing effects on seed yield and yield components of glyphosate – resistant soybean. Crop Research. 26 (1): 1-16.Deptt. of Plant and Soil Science, albama A& M University, P.O.Box 1208. Normal , AL 35762, USA. and Colorado State University, San Luis Valley Research Centre,0249 East Road 9 North Center CO 81125, USA[1]. (Tab.3 Dig.5 Refe.15)

Hardware & Software

The NRCS library has a Pentium 4 with CD writer, CD driver, DVD writable etc, supported by 2 more Pentiums. The entries are made entered in MS ward 2000. On the last day of the month, cumulation is made in alphabetical order & print in taken out on Jet printer. The copies are made by photocopying in Technical Cell in NRCS.

Distribution

The copies are distributed in various section of institutes in hard copy. The entries are available on line in the library. Besides , the copies are send to

(i) Jawahar Lal Nehru Krishi Vishwavidyalay, College of Agriculture, Indore.

(ii) Indian Agricultural. Research Institute, Regional Wheat Breeding Research Station, Indore.

Plan

The institute plans to distribution the copies to 28 AICRPS in different part of India. It also plan to made the Index available on line web side of the NRCS. **www.nrcsoya.com**

Availability to Interested Scholars

The index can be made availability on request to any research scholar with nominal payment for postage etc. contect through e mail director @ nrcsoya.com, ido @nrcsoya.com and Postal address as Director/ Documentation Officer, National Research Centre for Soybean, Khandwa Road, Indore- 452017 (M.P.)

APPENDIX

(i) Important Web site on soybean

(ii) List of Journal received in the library

CONCLUSION

The current content list of soybean named as Soya Index in very useful to the National Research Centre for Soybean. They are making full use of the list. The copies of the articles are supplied on demand. The scientist need the list online & sent to them through e-mail on their computers. They also prefer to have an abstract but due to shortage of staff it is difficult. At present the library is managed by Documentation Officer (T-7-8). A post of Card Indexer (T-2) is being vacant for many years. If supporting staff is given Indian Soybean Abstract may be developed in near future.

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2. Prasher, R.G. Library and Information Science : Parameters and Perspectives. New Delhi, Concept Publishing Company, 1997. pp13

3. Prasher, R.G. Library and Information Science : Parameters and Perspectives. New Delhi, Concept Publishing Company, 1997. pp14

4. Surendra Kumar and Prof. S.Kumar 2001 Agriculture Research Information System:Strategiesfor quality agricultural information services. ILA Conference at Warangal, 2001 : 38-39.

5. Tiwari , S.P. and others. Advent and renaissance of soybean A landmark in Indian agriculture. NRCS, Indore. 1999 : 3-4 .

6. Tiwari , S.P. and others. Advent and renaissance of soybean A landmark in Indian agriculture. NRCS, Indore. 1999 :18-20.

List of Web Sites for Additional Information

APPENDIX I

Soybean

United Soybean Board - http://www.unitedsoybean.org

American Soybean Association - http://www.asa-europe.org/index.htm

Ohio Soybean Council - http://www.soyohio.org

Ontario Soybean Growers Marketing Board - http://www.soybean.on.ca

Illinois Soybean Association - http://www.ilsoy.org

National Corn Growers Association - http://www.ncga.com

Illinois Corn (Growers Assn. & Marketing Board) - http://www.ilcorn.org

The Popcorn Board - http://www.popcorn.org/mpindex.htm

Kentucky Corn Growers Association - http://kycorn.org/newcornuses/pla.html

American dry bean board - http://www.americanbean.org/bean_beans.htm

Idaho bean commission - http://www2.state.id.us/bean

Nebraska dry bean commission - http://www.nebraskadrybean.com

Michigan Bean commission - http://www.michiganbean.org

Northarvest beans - http://www.northarvestbean.org

Central Bean Co., Inc. - http://www.centralbean.com

Kefir Information by Harald Tiezte	http://www.younguns.com.au/kefir/book/
Kefir - Yoghurt for Life	http://www.kefir.biz/whatis_.htm
Kefir information by Body Ecology	http://www.kefir.net/index.htm
Kefir information from Raw Health	http://www.rawhealth.net/kefir.htm
Kefir.com	http://www31.brinkster.com/kefirgrains/

Water Kefir	http://pages.ivillage.com/solinti/Waterkefir.html
Water Kefir	http://www.geocities.com/wallstreet/9347/KEFIR.htm
The World of Tofu	http://www.tofu.com/
U.S. Soyfoods Directory	http://www.soyfoods.com/index.html
Tofu Recipes	http://www.vegweb.com/food/tofu/
Soyfoods Assn of North America	http://www.soyfoods.org/
Soyfoods.org	http://www.soybean.org/
Miso information	http://www.soyfoods.com/soyfoodsdescriptions/miso.html
Hatcho Miso	http://www.cjn.or.jp/hatchomiso/
Natto Land	http://www.ynest.com/nattoeng.htm
Natto information	http://www.gaia21.net/natto/natto.htm
Kombucha Center	http://w3.trib.com/~kombu/
The Kombucha Journal by Gunther	W. Frank (29 languages!) http://www.kombu.de/
Sourdough FAQ	http://www.nyx.net/~dgreenw/sourdoughfaqs.html
Sourdough Recipes	http://www.ebicom.net/kitchen/page/souridx.htm
More Sourdough FAQ	http://www.faSqs.org/faqs/food/sourdough/faq/preamble.html

Ontario Soybean Growers. "New Uses for Soybeans" Ontario Soybean Growers. 30 Aug., 2000.www.soybean.on.ca/uses2.htm

Ontario Soybean Growers. "Canadian Soybean Supply and Demand" Statistics Canada, Agriculture & Agri-Food Canada, and Ontario Soybean Growers. 27 Apr., 2000.www.soybean.on.ca/cansd.htm

United Soybean Board. "World Soybean Production" USDA, and United Soybean Board. 29 Aug., 2000.www.unitedsoybean.org/soystats2000/page_34.htm

Encarta On-line Deluxe. "Soybean (keyword)" Encarta Encyclopaedia.encarta.msn.com

Max-Planck-Institute for Plant Breeding Research. "Soya Bean (Glycine max)"Bock. D., MPI Köln, Margarine Institute, Hamburg. 30 Aug., 2000. www.mpiz-koeln.mpg.de/~pr/garten/schau/Glycinemax/Soya_Bean.htmlOhio Soybean Council. "Soybean Facts"

Ohio Soybean Council. 29 Aug., 2000 www.soyohio.org/education/facts.htm

Canadian Food Inspection Agency. "Status or Regulated Plants with Novel Traits (PNTs) in Canada" The Canadian Food Inspection Agency, Health Canada. July 24, 2000.http://www.cfia-acia.agr.ca/english/plaveg/pbo/pntvcne.shtml

Canadian Food Inspection Agency. "Regulatory Directive: T-1-10-96: The Biology of Glycine max (L.) Merr. (Soybean)" Part B. The Canadian Food Inspection Agency, Health Canada. 26 Mar., 1996.

www.cfia-acia.agr.ca/english/plaveg/pbo/t11096e.shtml#PTA

Monsanto. "Agriculture Products: In the Pipeline" Monsanto Company. 31 Aug., 2000 www.monsanto.com/monsanto/agriculture/pipeline/default.htm

Food and Agriculture Organizations of the UN
http://www.fao.org

Global Crop Protection Federation
http://www.gcpf.org

International Agriculture Exchange Association
http://www.ozemail.com.au/~iaea

Ontario Soybean Growers
http://www.soybean.on.ca

American Soybean Association
http://www.oilseeds.org

Breeder's World Beef
http://www.breedersworld.com/beef

HOW TO PROMOTE LIBRARY SERVICES?

Anjana Bhatnagar

ABSTRACT

There are many advantages of an automated library system. Most importantly, it is expected to provide more efficient services to the user at lower operational cost. Increasing availability of information to the user in the electronic form has been the most significant developments in the library services. The author has taken the example of her own organization (IIT Kanpur) to discuss the pioneering work being done in the field of library automation in our country. She has also attempted an insight on how instant access of information is achieved and how the modern and traditional services may be integrated effectively.

However, the business models, information delivery infrastructure, and the shifting relationships between the traditional players, are still in a state of flux. These issues must be given their due consideration in changing scenario of the library services.

The library professionals have to act as facilitators to deliver the right knowledge and information in any form oral, printed, digital in right time at right place.

INTRODUCTION

It is generally agreed that computerization of libraries will greatly facilitate library services for users of all kinds. To elaborate this issue further we have discussed the impact of emerging technologies on the library services in the following paragraphs.

Anjana Bhatnagar, PK Kelkar Library, IIT Kanpur

Access of information to a remote user has always been a challenge. Information services/delivery is not a new concept. It has been there even before the print media was invented. The traditional terms, interlibrary loan or inter lending, are both inadequate to describe transactions taking place between various libraries. Particularly in academic and special libraries, relatively few interlibrary requests require the lending in physical form, document delivery or sharing of information resources is a more appropriate term for this service, rather than to the lending of materials. Due to information explosion the volume of information become too enormous to be managed manually. With this view IITK Library and other libraries decided to move towards a digitized library system

ADVANTAGES OF DIGITIZED LIBRARY SERVICES

Digitized library services has the following advantages:

* The storage and retrieval of information is accurate, fast and relatively economical. Digital delivery of the information reduces the workload on the library professionals.
* Many users from various locations can access a single electronic copy round the clock simultaneously.
* Digital information delivery is flexibility from the point of resource utilization without any additional cost.
* Loss of materials during transit is reduced. The degree of precision and accuracy in processing information is high.
* The users can receive information more consistently. Online catalogue made it possible to view the library holding from outside the library
* It also facilitates better management of information resources in electronic environment and saves users from the hassles of print media
* Though the initial capital investment is high, the recurring cost is not high
* CAS and SDI services and other reference services are provided with efficiency and well in time

LIBRARY SERVICES OF PK KELKAR LIBRARY OF IIT KANPUR TO ITS USERS

IIT Kanpur library was the first library in the country to initiate automation activity as early as 1987. Since then, it has phased out many manual operations and started moving steadily towards a paperless or digitized library system. Using Technology it started

delivering to the user most of what he might possibly require for his information, education, and academic research or even recreations. Since no library automation package was then available in the market, the library in collaboration with Computer Science and Engineering Department took up the design & development of library software, which was named as iit-KLAS. (IIT Kanpur Library Automation system). Science 1989 four versions of iitKLAS have been written.

It consists of six modules:

* iit-KLAS : Lekhya – The Acquisition Module
* iit-KLAS : Suchi – The Cataloging Module
* iit-KLAS : Circon – The Circulation Module
* iit-KLAS : Patrika – The Serials control Module
* iit-KLAS : TBMS – The Text Book Management System Module
* iit-KLAS : AIC– Academic Information Center Module

The system has been in use for over a decade. It is simple to operate; user friendly yet offers comprehensive functionality.

With the help of these modules different following library services are provided to its users.

CIRCULATION SERVICE

One of the most important activities of a library is lending books to borrowers and keeping records of loans. Circulation Section of P. K. Kelkar Library is open from 8 a.m. to 9.30 p.m. on all working days except on Sundays and other holidays. The faculty members, students and staff of IIT Kanpur may get books for home reading. The details of lending privileges for internal users can be seen from **Table No 1.** The faculty and students get prescribed textbooks for full semester besides normal facility of loan for 20 and 10 books respectively. Details a complete record of books lent out since 1998-2003 is given in **Table No 2 .**

REFERENCE SERVICES

A reference service is the ultimate goal of library services. It is the service that connects the users with the documents and information; they need and promotes use of the collections built in a library, so, much more emphasis should be given to reference services. Important reference services are CAS, SDI, Indexing and abstracting, Literature Search, Translation services, EDDS, Reprography, and DDS etc.

IIT Kanpur library has created a separate reference service division- **COMPUTER-AIDED REFERENCE SERVICE (CARS)** consisting

of a fully equipped workstation dedicated to the reference services. Main functions of CARS are:

A. Educate user in the techniques of accessing various electronic and optical information resources for example:

* Types of information available online, in electronic (or other) formats This includes complete understanding of a bibliographic database as well as other types, such as directory, numeric, and full text databases.
* Functions of a database retrieval system with inputs (document surrogate in the form of records and user quires), a matching mechanism (search engine), and out puts (search results).
* How documents are analyzed and represented in databases through indexing and abstracting.
* The structures of record, fields and inverted indexes and how to browse through the inverted index or thesaurus in the different database.
* How documents are organized and stored in database.
* The nature of controlled vocabulary, how this differ from free text, and its importance to information retrieval systems.
* The vagaries of natural language, and how the expressiveness, expansiveness, and variety in human language impede information retrieval. This is extremely important.
* Boolean logic, proximity connectors, and weighted search system. Users need to understand how entering terms in different combinations or in different systems can influence out put.
* What types of limits to searches are potentially available such as dates, languages, or publication type?
* The notion of truncation & how best to create information queries.

B. To provide **CAS and SDI** services to internal and external users.

C. To provide various regular **computerized information services** in bulletin as well as in electronic form.

READY REFERENCE SERVICES

Aside from the traditional manner of information and ready reference services provided to users, the library, at present, is providing a series of online information services for internal and external users. AIC

(Academic information center), the name of iit-KLAS online is accessible from any node on the campus LAN. AIC provides online information about the resources and activities of the library, as well as about the current academic programs at the Institute level, such as courses of studies, new academic programs, Current Contents services, etc., etc.

OPAC SERVICE

A database of bibliographic records describing the holdings of P.K. Kelkar library has been created. It allows searching by name, title and subject and offers online access through public terminals. Library maintains AACR-II format. Each book added to the library as added to the OPAC for its release to users for use. Any outsider can access OPAC from any remote site.

COMPUTERIZED CURRENT AWARENESS SERVICES (CAS)

The abstract-based **CD-ROM databases** are the computer readable versions of the information services traditionally appearing in printed forms in various fields of knowledge. These resources provide a through and quick view on what is being published worldwide on a user's particular area of interest, with incredible range, accuracy and speed of Access. The CD- ROM databases are available for remote access over LAN. For e.g. EI Compendex* Plus, INSPEC, Biological Abstract, SciFinder Scholar, Chemical Abstract, Science Citation Index, LISA plus, Ulrich's on disc, MathSci disc, PsycLIT, Sociofile, Books in Print, ISI & ASTM Standards, Cumulative Book Index, Oxford English Dictionary etc.

Using abstract-based CD-ROM databases, the library provides Current Awareness Services (CAS) to its subscribers. Through this service, users are provided a quick view of the contents page of what is being published in journals worldwide on any particular area of interest. The required information may be supplied in the form of monthly hard-copy bulletins, diskettes, and electronic mail or in unformatted plain machine-printed paper, depending upon the choice of the user. The disciplines for which this service is currently available are:

Current...

* Mathematics Literature (CML),
* Aerospace Engineering Literature (CAEL),
* Chemical Engineering Literature (CChemEL),
* Civil Engineering Literature (CCEL),

* Computer Engineering & Technology Literature (CCE&TL),
* Electrical & Electronics Engineering Literature (CE&EEL),
* Mechanical Engineering Literature (CMEL),
* Nuclear Engineering Literature (CNuEL),
* Education Literature (CEduL),
* Management Literature (CManL),
* Sociology Literature (CSocL),
* Psychology Literature (CPsyL).

The National Board of Higher Mathematics funds 'Current Mathematics Literature (CML)'

SELECTIVE DISSEMINATION OF INFORMATION (SDI)

Selective Dissemination of Information (SDI) service is based on the user's exclusive interest profile. The user creates his profile by specifying subject or keyword or journals. The Library's database searchers re-organize the information given by the user in the appropriate database search language and submit the query. The hit records are downloaded and given to the user in printed form or in a file. This service is available to the IIT users only.

DOCUMENT DELIVERY SERVICE (DDS)

The library provides the delivery of the copies of available documents against specific requests by external users. In keeping with its custom of maintaining close cooperation with other academic libraries and sharing resources with them on a mutual basis, the library also borrows books for its users from other libraries for short durations. Sometimes, the library also exchanges photocopies of journal articles and other micro documents with the cooperating libraries. If the IITK Library does not own the material user needs, user may place a request with DDS request forms, which are available in CARS section of IITK Library. A complete record of items/pages lent out from 1998–2003 is shown in **Table No. 3.**

ON LINE JOURNALS

The Digital Library has access to the electronic resources, which are web enabled. The scope of the access may be Abstracts or Full text. Accesses to most of the electronic resources are IP enabled. Users may browse on-line journals by title as well as by Publisher. Users of IITK have the facility to download full text or abstract of an article from these collections. Mostly articles are in PDF or HTML format. The Electronic resources are:

* Electronic Publisher
* Electronic Journal Alphabetical List
* List of Journals Available on Print
* **MHRD**
* Database
* List of all The Publishers

Readers of IITK Library may access approximate 6302 e-journals. Some of the main publishers and their number of journals, which may access in the year 2003, are listed in **Table No. 4** Subscription for the printed journals for the year 2003 is approximate 1585.

MHRD CONSORTIUM – INDEST E-RESOURCES

The Ministry of Human Resource Development (MHRD) has set-up a "Consortia-based Subscription to Electronic Resources for Technical Education System in India. The consortium is named as the Indian National Digital Library in Science and Technology (INDEST) Consortium. "Shared subscription" or "Consortia-based subscription" to electronic resources.

Under **MHRD Consortium – INDEST,** I I T Kanpur is getting access to the following resources

(A) Abstract and Indexing Journals

* ABI / INFORM (ProQuest)
* ASTP (Applied Science & Technology Plus): ProQuest
* COMPENDEX & INSPEC (Engineering Village)
* Web of Science (ISI)
* MathSciNet (AMS)
* SciFinder Scholar

(B) Full Text Journals

* IEL Online (IEEE/IEE)
* Science Direct (Elsiever)
* Springer Verlag (Springer)
* ACM Digital Library etc

Users of IITK Library may access approximate 5381 E-resources by MHRD-INDEST for the year of 2003. Range of subscription period in many cases, IITK Library has access to Current issues as well as older issues. However, in some cases the range of older issues is limited. Information regarding restrictions is mentioned if applicable and available. The name of the publishers and their URLs, resources, and back files for full-text resources are shown in **Table No. 5** and for

online bibliographic databases in **Table No. 6.** With the help of INDEST consortium and on line facility of journals and databases, information delivery has become easier than ever before for the users.

JCCC-INDEST CONSORTIUM SERVICES

JCCC-INDEST is J-Gate Custom Content for the Indian National Digital Library in Science and Technology (INDEST) JCCC is an intranet / Internet solution. J-Gate is an Internet gateway set up by Informatics (India) Ltd., Bangalore for integrating e-content and e-commerce for journal literature. It envisages providing seamless access to journal articles at publisher's site, local site of the libraries, or at the J-Gate archive, through a table-of-content (TOC) and abstract database as the search and link interface. It will also support online subscription to journals, and other related services.

IITK Library is getting access to 3100 e-journals and also access to Bibliographic content, full-text. The figure shows the different logos of IITs and IISc the first level members of INDEST Consortium in the center and different options to select in left-hand side and one can select any option. Union catalogue of e-journals (alphabetically) of these institutions can be access and statues and the status is given just parallel to the title as following abbreviation. **F**- Free, **CS** - Consortia Subscription, **LS** - Library Subscription. This is clear from the following **Figure no 1.** This will help in Electronic Document Delivery through JCCC-INDEST.

CAREER COUNSELLING SERVICE

It is a dream for every student to earn an overseas job or a professional degree from reputed institutes abroad. For the benefit of the students IIT Library provided a career guidance desk. Various details from universities are regularly obtained and made available to users. In spite of Internet, printed information is considered more useful with regard to courses offered, duration of course, fee payable, financial assistance and living conditions.

PUBLIC RELATIONS WITH USERS

In order to continuously improve the library services, we have also initiated the User Care mechanism. Feed back from users is requested and we modify our services according to their needs.

SERVICES TO CASUAL VISITORS

The library is a central academic facility primarily meant for the bona fide students, teachers and staff of the Institute. The external users who are permitted to consult the library are:

* Members of academic institutions, industries or government bodies who visit the Institute on various academic program organized by the IIT, such as, delegates to seminars and conferences, QIP programs, etc., No borrowing facilities are, however, extended to them.
* Students and teachers of mathematics, under a scheme with National Board of Higher Mathematics.
* Other persons from outside, either from academic institutions or from industries, who wish to use the library, are permitted to do the same for short duration's after the prior permission of ***THE LIBRARIAN.***

SERVICES TO EARTHQUAKE ENGINEERING PROFESSIONALS

IIT Kanpur Library has been designated as National Information Centre for Earthquake Engineering. The center is charged with the responsibility of collecting literature and information on earthquake engineering, and disseminating the same to earthquake engineering professionals spread all over India, Nepal and other South East Asian countries.

SERVICES TO MATHEMATICS PROFESSIONALS

The National Board for Higher Mathematics (NBHM) has accorded to this library the status of the Regional Library of Mathematics in the Northern zone. In this capacity the library has been given annual Grant for subscription to Mathematics Journals and for dissemination of mathematics information to the members of the Board by way of a monthly CAS service entitled "The Current Mathematics Literature (CML)".

FUTURE OF AUTOMATED LIBRARY SERVICES

* There will be an increase in the electronic transmission of requests via bibliographic utilities, automated circulation systems, and electronic mail systems, including those of the commercial data base services. Information document delivery service may survive but it will be different from the present as there will be emphasis on the desktop delivery of documents.
* The acquisition by the libraries will be shifting from print to electronic media. The issues of licensing and copyright of e-material for DDS need to be resolved.
* There will be growth of large international consortia and large institutions may have to support smaller bodies. The future of

consortia will depend on the financial agreements with the end user.

CONCLUSION

The present trend will continue for some time. However, the next decade will usher an electronic revolution. The users will generally expect to get well-organized collections, clear directions, quick access and delivery, and adequate communication. It is heartening to see that most of the libraries including the prominent Indian libraries have automated their services. New technologies for use in the library systems will continue to evolve which will lead to cost benefits and improvement in electronic library services. Future developments are expected to lead to four basic systems of libraries: Polymedia Libraries, Electronic Libraries, Digital Libraries, and virtual Libraries. The impact of new technologies will however, depend on two factors: the type of technologies involved, and the extent to which they are exploited for library systems.

ACKNOWLEDGEMENT

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* Indian Institute of Technology, Kanpur: Annual Report 2000-2001
* Indian Institute of Technology, Kanpur: Annual Report 2001-2002
* Indian Institute of Technology, Kanpur: Annual Report 2002-2003
* Profile of an Academic Library– PK Kelkar Library IIT Kanpur– 16

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* http://www.lib.iitk.ac.in:8080/examples/digital/jsp/dig_main_ep2.jsp
* http://www.library.iitb.ac.in/indest/
* http://ieeexplore.ieee.org
* http://www.sciencedirect.com/
* http://link.springer.de
* http://portal.acm.org/portal.cfm
* http://www.ams.org/mathscinet/
* http://www.engineeringvillage2.org/
* http://isiknowledge.com/)
* http:// www.jccc-indest.informindia.co.in

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TABLES AND FIGURES

CATEGORY	UNINTS	DURATION
Undergraduates	10 books	2 weeks
Postgraduates	10 books	1 month
Ph. D. Students	15 books	1 month
Faculty members	12 books	6 months
Staff members	02 books	2 weeks

TABLE NO.1: LENDING PRIVILLEGES FOR INTERNAL USERS

YEAR	NUMBER
1998 - 1999	62761
1999 - 2000	64873
2000 - 2001	50662
2001 - 2002	52590
2002 - 2003	53479

TABLE NO. 2: READING MATERIAL LENT OUT

YEAR	COMPLEMENTARY COPIES OF CAS SERVICES	DDSNO. OF PAGES
2002-2003	2,30,800	2,415
2001-2002	2,30,766	857
2000-2001	2,42,247	2,510
1999-2000	2,13,552	6,130
1998-1999	1,50,000	5,000

TABLE NO.3: DDS – NUMBER OF XEROX COPIES LENT OUT

PUBLISHER NAME	NO. OF JOURNALS
Abi/Inform	2371
Academic Press	204
Astp (Applied Science & Tech. Plus	379
Churchill Livingstone	54
Editions Scientifiques Et Medicales Elsevier	91
Elsevier	698
Elsevier (Peragmon)	20
Elsevier Advanced Technology	20
Elsevier Current Trends	28
Iee + IEEE	33 + 169
North-Holland	122
Pergamon	332
Sage Publications	59
Springer verlag	298
University Of Chicago Press	11
W.B. Saunders	53
World Scientific	15

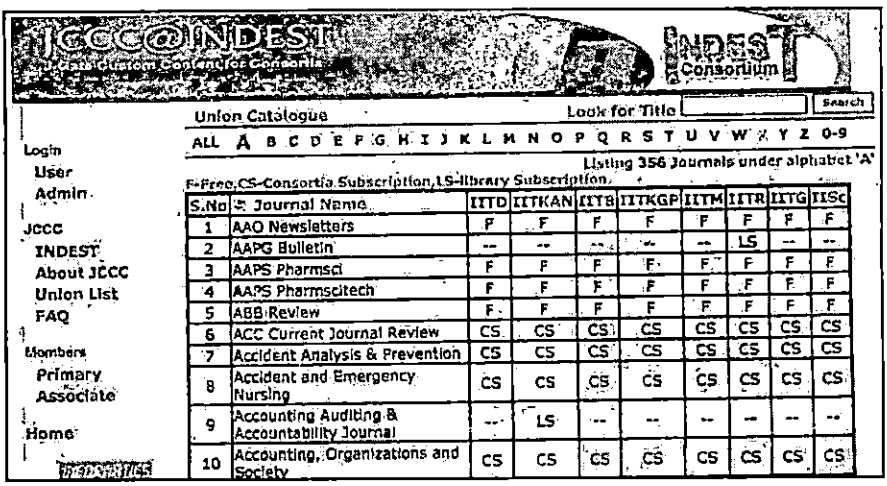
TABLE NO. 4: LIST OF MAIN 'ON LINE' PUBLISHERS AND NO. OF JOURNALS WHICH MAY ACCESS FROM IITK LIBRARY

Name of Publisher	Name of URL	Resource	Back file
IEL online (IEEE/IEE),	http://ieeexplore.ieee.org	110 journals, transactions,] magazines	1988 onwards
Elsevier's Science Direct and Academic Press's Ideal	http://www.sciencedirect.com/	1500 journals published by Elsevier Science and Academic Press	1995 onwards
Springer Verlag	http://link.springer.de	300 journals	1980 onwards
ABI & INFORM	http://www.il.proquest.com/pqd auto	1800 full-text journals + 2000 journals indexed	1985- Present; 1971-1984 Backfile
ACM Digital Library	http://portal.acm.org/portal.cfm	30 full-text journals +conf. proceedings +others	Back-files: Inception

TABLE NO.5: FULL TEXT ACCESS TO JOURNALS THROUGH *INDEST* CONSORTIUM

Name of Publisher	Name of URL	Resource	Backfile
COMPENDEX + and INSPEC	http://www.engineering village2.org/)	COMPENDEX Plus and INSPEC	Back-files: 1970+
Web of Science	(http://isiknowledge.com/)	Science Citation Index (Expanded)	Back-files: 10 years
SciFinder Scholar	Access through a Z39.50 client	SciFinder Scholar	Back-files: 1907+
MathSciNet	http://www.ams.org/mathscinet/)	MathSciNet	Back-files: Since 1940'

TABLE NO.6: ABSTRACTING AND INDEXING JOURNALS THROUGH *INDEST* CONSORTIUM



S.No	Journal Name	IITD	IITKAN	IITB	IITKGP	IITM	IITR	IITG	IISc
1	AAO Newsletters	F	F	F	F	F	F	F	F
2	AAPG Bulletin	--	--	--	--	--	LS	--	--
3	AAPS Pharmsci	F	F	F	F	F	F	F	F
4	AAPS Pharmscitech	F	F	F	F	F	F	F	F
5	ABB Review	F	F	F	F	F	F	F	F
6	ACC Current Journal Review	CS	CS	CS	CS	CS	CS	CS	CS
7	Accident Analysis & Prevention	CS	CS	CS	CS	CS	CS	CS	CS
8	Accident and Emergency Nursing	CS	CS	CS	CS	CS	CS	CS	CS
9	Accounting Auditing & Accountability Journal	--	LS	--	--	--	--	--	--
10	Accounting, Organizations and Society	CS	CS	CS	CS	CS	CS	CS	CS

FIGURE NO.1: UNION LIST OF *JCCC-INDEST* CONSORTIA

IMPACT OF CAS AND SDI SERVICES IN OPTIMIZATION OF LIBRARY USE IN THE CHANGING NETWORKED ENVIRONMENT: A CASE STUDY OF UNIVERSITY LIBRARIES OF KARNATAKA STATE

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ABSTRACT

The present study has made an attempt to investigate the state of the art of CAS and SDI services offered to different category of users of in seven university libraries in Karnataka State in a changing networked environment. The impact parameters examined in this study are both subjective and objective and they offer suggestions for further development of CAS and SDI services to meet the ever-changing demands of users. The study also helps the librarians to understand the users' opinion towards users satisfaction and performance of the CAS and SDI and services. In addition they also present to them the better side of the overall development of CAS and SDI services of library in the networked environment.

INTRODUCTION

Information is a valuable input for the planning, directing, controlling, decision-making, motivating, forecasting, research and development

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activities and which ensures productive and gainful operation. Information is available in different forms and formats like books, periodicals, CD-ROM, Internet sources, etc. The continuous growth of information has resulted in the proliferation of literature in different forms and subjects. Providing an access to information is essential to meet the ever-increasing needs of library users. The growing volume of information has placed library and information professionals in a position to device new tools and facilities. To ensure an optimal utilisation of information, a systematic approach towards planning of library services is needed. Providing right information to a right user at a right time is the principal aim of the library for which a number of efforts have been made since time immemorial.

In the context of an academic library users are most important constituent of library. Therefore, it is necessary to examine the users' views regarding to what extent the library resources and services are being found useful. Through the users' studies one can know about their information requirements and the measures to be taken to ensure an optimal use of these services as well as resources of a library. The information need is an objective demand of the user i.e., information need is oriented towards reality practice and resolving the task of finding terms related with need which are varied-want, requirement, desire and demand etc. The use and the need for information are two faces of the same coin. The need is always expressed with the purpose of use. To know the users' Current Awareness(CAS) and Selective Dissemination of Information(SDI) services needs, and to know how these services are used.

CAS AND SDI SERVICE IN THE CHANGING ENVIRONMENT

Dissemination of informationwill keep its users well informed and up-to-date in their fields of basic interest as well in the related subject. This is called Current Awareness Service(CAS). Current awareness involves knowledge of;

- New theoretical ideas and hypothesis.
- New problems to be solved.
- New methods of techniques for solving old and new problems.
- New circumstances affecting what people do and how they may do it.

Due to the enormous growth of scientific and technical literature, scientists, faculty and researcher find it difficult to cope up with literature. It is becoming more and more difficult for them to keep themselves up-to-date and well informed in the fields of their

specialization. The present situation in the social sciences and humanities is also the same. The users at least need to be informed about the recent developments. The current awareness service enables the users to keep themselves up-to-date and well informed in their fields of interest.

During this period of scarcity of financial sources, it is essential to promote and market library services. CAS is one of the best ways to bring the resources of the university library to the notice of the users. This will, in turn, lead to a greater demand for library services, giving opportunity to the library to prove its value and justification for the money spent on it.

Selective Dissemination of Information(SDI) Service is a kind of advanced service directed towards individuals. This is a highly personalized service. The basic concept of SDI consists of matching of the information with the interest of the clientele. SDI is that service within an organization which concerns itself with channeling of new item of information from various sources to those points within the organization where they can usefully serve someone's interest. SDI consists of matching information with the profile of each individual of the clientele. The profile can be of a single user or a group working and the same project or some limited subject field. Those items which match are brought to the attention of the user.

Objectives of the Study

The present study aims at evaluation and measurement of library services and its impact an optimization of library use of the leading university libraries in Karnataka State.

1. To assess current levels of CAS and SDI services
2. To assess the nature of all types of users, their changing needs of information sources and types of services required satisfying them.
3. To diagnos particular problem providing CAS and SDI services
4. Monitoring progress towards specific objectives CAS and SDI services
5. To evaluate the manpower efficiency with reference to handle the CAS and SDI services in the changing needs of the users.
6. To assess and measure the users opinion on the CAS and SDI services keeping in view the changing networked environment.

7. To workout the strategy to increase the user awareness or orientation programme with respect to CAS and SDI services.

METHODOLOGY

The survey method is the best method to know the present situation providing the CAS and SDI services. Hence the survey has been undertaken with the help of questionnaire designed for this purpose. The questionnaire was designed as a mix of closed and open-ended type questions. A majority of the questions were structured with multiple choices to tick appropriate answers. Such questionnaire enhance the response as they are easy to fill-in, consume less time, and also facilitate efficient, objective and easy analysis of data, tabulations and scoring. The data was collected from the different category of users such as PG students, Research Scholars and Faculty Members.

ANALYSIS AND INTERPRETATION OF DATA

General Overview

The questionnaires were distributed to different categories of users at different intervals of time. The total 970 questionnaires were distributed to the users of the seven university libraries. Of 970 questionnaires 830 were received back which amounts to 85.57%(830) response.

Table 1 : Distribution of Questionnaires in different Universities in Karnataka

Name of the University	No. of Questionnaires Distributed	No. of Questionnaires Received	Rate of Response
Mysore University	160	133	(83.13%)
Karnatak University	180	161	(89.44%)
Bangalore University	140	128	(91.43%)
Mangalore University	130	117	(90.00%)
Gulbarga University	130	104	(80.00%)
Kuvempu University	130	119	(91.54%)
Indian Institute of Science	100	68	(68.00%)
Total	970	830	(85.57%)

The highest percentage of response has come from Kuvempu University with 91.54%(119), next is Bangalore University with 91.43%(128), followed with Mangalore University 117(90.00%), Karnatak University 161(89.44%), Mysore University 133(83.13%), Gulbarga University 104(80.00%). The least response from Indian Institute of Science 68(68.00%).

Gender - wise Response

Table 2 shows sex-wise distribution of respondents. Out of 830 respondents 439(52.90%) were female, while 391(47.10%) were male respondents. This is obviously an interesting factor-the female respondents have out numbered the male users.

Table 2 : Gender - wise Distribution of Respondents

Gender	MY	KU	BU	MU	GU	KVU	IISc.	Total
Male	60 (15.35)	72 (18.41)	63 (16.11)	57 (14.58)	53 (13.66)	56 (14.32)	30 (7.67)	391 (47.10)
Female	73 (16.40)	89 (20.0)	65 (14.61)	66 (14.83)	51 (11.46)	63 (14.16)	38 (8.66)	439 (52.90)
Total	133 (16.0)	161 (19.4)	128 (15.4)	117 (14.1)	104 (12.4)	119 (14.3)	68 (8.19)	830 (100%)

(Figures in parenthesis indicate percentage)

Note: 1. MY = Mysore University
2. KU = Karnatak University
3. BU = Bangalore University
4. MU = Mangalore University
5. GU = Gulbarga University
6. KVU = Kuvempu University
7. IISc. = Indian Institute of Science

Category - wise Distribution of Respondents

The category-wise distribution of respondents is shown in table 3. 27.83%(231) and 22.29%(185) of the respondents are the PG students(previous and final year), 20.84.%(173) and 5.18%(43) of the respondents are research scholars(Ph.D. and M.Phil.) and 23.86%(198) are faculty members.

Table 3 : Category - wise Response

Category of Users	MY	KU	BU	MU	GU	KVU	IISc.	Total
Faculty Members	31 (15.66)	30 (15.15)	30 (15.15)	27 (13.64)	29 (14.65)	30 (15.15)	21 (11.60)	198 (23.86)
Research Scholars: (M.Phil	11 (25.15)	15 (34.88)	5 (11.63)	3 (6.98)	5 (11.63)	4 (9.30)	NA	43 (5.18)
Ph.D.)	26 (15.03)	36 (20.81)	23 (13.29)	25 (14.45)	16 (9.26)	26 (15.03)	21 (12.14)	173 (20.84)
PG Students: (Previous	30 (16.22)	36 (19.46)	33 (17.84)	30 (16.22)	18 (9.73)	29 (15.68)	9 (4.86)	185 (22.29)
Final)	35 (15.15)	44 (19.05)	37 (16.02)	32 (13.85)	36 (15.58)	30 (12.99)	17 (7.36)	23 (27.83)
Total	133 (16.02)	161 (19.40)	128 (15.42)	117 (14.10)	104 (12.53)	119 (14.34)	68 (8.19)	830 (100%)

Opinion about CAS by PG students

Opinion about current awareness service by PG students of universities in Karnataka is depicted in table 4. It is observed from the table that half of the PG students 211(50.72%) have reported that the latest books are available in their subject area and the remaining half of the respondents 205(49.28%) have stated that the latest books are not available in the library concerning to their syllabus or study needs. It is further observed from the same table that, the majority of Mangalore University PG students 53(85.48%) are more satisfied with the availability of latest books and Gulbarga University students 16(29.63%) are least satisfied with it.

Table 4 : Opinion about CAS by PG students

Current Awareness Service		MY N=65	KU N=80	BU N=70	MU N=62	GUL N=54	KVU N=59	IISc N=26	Total N=416
Latest and current books are easily available	Yes	34 (52.31)	41 (51.31)	24 (34.29)	53 (85.48)	16 (29.63)	30 (50.85)	13 (50.00)	211 (50.72)
	No	31 (47.69)	39 (48.75)	46 (65.71)	9 (14.52)	38 (70.37)	29 (49.15)	13 (50.00)	205 (49.28)
Content page of Journal service	Yes	3 (4.62)	16 (20.00)	0 (0.00)	13 (20.97)	0 (0.00)	0 (0.00)	18 (69.23)	50 (12.02)
	No	62 (95.38)	64 (80.00)	70 (100)	49 (79.03)	54 (100)	59 (100)	8 (30.77)	366 (87.98)
Prefer to have the Index and abstract of articles	Yes	38 (58.46)	66 (82.50)	60 (85.71)	62 (100)	37 (89.83)	53 (89.83)	22 (84.62)	338 (81.25)
	No	27 (41.54)	14 (17.50)	10 (14.29)	0 (0.00)	17 (10.17)	6 (10.17)	4 (15.38)	78 (18.75)

As regards the content page of journal service or article alert bulletin out of 416 PG students, only 50(12.02%) students have stated that they are receiving the content page of journal service whereas the majority of the PG students 366(87.98%) have reported that they have not received. The majority of the respondents have expressed the view that they are not receiving the content page of journal service except by the IISc library ress

Opinion about CAS by Research Scholars

Opinion about current awareness service by research scholars of university libraries of Karnataka is depicted in table 5. It is observed from the table that the majority of research scholars 144(66.67%) have reported that the latest books are not available on their research topic and 72(33.33%) research scholars have reported that the latest books are available in the library according to their research needs. It is also observed from the table that the majority of the IISc research scholars 14(66.67%) are satisfied with the latest books available in the library and Mangalore University research scholars 3(10.71%) are least satisfied with it.

Table 5 : Opinion about CAS by Research Scholars

Current Awareness Service(CAS)		MY N=37	KU N=51	BU N=28	MU N=28	GUL N=21	KVU N=30	IISc N=21	Total N=216
Latest and current books are easily available	Yes	10 (27.97)	11 (21.57)	15 (53.57)	3 (10.71)	10 (47.62)	9 (30.00)	14 (66.67)	72 (33.33)
	No	27 (72.97)	40 (78.43)	13 (46.43)	25 (89.29)	11 (52.38)	21 (70.00)	7 (33.33)	144 (66.67)
Content page of Journal service	Yes	2 (5.41)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	18 (85.71)	20 (9.26)
	No	35 (94.59)	51 (100)	28 (100)	28 (100)	21 (100)	30 (100)	3 (14.29)	196 (90.74)
Prefer to have the Index and abstract of articles	Yes	31 (83.76)	51 (100)	25 (89.29)	28 (100)	21 (100)	21 (70.00)	21 (100)	198 (91.67)
	No	6 (16.22)	0 (0.00)	3 (10.71)	0 (0.00)	0 (0.00)	9 (30.00)	0 (0.00)	18 (8.33)

The research scholars were asked whether they received the content page of journal service or article alert bulletin regularly and in time. Out of 216 research scholars only 20(9.26%) research scholars have stated that they are receiving the content page of journal service whereas the majority of the research scholars 196(90.74%) have

reported that they have not received this service. Further, they were asked whether they required indexing and abstracting of article. Out of 216 research scholars, 198(91.67%) have stated that they require indexing and abstracting of article service and only a few research scholars 18(8.33%) have stated that they don't require it.

Opinion about CAS by Faculty Members

Opinion about current awareness service by faculty members of university libraries of Karnataka is depicted in table 6. It is observed from the table that the majority of faculty members 124(62.63%) have reported that the latest books are not available for teaching and research purpose and 74(37.37%) faculty members have reported that the availability of the latest books in the library is good. It is observed from the table that the majority of IISc faculty members 17(80.95%) are more satisfied with the latest books available in the library and Mangalore University faculty members 5(18.52%) are least satisfied ones with it.

Table 6 : Opinion about CAS by Faculty Members

Current Awareness Service(CAS)		MY N=31	KU N=30	BU N=30	MU N=27	GUL N=29	KVU N=30	IISc N=21	Total N=198
The latest and current	Yes	10 (32.26)	10 (33.33)	85 (26.67)	5 (18.52)	19 (17.24)	17 (63.33)	74 (80.95)	(37.37)
books are easily available	No	21 (67.74)	20 (66.67)	22 (73.33)	22 (81.48)	24 (82.76)	11 (36.67)	4 (19.05)	124 (62.63)
Received the Content page	Yes	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	16 (0.00)	16 (76.19)	(8.08)
of Journal service	No	31 (100)	30 (100)	30 (100)	27 (100)	29 (100)	30 (100)	5 (23.81)	182 (91.92)
Prefer to have the Index and	Yes	27 (87.10)	29 (96.67)	29 (96.67)	27 (100)	27 (93.10)	29 (96.67)	21 (100)	189 (95.45)
abstract of articles	No	4 (12.90)	1 (3.33)	1 (3.33)	0 (0.00)	2 (6.90)	1 (3.33)	0 (0.00)	9 (4.55)

Figures in parenthesis indicate percentage

As regards to content page of journal service, out of 198 faculty members only 16(8.06%) have stated that they are receiving the content page of journal service whereas the majority of them 182(91.92%) have reported that they have not received this service. It was also asked to them whether they required indexing and abstracting of article. Out of the 198 faculty members, 189(95.45%)

have stated that they require indexing and abstracting of article service and only a few of them 9(4.55%) have stated that they don't require this service.

Overall Satisfaction of Current Awareness Service(CAS)

Table 7 examines the users' opinion about university libraries in Karnataka towards overall satisfaction of current awareness service.

Table 7 : Overall Satisfaction of Current Awareness Service

Over all CAS	Category of Users	MY	KU	BU	MU	GU	KVU	IISc	Total
Extremely Satisfied	PG	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	RS	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	FM	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Satisfied	PG	15 (23.08)	17 (21.25)	12 (17.14)	5 (8.06)	7 (12.96)	25 (42.37)	4 (15.38)	85 (20.43)
	RS	13 (35.14)	24 (47.06)	8 (28.57)	25 (89.29)	2 (9.52)	8 (26.67)	18 (85.71)	98 (45.37)
	FM	3 (9.68)	11 (36.67)	9 (30.00)	11 (40.74)	4 (13.79)	8 (26.67)	14 (66.67)	60 (30.30)
Uncertain	PG	12 (18.46)	30 (37.50)	18 (25.71)	19 (30.65)	9 (16.67)	6 (10.17)	0 (0.00)	94 (22.60)
	RS	0 (0.00)	4 (7.84)	8 (28.57)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	12 (5.56)
	FM	5 (16.13)	6 (20.00)	4 (13.33)	0 (0.00)	1 (3.45)	1 (3.33)	4 (19.05)	21 (10.60)
Not satisfied	PG	34 (52.31)	33 (41.25)	40 (57.15)	34 (54.84)	28 (51.85)	28 (47.46)	22 (84.62)	219 (52.64)
	RS	24 (64.86)	23 (45.10)	12 (42.86)	3 (10.71)	15 (71.43)	22 (73.33)	3 (14.29)	102 (47.22)
	FM	23 (74.19)	10 (33.33)	13 (43.33)	16 (59.26)	20 (68.97)	21 (70.00)	3 (14.29)	106 (53.54)
Not at all satisfied	PG	4 (6.15)	0 (0.00)	0 (0.00)	4 (6.45)	10 (18.52)	0 (0.00)	0 (0.00)	18 (4.33)
	RS	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	4 (19.05)	0 (0.00)	0 (0.00)	4 (1.85)
	FM	0 (0.00)	3 (10.00)	4 (13.33)	0 (0.00)	4 (13.79)	0 (0.00)	0 (0.00)	11 (5.56)

Figures in parenthesis indicate percentage

After going through the table, it is found that most of the PG students 219(52.64%), research scholars 102 (47.22%) and faculty members 106 (53.54%) are not satisfied with the overall CAS. However, some percentage of PG students 85(20.43%), research scholars 98(45.37%) and faculty members 60(30.30%) indicated that they are satisfied with the overall current awareness service. On the other hand only a few PG students 94(22.60%), research scholars 12(5.56%) and faculty members 21(10.60%) have expressed the view that they are uncertain about this question.

OPINION ABOUT SDI SERVICE BY PG STUDENTS

This is a personalized service provided by the library to its users. Basically this service is very useful to research scholars and faculty members. Here, a library collects information about the research topic or research interest of the scholars and faculty members. It was asked whether they had requested for the SDI service. The table 8 shows that, out of 416 PG students only 88(21.15%) students have requested the SDI service and most of the PG students 328(78.85%) have not requested the SDI service. It was further asked whether they had received any feedback from the library. Among the requested respondents only 21(23.86%) students have received a feedback from the library. It shows that the libraries do not effectively monitor this service.

Table 8 : Opinion about SDI Service by PG students

SDI Service		MY N=65	KU N=80	BU N=70	MU N=62	GUL N=54	KVU N=59	IISc N=26	Total N=416
Requested for SDI service	Yes	17 (26.15)	7 (8.75)	10 (14.29)	19 (30.65)	14 (25.93)	20 (33.90)	1 (3.85)	88 (21.15)
	No	48 (73.85)	73 (91.25)	60 (85.71)	43 (69.35)	40 (74.07)	39 (66.10)	25 (96.15)	328 (78.85)
Received the feed back from the library	Yes	2 (11.76)	0 (0.00)	0 (0.00)	16 (84.21)	0 (0.00)	3 (15.00)	0 (0.00)	21 (23.86)
	No	15 (88.24)	7 (100)	10 (100)	3 (15.79)	14 (100)	17 (85.00)	1 (100)	67 (76.14)

Figures in parenthesis indicate percentage

Opinion about SDI Service by Research Scholars

Table 9 depicts that the majority of the research scholars 166(76.85%) have not requested the SDI service and only a few research scholars 50(23.15%) have requested it. It was further asked

whether they had received any feedback from the library. Among the requested respondents only 20(40.00%) research scholars have received a feedback from the library.

Table 9 : Opinion about SDI Service by Research scholars

SDI Service		MY N=37	KU N=51	BU N=28	MU N=28	GUL N=21	KVU N=30	IISc N=21	Total N=216
Requested forSDI	Yes	9 (24.32)	0 (0.00)	7 (25.00)	6 (21.43)	2 (9.52)	22 (73.33)	4 (19.05)	50 (23.15)
service Received the	No	28 (75.68)	51 (100)	21 (75.00)	22 (78.57)	19 (90.48)	8 (26.67)	17 (80.95)	166 (76.85)
feed back from the	Yes	6 (66.67)	0 (0.00)	3 (42.86)	3 (50.00)	0 (0.00)	8 (36.36)	0 (0.00)	20 (40.00)
library	No	3 (33.33)	0 (0.00)	4 (57.14)	3 (50.00)	2 (100)	14 (63.64)	4 (100)	30 (60.00)

Figures in parenthesis indicate percentage

Opinion about SDI Service by Faculty Members

Table 10 indicates that the majority of the faculty members 111(56.06%) have not requested the SDI service and some 87(43.94%) have requested it. Faculty members were also asked, whether they had received any feedback from the library. Among the requested respondents only 26(29.89%) faculty members had received a feedback from the library.

Table 10 : Opinion about SDI Service by Faculty members

SDI Service		MY N=31	KU N=30	BU N=30	MU N=27	GUL N=29	KVU N=30	IISc N=21	Total N=198
Requested for SDI	Yes	14 (45.16)	7 (23.33)	19 (63.33)	2 (7.41)	20 (68.97)	14 (46.67)	11 (52.38)	87 (43.94)
service	No	17 (54.84)	23 (76.67)	11 (36.67)	25 (92.59)	9 (31.03)	16 (53.33)	10 (47.62)	111 (56.06)
Received the feed	Yes	4 (28.57)	3 (42.86)	3 (15.79)	1 (50.00)	3 (15.00)	4 (28.57)	8 (72.73)	26 (29.89)
back from the library	No	10 (71.43)	4 (57.14)	16 (84.21)	1 (50.00)	17 (85.00)	10 (71.43)	3 (27.27)	61 (70.11)

Figures in parenthesis indicate percentage

Overall Satisfaction of SDI Service

The opinion of users on overall satisfaction of SDI service is collected from the university libraries and is shown in table 11. From the table, its is clear that, most of the PG students 277(66.59%), research scholars 117(54.17%) and faculty members 118(59.60%) are not satisfied with the overall SDI service and only a few PG students 37(8.89%), research scholars 28(12.96%) and faculty members 22(11.11%) are satisfied with it. On the other hand some of the PG students 84(20.96%), research scholars 43(19.91%) and faculty members 43(21.72%) have indicated that they are uncertain about SDI service.

Table 11 : Overall Satisfaction of SDI Service

Overall SDI Service	Category of Users	MY	KU	BU	MU	GU	KVU	IISc	Total
Extremely Satisfied	PG	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	RS	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	FM	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Satisfied	PG	1 (1.54)	0 (0.00)	0 (0.00)	28 (45.16)	0 (0.00)	3 (5.08)	5 (19.23)	37 (8.89)
	RS	6 (16.22)	1 (1.96)	5 (17.86)	8 (28.57)	0 (0.00)	8 (26.67)	0 (0.00)	28 (12.96)
	FM	1 (3.23)	3 (10.00)	9 (30.00)	0 (0.00)	0 (0.00)	1 (3.33)	8 (38.10)	22 (11.11)
Uncertain	PG	4 (6.15)	15 (18.75)	24 (34.29)	30 (48.39)	6 (11.11)	5 (8.47)	0 (0.00)	84 (20.96)
	RS	0 (0.00)	11 (21.57)	12 (42.86)	20 (71.43)	0 (0.00)	0 (0.00)	0 (0.00)	43 (19.91)
	FM	1 (3.23)	12 (40.00)	3 (10.00)	18 (66.67)	3 (10.34)	3 (10.00)	3 (14.29)	43 (21.72)
Not satisfied	PG	60 (92.31)	65 (81.25)	42 (60.00)	0 (0.00)	40 (74.07)	49 (83.05)	21 (80.77)	277 (66.59)
	RS	24 (64.86)	39 (76.47)	8 (28.57)	0 (0.00)	11 (52.38)	22 (73.33)	13 (61.90)	117 (54.17)
	FM	26 (83.87)	15 (50.00)	16 (53.33)	9 (33.33)	20 (68.97)	26 (86.67)	6 (28.57)	118 (59.60)

Not at all satisfied	PG	0 (0.00)	0 (0.00)	4 (5.71)	4 (6.45)	8 (14.81)	2 (3.39)	0 (0.00)	18 (4.33)
	RS	7 (18.92)	0 (0.00)	3 (10.71)	0 (0.00)	10 (47.62)	0 (0.00)	8 (38.10)	28 (12.96)
	FM	3 (9.68)	0 (0.00)	2 (6.67)	0 (0.00)	6 (20.67)	0 (0.00)	4 (19.05)	15 (7.58)

(Figures in parenthesis indicate percentage)

FINDINGS OF THE STUDY

The inferences drawn from the analysis of the data the following findings have been evolved. They are as follows;

1. Among the user responses received from university libraries, the Kuvempu (91.5%) and Bangalore (91.4%) Universities rank 1st and 2nd respectively while the least responses have come from the Indian Institute of Science, Bangalore (68.00%).
2. Of the total respondents 416(50.00%) are PG students, 216(27.83%)are research scholars and 198(23.16%) are faculty members.
3. It is observed that half of the PG students 211(50.72%), 144(66.67%) research scholars and 124(62.63%) faculty members have reported that the latest books are available in their subject area and the remaining respondents have stated that the latest books are not available in the library concerning to their syllabus or study research and teaching needs.
4. A Majority of the PG students 366(87.98%), research scholars 144(66.67%) and faculty members 182(91.92%) have reported that they have not received content page of journal service. Only few respondents have stated that they are receiving with it.
5. It is observed that almost all the respondents 338(81.25%) of all the universities have stated that they require indexing and abstracting of journal service for their study, research and teaching purpose.
6. It is observed that on the whole more than half of the library users are not satisfied with the quality of Current Awareness Service(CAS) being provided in their university libraries. Nearly one fifth of PG students, one tenth of faculty members and a few research scholars are uncertain about the quality of current awareness service.

7. It is observed that only 21.15%(88) of the PG students, 23.15%(50) of the research scholars and 43.94%(87) of the faculty members have requested the SDI service and most of the PG students 328(78.85%), research scholars 166(76.85%) and faculty members 111(56.06%) have not requested the SDI service. Among the requested respondents only few respondents have received a feedback from the library. It shows that the libraries do not effectively monitor this service.
8. It is observed that on the whole, the majority of users are not satisfied with the quality of Selective Dissemination of Information(SDI) service being provided by the libraries. Almost two third of users have said that they are uncertain with SDI service. Only one tenth of users have indicated that they are satisfied with SDI service.
9. Implied Suggestions.

The views and comments offered by the different category of users have enabled the investigators to offer some feasible suggestions for achieving optimal utilization of library CAS and SDI services. They are as follows;

1. The present study explicitly states that university libraries are lacking in the programmes of users awareness and publicity of CAS and SDI services. This is more important than any other in the overall use of library services by users. In order to meet the same, each library has to have compulsory user awareness and publicity programmes like user orientation either through videocassettes or through lecture method from time to time. Similarly a library has to prepare its attractive but informative guide/manual for both students and teachers. The guide should provide a detailed note which should reflect, meaning, definition and important of CAS and SDI services with respect users requirements and its should be match the users profile or request.
2. Close scrutiny of the findings reveals that either half of the users or more than that are not satisfied with the quality of CAS and SDI services being provided by the University libraries of Karnataka. This requires a serious introspection. Even though many of these services are started with much enthusiasm, they have not been continued with the same zeal. The CAS and SDI services are not updated, and

continue to be provided with the same obsolete method and format. They are out of seen with the present networked environment. This justifies the users dissatisfaction with this. To improve this scenario it is suggested that each service needs to be done keeping in view the users' expectations from it. Methods should be updated on a regular basis and information should be presented in an attractive way. Feedback should be sought from the users and the services be evaluated to decide its utility. The staff involved in developing these services should be encouraged to develop core competences required for this.

3. Libraries must realize the importance of routing all the queries through a single window. Information Desk or Reference Desk is very practical idea which is provide CAS and SDI services efficiently, but only where it has an adequate qualified and competitive staff. Personal visits have revealed that most libraries do not have the professionally trained staff to manage reference, CAS and SDI services. Librarians should take this with utmost care and deploy competent staff to address the CAS queries and SDI service. The quality of CAS and SDI services enhances the library image as a courteous and cooperative support service of the university.
4. Greater emphasis on the need of individual. Information and Communication Technology(ICT) makes tailored CAS and SDI feasible. Professionals have less time for environmental scanning. Professionals take the advantage of ICT, a high-speed campus network, and give a new facelift to CAS and SDI services for the optimization of library use and achieve the excellence in an networked information environment.
5. Last but not the least the financial support from the UGC and proper encouragement form authorities of the university is also very much essential to design and develop the specialized services like CAS and SDI in large scale. It is strongly recommended that the UGC, INFLIBNET and authorities of the university give adequate professional staff and separate financial assistance to strengthen these units.

CONCLUSION

The PG students, research scholars and faculty members in almost all the disciplines require a constant flow of current, analytical

and often highly specialized information. An enterprising university library response is to develop ongoing individualized information services through challenging economically, certain technological efficiencies present opportunities to minimize costs. Here the CAS and SDI services offered by the university libraries in Karnataka well received but only by less percentage of the users. However, the majority of the respondents they have given their opinion negatively about the CAS and SDI services provided by the concerned universities. Looking into the above opinion this may conclude that, even they have not been made any impact on the user of library regarding the proper utilization of library and its resources.

Of the many reasons why customized information services deserve serious consideration in the university library, perhaps one of the best, yet least recognized, is the framework such services provide for building productive users-librarian relationships. The university librarians transcend their traditional reactive or passive modes of service and become integral play in both teaching and research process and, consequently, the information resource and services needed to support it. By extending individualized services to faculty and researcher, the CAS and SDI services are become an instrument for developing such involvement.

It is high time for university libraries especially those who are working in an networked environment it is an integral part of librarians as to conduct user education or orientation programmes from time to time. It also one of the important functions of university libraries is to provide current and updated information to each and every individual user. The CAS and SDI services keep the users continuously informed of new literature/information published in his/her area of interest, so that they can keep abreast of latest developments. Finally it is believed that the active role participants played in periodically reviewing and rejuvenating their own profiles raised the level of vested interest in the service and, consequently, the quality of the results.

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MARKETING OF LIBRARY RESOURCES AND SERVICES

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ABSTRACT

Marketing in libraries has gone beyond special days and book displays. The value of marketing library products and services has been recognised as priority activity in the library. Thus the staff of the library needs to give the marketing function a priority within their library duties and the library staff needs to develop new skills and strategies for marketing their sources and services. If the staff think of marketing as mindset rather than as a separate library function then they are more likely to be successful in their goal of positioning the library within their organisation or within their target client group. In this context the paper mainly focuses on several issues viz., concept of marketing, what is new about the marketing, role of marketing, steps and major benefits associated with marketing. The paper also recommends few important suggestions for effective marketing of library sources and services.

INTRODUCTION

Generally the concept of marketing is considered to be associated with commercial products where the prime concern is to maximise the profit. Therefore, marketing is closely related to selling. Libraries

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do not earn profits. Benefits of libraries are intangible. Hence, traditionally it is difficult to think of marketing of libraries. But, the concept of marketing is equally applicable to non-profit organisations. Marketing activities of non-profit organisation are referred to as social marketing. The basic concepts of conventional marketing and that of non-profit or social marketing are not different. The only difference is that in non-profit or social marketing, the objective is not profit in terms of money.

If more petosons respond to the cause that is being marketed, the purpose is better served. It is concerned with making community aware of social cause. The methods of both types of marketing are more or less the same. Marketing of non-profit organisations is the concept of sensitively serving and satisfying human needs.

So marketing concept now counts many business firms as its practitioners. The marketing concept holds that the problem of all business firms in the age of abundance is to develop customer loyalties and satisfaction and the key to this problem is to focus on the customer's needs. In this context we made an attempt to draw a clear-cut picture about marketing of library resources and services.

WHAT IS MARKETING?

Marketing has been described as the process of planning and executing the conception, pricing and promotion and distribution of ideas, goods and services to create exchanges that satisfy individual, and organisational objectives. What does that mean? It means simply, for a library, creating products that meet library client's information needs and then planning ways of informing library clients of these products and services. The emphasis in this description is placed on planning and executing and that the whole exercise is a process that creates exchanges. For library staff it is an exchange of service to their clients and that service could be merely giving directions to a particular part of the collection or training the client to use information products. What does the library staff receive in this process of exchange? We get a sense of satisfaction as a reward for efficiently meeting out client's information needs.

Levitt (1995) outlined the difference between marketing and selling as selling focusing on the needs of the seller and marketing on the needs of the buyer. Selling is preoccupied with the seller's need to convert his product into cash: marketing with the idea of satisfying the needs of the customer by means of the product.

It bas been identified by Stanton, Miller and Layton (1994) that by developing an effective marketing program, a non-profit organisation can increase its chances of satisfactorily serving stakeholder and

client markets and also improving the overall efficiency of its operations. According to Kotler (2001) marketing is the art of helping your customer become better off Marketing your library can change the nightmare scenario of an adequate library service, to an informed, innovative dream library environment that focuses on your customer's needs.

WHAT IS NEW ABOUT MARKETING OF LIBRARIES?

It appears that every stage and ingredient of marketing suggests understanding users and their needs to cater to them. This has been traditionally done by libraries though reference service, inter-library loans, seeking readers suggestions, saving the time of reader, user education etc., Naturally one is promoted to ask the questions: what is new about marketing of libraries?

It is true that many of these service components were there in traditional Librarimtship. These services were offered to the end-users by the librarians. And it is only with a professional commitment that the librarians did or are doing these services.

However, the authorities who hold the purse string do not entirely know the value of libraries and their services. Marketing makes the authorities perceives the existence and importance of libraries. Marketing lends a sense of service to all the library staff, irrespective of whether they are attached to the public service points or are wocking in the other sections, which do not have direct public contact. Services need not be given on the impulse, but it should be ensured that all activities become cost-effective. Personalised services should not be given in a slipshod manner or as personal favors. It should become the organisational culture.

It should not be done only merely by a smart assistant at the desk, it is also offered by the chief librarian, though not directly. With marketing library as a team can gain the confidence and support from authorities. In short, while traditional services were offered by lower level staff, when it is practiced as a marketing activity, people at all levels enjoy its fruits and the services become more systematic and visible. The traditional services were more reactive in nature, i.e. only those who sought the help got it in marketing, it is pro-active. Thus marketing can be considered as an ongoing review of internal strengths and weakness and external opportunities and threats. This is refered to as SWOT (Strength, Weakness, Opportunities, and Threats) analysis. Thus this type of analysis is not seen in the traditional services. Therefore without any hesitation, one can say that marketing of library and information services is a new concept.

WHAT IS THE ROLE OF MARKETING IN THE LIBRARY?

Contemporary management practice suggests very strongly that marketing is an essential component of any organizational business plan. It is well known fact that the difference between good libraries or good companies and those that do not achieve their goals is the quality of their marketing. The role of marketing in the library is to:

1. Achieve high levels of customer satisfaction.
2. Enhance the perceived value of their services.
3. Ensure the survival of their respective institutions.

If the library staff examine the reasons for marketing they can see that profit or increased funding resources could be a result but that alone is not a reason to implement marketing. The another reason is the increased customer satisfaction, which will result in increased willingness to use and pay for the services offered. An enhanced perception of the value of the organization will translate into increased levels of support and that usage and funding is necessary for the continued survival and existence of the institution.

There is a lot that business can learn from the non-profits and social service organizations and they also can learn from business. The goals are similar and many of the techniques are the same. Not for profit organizations are usually services and the primary differences between pure products and services is the role of advertising and public relations. Services are nearly totally dependent upon satisfied customers telling others about the institution where products depend more on advertising.

STEPS IN MARKETING

The following are the steps in marketing a product or service.

Marketing Segmentation

This means breaking up the market into parts according to customer needs. Customers may need the product in one form in particular area and people of some other area may have a different liking. The product may be modified for that groups. In academic libraries the type of assistance required for those who have just entered the organisation is different from those who are conduction research and studying in the libraoy for years.

Market Positioning

This means prioritizing clients and making policies that guide the designing of other programmer to suit the priority client.

Customer Analysis

This involves determining the needs and preferences of the selected

segments of the market The information about consumers needs to be gathered and ana1ysed.

Market Program

This is the core activity in the marketing process. Determination of the optimum mix of the 4Ps is done at this stage.

- Product i.e. Various attributes of the product, its packaging are decided.
- Place i.e. Decision about distribution channels are made.
- Price i.e. Exact price affordable to consumers and yielding good profit is arrived at by working out the cost of raw materials, production, distribution, after sales service, promotion etc., and profit margin and
- Promotion i.e. Major decisions about the publicity campaign such as which medium how long etc., are made

All these decisions about the four Ps are made and market plan goes to the next step.

Market Audit

At this stage all the previous steps are reviewed and evaluated Questions such as should so much be spent on publicity? Why not test the market in one region before countrywide launching etc. Even implementation of the final plan and its further continuous monitoring and modification fall within the realm of this stage. Marketing, therefore, is not a one-time activity. It is a continuous process and it has relationship with all other activities.

THE MAJOR BENEFITS ASSOCIATED WITH MARKETING

The non-profit organizations should be interested in formal marketing principles is that they will enable these organizations to achieve their objectives more effectively. Organizations in a free society depend upon voluntary exchanges to accomplish their objectives. Resources must be attracted, employees must be motivated, and customers must be found. The designing of proper incentives is a key step in stimulating these exchanges. Marketing is the applied science most concerned with managing exchanges effectively and efficiently.

Marketing is designed to produce three principal benefits for the organizations and its public. They are as follows:

Improved Satisfaction of the Target Market

A substantial number of non-profit organizations operate in a noncompetitive environment or in an environment where the demand for the service exceeds the supply.

These organisations lock the motivation to satisfy their markets and may deliver unsatisfactory services, which consumers accept because there are no alternatives. On the other hand, organizations that operate in highly competitive environment often lack the marketing skills to develop satisofactory services for their clientele. The result is bad word-of-mouth and client turnover, which ultimately hurt these organization's marketing. In stressing the importance of measuring and satisfying consumer needs it tends to produce an improved level of client service and satisfaction.

Improved Attraction of Marketing Resources

Organizations, in striving to satisfy a set of consumers, must attract various resources, including members, volunteers, employees, funds and public support. Marketing provides a disciplined approach to improving the attraction of these needed resources.

Improved Efficiency in Marketing Activies

Marketing places a great emphasis on the rational management and co-ordination of product development, pricing, communication, and distribution. Many non-profit organizations make these decisions with insufficient knowledge, resulting either more cost for the given impact or less impact for the given cost. Because the funds of non-profit organizations are often inadequate and undependable, the administrator much achieves the maximum efficiency and effectiveness in marketing activities.

Recommendations and Conclusion

The key for successful marketing is to understand what makes someone want to use or buy services and what type of marketing strategy they respond to. This requires libray staff to learn needs, problems, industry trends etc. In order to speed up a particular business market, read trade journals and attend professional conferences to meet prospective users or buyers in person. To become active in various groups whenever possible and form strategic alliances and find out what works best for the markets library staff has to serve.

This is a trial-and-error process that requires testing and interaction with clients or prospective clients, although reading case studies and interviewing and consulting with libraies that have already had marketing achievements is one way to save time. Thus for effective marketing of library products and services the library staff nlay follow the basic marketing strategies given below:

* Establish network, either in person or electronically by participating in discussion groups online where library target markets congregate.

* Direct marketing involves sending out sales letters, self-explanatory brochures, or special offers on a regular, repeated basis to the same group of prospects. Direct marketing can only work if you speak the language of your target market and contact them regularly.
* Devise training programs that increase awareness about library sources and services.
* Write articles to professional journals and newsletters with describing the benefits of library sources and services
* Send out publicity and press releases through local newspapers, radio and television etc.

When a strategy works, repeat it. But if it fails, and you drop it. The ability to develop and implement each of the strategies above requires learning to know new skills. It will most likely be necessary to read marketing and sales books, attend courses or workshops, or hire consultants and specialists to assist you.

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MARKETING OF LIBRARY SERVICES

Saraswat Morei

ABSTRACT

A Library is sevice-oriented organization. Users are prime factors of a Library. For creating awareness Marketing is the devise. Marketing is one of the me-thods to promote the use of Library services. It is the optimization of Library use.

The paper Discusses the concept of Marketing. Emphasises on Marketing in non profit organization. Explains why Marketing of Library Services are essential.

Examines what constituted a Library marketing? Narrates why Marketing. Identifies and throws focus on the trends introduction the Marketing for Library. The paper gives an overview of the information products inthe form of sources and services they are being Marketed. The paper presents various ways for marketing the library services. Describes the Marketing medias.

Emphasises use of information systems for improving Library services. Enumerates the importance of Marketing. Illustrates some of the important steps which can certainly help in paying way for providing a dynamic Library services. Mentions various ways for Marketing the Library services. Attempts to examine the factors which influences the users to for mulate their information seeking behavior scope and limitation is narrated. Objectives are discussed.

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INTRODUCTION

A Library is an integral part of learning and Teaching process. It is the information powerful media to users. For whom a Library is? Library exists for users. Services cannot therefore be planned without relevance to the needs of the users. Services are make known to the patrons.

For survival of the organization it is essential to motivate and attract the readers. Readers are attracted by Marketing define Marketing.

Definition : by Stanton, W.J.

"Marketing is a total system of interacting activities designed to plan, price, promote and distribute want satisfying products and services to present and potential customers."[1]

WHY MARKETING

Marketing plays a pivatole role to increase the demands of the products and services, weather it may be profit making institution or non profit organizations.

Marketing develops interests and activities of the users. The applications of new information Technology for the storage, retrieval, distribution, display, transmission, communication and rapackaging of information by the profit oriented industry.

Multimedia dimensional exchanges and require more and more information to fulfill their purposes and objectives in an environment.

For understanding the consumers in the commercial world led to the development of numerous Techniques for analyzing consumers and their interrelations with organization.

Marketing at providing better information so that persent and potential customers can be better in formulated.

Marketing shows how rational and precise adjustments can better satisfy user requirements.

WHAT MARKETING CONSISTS OF

All the activities which are centered around the users. To know their needs and provides services.

Marketing : Ghosh, P.K. Quotes

"The Management process responsible for Identifying, anticipating and satisfying customer Produced somthing and them sought a Mark. Consume and his needs, continue with finding a product or service to

satisfy these need, and arrange for this product to be made and sold to the consumer, so that the whale operation is to the mutual benefit (Profit) of both consumer and company.

=needs of the customers.

=Resources of the company to satisfy. Therefore, needs at a planned level or profit."[2]

What are the essential things for Marketing

1) Product document.
2) Physical distribution.
3) Promotion.
4) Pricing.
5) Place.

AIMS AND OBJECTIVES

1) To know what is Marketing and why it is essential.
2) To see what important trends are effecting the Library.
3) What is the Librarys primary Markets.
4) How awarness/interests are to be developed by Library Market.
5) To observe how do our readers see us and our competitions.
6) What business is the Library having for Marketing.

METHODALOGY

1) The study is based on the Annual Reports.
2) The experiences.
3) Observations.
4) Discussions with the staff and students.

SCOP AND LIMITATIONS

The study is limited to Dr. Babasaheb Ambedkar Marathwada University, Aurngabad previsionly it was known as Marathwada University. It was established on 23rd, August 1958 Inagurated by First prime minister Jawaharlal Nehru and Renamed on 14th January 1994.

LIBRARY ENVIRONMENT

The Library was in Aurangpura in the rented building. In the year 1964 it was shitted in its own building and indgurated by Honourable Radhakrishnan our Ist president of India.

The Library is H Shaped 781 sq. Meters and situated in the natural beauty sonerimahal, Nipat Nirajan, Bibika Mukbara and Panchakki. Total collection of books is 319766. More than 9000 books are added each year. Books are acquired by purchasing gratis. Ruleshamraj Bahadur Presented books. The books are purchased on the recommendations of Faculty members. Books are classified as per D.C. 16th edition. Text books are classified on the priority basis. Three catalogue/catalogue card at least are prepared.

DOCUMENTATION LIST

New arrived books in every month are arranged classified wise and sent the copies are sent to the affiliated Colleges and the Departments of the University.

Services obtained at present are Bibliographic services, Indexing, Inter Library Loan Facilities.

XEROX: Focilities are available to the ursers.

Marketing of Library services depending on Advertising, public relations, face to face contact, Effective selling and publicity.

PUBLICITY: Publicity plays an important role in marketing of library services.

MEDIA COVERAGE : On All India Radio, Feature was broadcasted on Parbhani, Aurangabad Kendra in 1981 by name "Marathwada University Library."

EXHIBITIONS: On the specific occasions the Rare book Collections are Exhibited. Marathi books written by the eminent Author P.L. Deshpande his collection was exhibited at the inagural function of the Dramma Department, Shri, Aurobindo Ghosh, Dr. B.R. Ambedkar, Human Rights, Mahatma Gandhiji Collection was also exhibited.

DOCUMENTARY FILM

the Documentary film on the Library and its functioning is prepared by the students of Dramma depared by the students of Dramma Department.

BOOK TALKS

Speakers from other Departments are invited to deliver the talks by the study circle Dr. Babasaheb Ambedkar Marathawad University

Library Aurangabad.

USER EDUCATION

An orientation to Fefresher courses participants are arranged. As well as orentations to fefreshers in the month of June to Jully are arranged every year.

ANNUAL REPORTS

Provides all information regarding the library.

NEW ARRIVALS: Display after processing of the books Wrappers of the books are displayed aesthetically on the Notice Board.

BOOKS ARE DESPLAYED

New books are displayed in the Reference section on the racks kept for the "New arfivals" They are helfuli to users for scanning. For right days they are displayed.

FORMULATS BETTER PLANS FOR THE FUTURE

Sour: The Library is taking steps for soul package for Library.

LIBRARY BROCHURE

The Library is planning to design the Brochure to assist the readers. Information sources such as postal correspondence currier exchange communication through. Telephone, Face to face contact interpersonal relations with staff and users are maintained.

INTERNET

Use of internet used extensively and in various ways to enhance information demands of the patrons. For providing better or casting information can be better served.

FOR MULAT BETTER PLANS FOR THE FUTURE

Ghosh syas "The Marketing Process responsible."

LIBRARY BROCHURE

The Library is planning to design the prochure to assist the readers. Information sources such as postal correspondence, currier, Exchange of communication through Telephone.

ORIENTATION

For refereshers and participants for Refresher courses are oriented. For New comers orientation is started in the Month of June to August.

MARKETING MEANS TELLING WHAT TO DO AND WHAT YOU CAN DO

Launch new service increase readers, improve services.

SUBJECT HEADING

Subject head is an aid to the staff and users. By and on the Athors subject catalogue is maintained.

LIST OF ADDITIONS

List of new arrived books in the month are arranged classified wise and sent to the affiliated Colleges and Departments of the Library. Services objtained at present Bibliographics.

Indexing

Paper Clipping

Inter Library Loan facilities.

SUGGESTIONS AND CONCLUSIONS

For improving marketing Library services what are the means and ways. Provides suggestions for improvements in Marketing. Discusses Environments, Library building Acquisition policy, Book selection, processing Helpful self arrangement Lending a books. Concludes that the effective community Library services can be efficiently be possible only Marketing.

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MARKETING OF LIBRARY SERVICES

Amit Prakash Gupt
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ABSTRACT

The later half of twentieth century has brought in remarks as information explosion, with rapid changes in users requirements, increasing rates of publications and vast development of information technology, giving a new meaning to the marketing of library services. The factors which play an important role in making of marketing plan, promotion of library services, medium, planning communication and marketing areas of library and information centre for generating resources have been reviewed in this paper.

***Keyword** : Marketing- Library and information services; Resource generation- Library and Information service*

INTRODUCTION

In an age where libraries need to compete among the heap of Internet content providers, rising price of publication and shrinking budget, marketing and promotion of library & information services are vital to their survival. In an increasingly competitive environment where the libraries need to present user's case, supported by user's performance, to secure user's library budget. Application of marketing techniques will definitely prove to the sponsors that there is a return on investment, or increasingly the library services provide added value to the users served. Marketing techniques can contribute to the future development of the libraries and information services as well as to ensure effective management and achievement of the objectives set.

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WHAT IS MARKETING?

Marketing may define as the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual & organizational objectives. For a library, it may include, creating products that meet client's information needs and then planning ways of informing clients of these products and services

According to Kotler (2001) marketing is the art of helping customers to become better off. Marketing of any library can change the nightmare scenario of an adequate library service, to an informed, innovative dream library environment that focuses on the customer's needs.

NEED OF MARKETING

In the last few years, the products and services provided by libraries have changed considerably. The challenges to library services from changes in educational approaches, the impact of technology, new methods for information provision and declining budgets makes marketing of services'necessary.

According to Christian Gronroos "Marketing is to establish, maintain, and enhance...relationships with customers and other partners ...so thai the objectives of the parties are met. This is achieved by a mutual exchange and fulfillment of promises."

WHO ARE THE CUSTOMERS?

For a library, the obvious customers are:

- ❑ Staff member(s)
  - General staff/Parent's body staff
  - Internal library staff
  - Administrative staff
- ❑ Users (can be segmented in various ways);
  - By level of study,
  - By special need,
  - By age or
  - By prime activity.

USERS NEED

Today's generations/users are technophiles not technophobes. They fax, phone, e-mail and chat on-line with their friends, frequently in preference to meeting them in the mall. Call them GenerationNXT,

or Dotcommers, they are the cool, coddled, confident.

Therefore it becomes imperative for LIS Professionals to strive hard to gain a vision, for their customers, what they needs, their social characters, values, desires, aspirations, etc. Hence new service delivery systems in libraries will require more specialized workers, who are efficient in one to one service to customers.

NEED ASSESSMENT

The simple way is

- To ask them
- By Surveys (Manual/via web)
- Focus group interviews
- By analyses of Complaints and suggestions
- By Key visits to significant places
- By analyses of feedback immediately After service delivery

MARKETING PLAN

The market plan is the actual process, which will establish the business goals and objectives and figure out how to achieve them. In order to promote the use of Library products and services, Libraries must develop a marketing plan. Marketing Plan should include the following outline:

Mission statement describing clearly

- Nature of library(s),
- Services offered
- Markets served

Listing and describing potential groups of users or clients

Describing library services

Describing marketing and promotional strategies:

This is a trial-and-error process that requires testing and interaction with clients or prospective clients, although consulting with libraries that have already have marketing and promotional achievements is one way to save time.

Identifying and understanding the direct/indirect competitions

Establishing marketing goals that are quantifiable, like:

The number of new clients, to acquire

The number of people, to reach

The amount of income, to generate

However the goal should be realistic and practical and should

Monitors user's results carefully

PROMOTION OF LIBRARY SERVICES

Promotion is the means of informing the users about what is being done and what can be provided to them. It deals with how to achieve the objectives that have been forecasted. It involves:

- To whom is the promotional material directed?
- What is the message?
- What promotional mechanisms are available?
- What points are to be considered in the design of a promotional package?
- What is the role of the library staff in promotional activities?

THE MEDIUM

Place/User convenience

In the information world, the key word is convenience. It means, library should be situated at that place where service(s) are convenient made available to their usage may also grow measurably.

Location

It is that the user may be at risk in attempting personal visits to Library and information centre. A public library branch in a shopping area, the business information service, the industrial information unit within the manufacturing area or the university campus, so well populated in daylight hours, can become lonely areas at night.

Co-operation with the library or information centre authority, institution or organization will often result in better lighting or security equipment and personnel; it is obvious that such factors are the cause of decreased usage.

Appearance and atmosphere

The physical attributes of place, that are important to users, are potentially attracting new users and hence form a substantial part of the marketing plan, like commercially designed and produced graphics, that are surprisingly inexpensive and present a quality image must be encouraged.

Inside physical structure should also be made eye catching. Discreet gold plates or foot- high red letters indicate much about the kind of services being provided. The general fabric of the building will reflect on the services offered too.

A welcoming atmosphere created by staff well trained in customer care, in addition to the use of warm colours, comfortable seating and

good use of space, plus wording of signs and notices will definitely attract more users. A 'Welcome' to the library board in unused space or the entrance, a list of departments and guides with clear pathways will encourage the customers to make frequent usage of library services.

Working Hours

Working hours should match with users requirements. The information centre that is providing services for an organization in, say, the industrial, medical, government or voluntary sector, needs to look at where and how it is making services available.

Limiting service hours of a library may hamper, user potential when, the organization is operating on a 24-hour basis. 'We never close' may not be practicable in terms of availability of professional staff, but the situation needs to be assessed to see how online, electronic mail, auxiliary staff or user education, in say CD-ROM use, may effectively compensate, Telephone-answering machines, even decent-sized and prominent letter-boxes, will reduce users' frustrations. A frequently asked questions facility, available by web site or answering machine can also aid in user satisfaction.

Mobile services

Rural areas, the housebound, the traditional industrial estates and the new high- technology parks are targets for mobile services. These are concentrated populations, often served by banks, post offices and sandwich shops, but rarely considered by libraries. The nature of such industrial estates and parks is that they are on the outer fringes of urban development and employee has little opportunity to visit branch libraries in normal opening hours. The lack of competitive facilities on such estates means that any library, public or academic, making its services available would be highly successful. Collections could be tailored to the needs of many special.

Co-operation with individual companies would quickly allow for effective timetables and specific visits. This kind of activity could also generate sponsorship potential, as well as providing a platform for launching or enhancing information services for local industry and business communities.

Price/User cost

Price is the more crucial element of the marketing mix, for which many library professionals find it difficult to consider. Price does not necessarily imply cash value: marketing is an exchange process and the price paid could be in terms of time, energy or other opportunity or activity forgone.

Costs could differ according to *demand levels*. Photocopying, video rental and even refreshment services can produce such benefits in most libraries. Offering internet access cheaply is a successful ploy

in the public library sector as are information bulletins with reliable sector information in: commercial information services.

Price discrimination strategies are practiced widely. Special groups such as children, students, old-age pensioners and the unemployed are often offered reduced prices. Extra loans could be allowed during lower-use days and it could perhaps be made conditional that they must be returned in a corresponding period.

Family subscriptions to a library at an advantageous rate will happily mean a likelihood that the children will continue membership as they reach adulthood. Pricing always needs to be examined carefully.

PROMOTION/USER COMMUNICATION

Communications is an important aspect of promotion. Communication is a two-way process. LIS managers are climbing down from the position of all knower and are trying to learn from customers. A dialog approach is most efficient methods to solve problems of both services providers as well as customers. A need to equip frontline's to answer user question in a proper way so that they do not hesitate to continue the dialogue. Even in cases where the primary purpose of the communication is to 'inform' to the customers, the emphasis should be on 'get informed', so that information gap between both parties minlmizes.

PLANNING THE COMMUNICATIONS

Evaluation methods must be built in at the planning stage. Project management and critical path analysis are useful management tools to use in working with the communication mix.

A planned communications for a library or information service will include some or all of the following elements:

- Public relations
- Advertising
- Publications
- Sales force.

Public/User relations

Public relation is to establish and maintain mutual understanding between an organization/Library and its public/user. It always help library to achieve its objectives effectively.

Advertising

It is important to assess where advertisements might appear most fruitfully in terms of which media to use and when. Some the advertising

strategies are:

- Usage of press release for events and public announcements.
- Issuing an organizational "press release".
- Producing one's own newsletter
- Hosting a copy on the website.
- Publishing a glossy publication called Connections.
- Posting press releases. to the local press.

Publications

The majority of such publications will be in paper and electronic format. They are:

- Annual reports,
- Specialist monographs,
- Training manuals,
- Statistical surveys;
- Collections of photograph
- Electronic newsletter,
- Book reviews,
- Subject bibliographies,
- Reference services,
- CAS
- Abstracting service
- Indexing services

Utilizing talents of a various kinds in this way motivates staff, leads to a higher profile and more effective products.

The 'sales force'

One of the Concise Oxford dictionary definitions of selling, is 'to advertise, or publish merits of; give information on value of something; inspire with desire to buy or acquire or agree to something'.

It is not envisaged that the libraries and information services, which are the market for this text would be employing sales personnel to any extent as a business organization deploy a sales force in the field, dedicated to selling the important products of the company.

However, if all employees are encouraged to recognize their very real role as salespeople for the organization, then customer care becomes high-level priority.

Marketing areas of LIC for resource generating

Marketing efforts may help LIC in improving their budget position. Some of the Library and Information services/products can be marketed as follows:

Membership fee

Library may well charge a higher subscription rate to a profeesional society, corporate body, working professionals etc. and very smaller rate to students, researchers, senior citizen etc.

Dues collection

The fine collected because of late returns is found to be a good amount. This fine can be kept in library earning account and may help in creating additional resources for the libraries.

Photocopy/ Internet access Charges

Facilities such as photocopying, Internet access, and printing from database can also help libraries to generate additional resources.

Documentation charges

Library can also be charged for documentation services like CAS, SDI, indexing, abstracting, bibliographies, etc.

Audio Video rental

Revenue can be generated through audio video access charges. Library can also provide audio video recording and displaying facilities.

Training and consultancy

Training and consultancy is another means through which revenue can be generated. A developed library can provide consultancy to less/ under-developed library in the area of implementation of technologies, Archive maintenance, etc.

Library publication

Revenue can be generated through trade of library publications like Current contents, Current index, Information bulletin, Newsletter, etc.

Discount on purchase

Discount is an important factor in the management of library expenses. A marginal increase in discount rates can help in increasing the additional revenue for a library. The library can have higher discount on various products such as journals, books, electronic databases, etc another option for meaningful discount is the consortia approach.

Exchange of publication

Library can have exchange of their institutional publications with similar libraries this help them in increasing their collection through mutual exchange. In exchange marketing, a good number of foreign journals can also be obtained against the per copy cost of your journal.

Inter Library Loan

No library, however big it may be, can be self-sufficient on its own. In this regard ILL facility is a good source of expenditure management under which occasionally used publications can be procured from other library instead of spending from existing budget.

CONCLUSION

The library can be called an information market and the library user is a consumer of information. Information is a vital resource for national development. Increasing realization of the role of information has resulted in the establishment of information systems to provide a variety of information services and products. It is an essential step in the planning, designing, and use of such services and products for optimal use of information. Library acquisition, organization and dissemination must be based on the modem concept of marketing to achieve reader satisfaction. It must endeavor to nurture culture of customer service to enhance its image in the eyes of the users.

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MARKETING OF LIBRARY AND INFORMATION SERVICES AND PRODUCTS: A CASE STUDY OF GOA UNIVERSITY LIBRARY

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ABSTRACT

On the one side of academic libraries in the present time are facing several problems such as budget cuts, increased cost of publications, money devaluation, ever increasing information requirements of readers etc., on the other side, the advent of Information Communication Technology has made the Library and Information Centres more competent and alert. These changes are forcing academic libraries and librarians to adopt the marketing tools for the betterment of library information services. The present paper focuses on the marketing of library services and products with particular reference to Goa University Library

INTRODUCTION

Over the years Librarians and information specialists have been debating on the acceptance of marketing approach in the information sector. In fact, there are several factors that have compelled the present day library professionals and information managers to formulate a working mechanism, which can be operated effectively, and efficiently to sustain present day librarianship, which is full of

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dynamic changes. The advent of information superhighways has made the libraries and information centres more competitive and alert. The challenges faced by the professionals towards budget cuts, increased users base, competition by the private vendors, outflow of information, and complexity in the information requirements are forcing the professionals to adopt the marketing tools for the betterment of the management of library and information centres.

Marketing is more than the use of certain tools such as personal selling, advertising, and publicity to create or maintain demand. Marketing is the skill of knowing how to plan and manage the exchange relations of the organization with its various customers. Kotler [1] defines marketing management as "the analysis, planning, implementation and control of carefully formulated programmes designed to bring about voluntary exchanges of values with target markets for the purpose of achieving organizational objectives" Chartered Institute of Marketing [2] says that marketing is the management process, which identifies, anticipates, and supplies customer requirements efficiently and profitably. Kotler [3] says that marketing "is the process of planning and executing the conception, pricing, promotion and distribution of goods, services and ideas to create exchanges with target groups that satisfy customers and organizational objectives". In fact, marketing involves the organization in studying the target market's needs, designing appropriate products and services, and using effective pricing, communication, and distributing to inform, motivate, and service the market. Thus, marketing is the performance by an enterprise of all the activities required in order to create, promote, and distribute products in accordance with the present or future potential customers demand and the firm's ability to produce. Under umbrella term `marketing' we study concepts like information marketing place, customers, building customer relationships, information products, branding and corporate identity, marketing communications, price and pricing policy, collecting marketing data and marketing strategy and planning. However, for the purpose of this paper we intend to restrict the scope of the subject only to pricing information products and services.

IMPORTANCE OF INFORMATION

"Information has been described by subject experts as the fifth need of man ranking after air, water, food and shelter"[4]. In fact in view of the vital role that information plays in the daily life of the men, information should be considered as the first need of human being. "Information is an indispensable factor for promoting the development of society"[5]. It is a component of fundamental importance in the

generation of knowledge, which in turn, makes the satisfaction of the various demands of the population possible in an efficient way.

The present age is rightly characterized as the "age of information"[6]. The fact that information is a key resource for the progress and development of a nation is nothing but the socio-economic, cultural and political development of its citizenry. This has a great deal of implications of the information resources of a nation. The quality and quantity of the information resources of the country are counted as one of the parameters of the development of countries. Therefore, it has become almost undisputed phenomenon that the countries which have got adequate and efficient information infrastructure and the power of information technology to process it efficiently and effectively uses this as one of the weapons by creating artificial demand for the superfluous goods and this may even lead to effect on the economy of other countries. Hence, the advanced countries considered information as an indispensable input for technological and economic development. They use it as a negotiable product that moves about in international markets. It has been established in today's International developing economics that, a country incapable of providing necessary information to its citizens and industries will loose a large part of their autonomy and depend up on the mercy of information being offered by the developed countries.

NEED FOR INFORMATION MARKETING IN UNIVERSITY LIBRARIES

Information marketing is essential by the university libraries in India due to the following reasons.

* For the promotion of the use of information resources
* To facilitate need perception on the part of the needy and hereby create demand
* To optimize use of information can be ensured
* To elevation of the image and status of the University Libraries and Information center and the profession
* Rising prices of reading materials
* Information explosion
* Introduction of new information technology
* Shrinking funds
* Devaluation of libraries
* Declining support to libraries

* Information is power

As information has become an important salable commodity, libraries should no longer be considered as a non-profit organization and be encouraged to market their services and products, so as to generate financial resources on their own. Academic libraries, today, rely on their host organization for their operational cost. In order to become self sufficient to some extent academic libraries have to give serious thought to recover the cost incurred from their services and also make profit from the same.

INFORMATION MARKETING IN GOA UNIVERSITY LIBRARY

Marketing is an integral part of library service, since it has to do with basic principles of librarianship i.e. to develop good collection and user-oriented services. The academic libraries play a significant role in catering to the needs of different groups of the academic community viz., students, teachers and research scholars for furthering their educational research. The libraries provide certain products and services to any of its users who desire or require using them. Hence, the ultimate aim of academic libraries is to locate, collect, organize and disseminate information. Goa University Library (GUL) is using most of the skills of information marketing to satisfy the needs of its clientele.

The Goa University Library and Information centre came into existence on 30th June 1985. Today the G U L and Information centre is housed in a magnificent building of more than 6,500 sq. Mts., that includes stack rooms, reading rooms, periodical area, computer centre, administrative division, reception and circulation area. The collection of books has now crossed 1,30,000 and continues to grow at the rate exceeding 2,500 titles annually. The library also subscribes to over 450 periodicals covering more than 40 disciplines. Back volumes of all important journals are available and the task of plugging lacunae in important serials is being actively pursued. The Chemical Abstracts Society has recently commended the library with a plaque for its complete collection of chemical abstracts. Readership has now crossed 4,000 members from the academic community in and around the state of Goa. The GUL is also a partner in the nationwide Information and Library Network (INFLIBNET) programme of University Grants Commission (UGC).

In addition to contemporary holdings, the library also houses a collection of rare historical documents from the collection of more than 52 donors that include the noted historian Dr. P.S.S. Pissurlencar and the eminent Portuguese scholar Dr. Nuno Gonsalves, dating back

to 16th Century and encompassing fields like Indo-Portuguese relations and history of Goa. The library is also officially designated repository of nearly 4,000 United Nations documents.

To fulfill demands of users and satisfy their needs, GUL is using the following ways to design a market mix for ensuring a catalytic role in the modern information community.

i) Product development
ii) Physical distribution
iii) Promotion and
iv) Pricing to

PRODUCT DEVELOPMENT

"Without products no organization has reason to exist, there is no task to perform; hence product is the most important factor in marketing."[7] GUL is free to develop the products according to the needs expressed by the users. The library has already automated its functions under the Library Automation Programme with the financial assistance of INFLIBNET. More than 1,30,000 records of database of the library collection is available on-line with barcode.

Online Public Access Catalogue (OPAC): The library web site offers an Online Public Access searchable digital catalogue of its entire holding exceeding 1.3 lakh titles, both on the campus-wide intranet and Internet .The URL of the library home page is http://202.117.85/.

Digital Information Services: The Library also offers access to general reference materials like the Encyclopaedia Britannica, the Encyclopaedia of Science and Technology, the World Book Encyclopaedia, the Oxford English Dictionary, and the Manorama Year book.

COPSAT: The library subscribes to the Contents Pages of Science and Technology (COPSAT) of more than 40 journals in each Science discipline (eight disciplines) from the INFLIBNET- a UGC project. GUL has developed a web-based application using WWWISIS software that queries this database and offers a search service from its web site on the campus-wide Intranet and Internet.

Searchable Full Text Database: GUL provides the access to a searchable full text database of the EBSCO Information Services from the provider's web site as well as a local CD-ROM (back up). This database, which is regularly updated and offers the full text of articles

from over 250 journals covering Social Sciences, Humanities, Management Sciences, and Commerce. Emerald and ERIC full text databases also available for users.

INSDOC Services: GUL is regular user of the Indian Scientific Documentation Centre's (INSDOC) services like Contents, Abstracts and Photocopying Services (CAPS), the Standing Order Abstract Services (SOAS), and the Full Text Journal Services (FTJS). These services serve to the financial burden of subscribing to expensive journals without compromising access to these resources at reduced costs. Presently this service has been stopped due to discontinuation of sending the required information by INSDOC [renamed as National Information Science Communication and Information Resources (NISCAIR)].

DELNET: GUL is one of the subscribed libraries in Developing Libraries Network (DELNET – formerly known as Delhi Library Network). DELNET has been offering accessibility to its databases through the World Wide Web (WWW). GUL availing Inter Library Loan (ILL) on-line facility, and would be able to place the ILL request in the Union Catalogue of Books (more than one million records), Periodical Article Database, Database of thesis and Dissertations, to enhance its quality service, the GUL also got membership to highly reputed institutions such as National Chemical Laboratory (NCL), Pune and Indira Gandhi Institute for Development Research (IGIDR), Mumbai. These institutions are specializing in their subjects and sending required information (photocopies) as and when request made by GUL.

CURRENT AWARENESS BULLETIN: GUL providing Content Pages of Subscribed Journals (monthly) for the use of its users and sending a copy to its Corporate and Institutional members.

GUL is recently launched "**Remote Access Service**" for providing this service a Remote Access Service (RAS) Server i.e. Dial-in Server has been installed and installing a 16 port switch for RAS is under pipeline for networking of affiliated college libraries of Goa University and other institutions/libraries, etc., services such as Online Public Access Catalogue (OPAC), Querying, Inter Library Loan Management, and Electronic Mail based Alert Services have been provided. To avail the above services, user has to dial 2451991 (0832-2451991 for out side Goa User) for confirmation of the network and feed the User Identification as "visitor" and password as "visitor". It is hoped that a

separate dial-in-server will ease the bandwidth difficulties during peak hours making dial-in access to the GUL resources with less difficulty.

GUL already started the digitizing its rare archival collection, special collection and Thesis both Compact Disc (CD) as well as the World Wide Web so as to enable scholar outside Goa and other country to access these resources.

4.2 DISTRIBUTION OF INFORMATION

"Getting the raw materials and sending that out, the operation we call acquisition" [8], is input side of distribution. GUL acquired documents as gift e.g. P.S.S. Pissurlekar and Dr. Nuno Gonsalves, Gifted collection section of 52 donors, Government publications like Gazettes etc. To fill in the gaps in collection, the library also has exchange relations with the universities all over India and few foreign universities with its Inter Library Loan (ILL) facility. On the output side the library deal with giving materials to clients, either by person-to-person contact or relying on other means such as electronic mail, telephones, courier and communication satellites for distribution of products. GUL distributes list of recent additions of books and contents-pages of periodicals (monthly) to institutional and corporate members both print and election versions.

The documents acquired by the library are distributed after its processing including bar coding and database through individual loan for home use. Separate reading room facility for 50 students is provided round the clock. Nearly, 400 students at a time can use the Sack Book Section with Text Book, Reference Section, Gifted, United Nation's, Current and Stack Periodical Sections. The distribution of acquired products is also extended to students and faculty members of affiliated colleges of Goa University, Goa, and Research Scholars from different Universities/Institutions of India and abroad.

4.3 PROMOTION OF PRODUCTS AND SERVICES

Promotion means advertising selling and public relations. For the purpose of promotion of products/service the basic need is to identify market segment, so as to design activities appealing to them. The customers so GUL can be divided into three segments (i) Individual include Post Graduate, M.Phil, Research Scholars, Faculty Members, Research Associate and Assistants, Project Assistant, Non-Teaching Staff (ii) Corporate and Institutional Members and (iii) Libraries. Each of these segments has different needs and can be reached in a slightly different manner.

The variety of on-line and off-line services that library offers must be known to as many members as possible, so that whenever necessity arises members must remember library only. Adapting effective advertising methods and selling the information services and products of GUL can achieve it. The Promotion plans used by GUL i.e. Publicity, Public Relations, Advertising, and Selling designed about the user segments are discussed below:

4.4 PUBLICITY

Wide publicity is given to GUL products and services by various advertising methods. For example, local newspapers and magazines are used for dissemination of information related to the various programmes and activities being performed by the library including the specific ventures such as conducting of the workshops/seminars/ Refresher Courses by GUL etc. The GUL conducts extension activities on various occasions such as National Library Week, Year of Books Programme, Goa Liberation Day etc in order to improve upon the image of the library and inviting the attention to the large community of the users of the library. Wider publicity is given for all the training programmes being conducted by the library in the field of Information Technology (IT), Library Automation and Networking, which is the most crucial and challenging jobs before the libraries of the modern world. The GUL has prepared the very attractive information brochures and leaflets are distributed widely in order to catch the eye of the user community and incorporated the same in its homepage for on-line users. GUL is one of the active partners in Carnegie Mellon University, Pittsburgh, USA's "Million books on the web" project. Due to the partner in this project, the GUL is compared to invite attention from the foreign universities to get the benefit of this project.

4.5 PUBLIC RELATIONS

Maintaining the public relations with users is most important activity in order to achieve the objectives of the marketing of information services and products. Public relations are developed and maintained by the GUL to the best possible extent. For example, Librarian welcomes the comments complaints, requests and general suggestions that lead to improved library services. In this context, GUL has fixed its Suggestion Box besides the Circulation Counter. Replies on the suggestions made by the users are usually given with in 10 days to individuals and a copy sends to Vice-Chancellor. In case the comments given by the member need detailed discussion, the Librarian is placing the same in Library Committee meeting agenda for healthy solution. In addition, on-line suggestions are also welcomed

and entertained for the speedy communication and actions. Every new academic session starts in the library with an orientation programme conducted for creating the awareness about the library rules and regulations and library services and systems. Similarly, GUL homepage also facilitates on-line library orientation in detail for newly admitted and existing students for maximum use of library services. When ever new service is to be installed, the poster, press releases, special displays are arranged in the GUL Notice Board to inform the users. A separate notice also sends to each department for display the same on the their notice board. Giving attentive listening to the problems of the readers/users/customers by the staff of the library will help the GUL to build its high reputation which in turn help it to receive more and more customers to enhance its financial status.

PRICING

Price is a key element in the marketing mix and has a significant effect on the operation of the information marketplace. The marketing mix is the organization's overall offer, or value to the customer. Philip Kotler, the 'expert of marketing' gave the concept of '4Ps' of marketing mix '4Ps' i.e. Product, Place, Pricing, and Promotion and argued that the seller's paradigm of the'4Ps' should become the four '4Cs' of a buyer's mix i.e. Customer Value, User Convenience, User Cost, and User Communication. Price is a means of exchange offered by a buyer for buying the product/service being marketed by a seller/ marketer. It is generally expressed in currency units, such as dollars, pounds, sterling, rupee etc. However, it may also be expressed in services or other goods, which the seller and buyer may agree to exchange for the item. As far as the usage of the term 'price' in relation to librarianship is concerned, it can be said that it is something related to information products and services, which are in physical product like CD-ROM and fee of a service or membership of the information centre/library. The three macroeconomic functions of price are:

1. Allocation or rationing or the balancing of the quantities demanded and those supplied.
2. Stimulation and acting as an incentive for new players and products to enter a marketplace.
3. Distribution, whereby income is distributed between buyers and sellers.

PRICING OBJECTIVES

Some of the pricing objectives are:

(i) Survival in the medium to long term

(ii) Increased and maintained level of profitability
(iii) Achievement of a specified level of return on investment
(iv) Retention or increase of market share
(v) Cash flow and liquidity
(vi) Creation of illusions of high product quality
(vii) Related issue of strengthening the brand and relationships with customers.

Keeping in view the above parameters of the pricing of library and information services and products. GUL is seriously planning to charge on the various services it is providing to its users, discussions among the senior staff and consultation with the university authorities especially Library Committee are going on in order to reach to the conclusion on deciding the price factor. However, at present the GUL has its income in the form annual library fee.

GUL is charging Rs. 400/- per P.G Students, Rs.500/- per M.Phil, Research Assistants, Project Assistants, and also Ex-students of P.G. for one year. Rs. 750/- per Ph.D. Scholars. Rs. 400/- per any Scholar/ Journalist or any Public (Rs. 100/- for temporary membership for reference per week). Rs. 5000/- per Corporate and Affiliated College Members. An amount of Rs. 6,00,000/- (approximately) is being collected as Library Annual Fee from the above. A very small share of the income of the library is also expected in future through the photocopying services which is to be provided now through some private vendor who would be paying a small part of his income to the library on account of providing him space and other facilities inside the library premises, certainly help the library to earn more money to sustain its library services under the financial crunch.

CONCLUSION

There is considerable difference between marketing of physical goods and marketing of library services and products. The prevailing conditions force libraries to adopt the marketing techniques for their advantage. Technological innovations facilitate tools for enhancing the effectiveness of such services. Though introducing the concept of pricing of information products and services, particularly in academic libraries and in developing countries like India is a difficult task, yet libraries and information centers need to assess the extent of funds that can be generated through charging of information services and products to users/clients/customers. A decision is also to be taken very carefully as to which customers/products/services can be charged only token price, which one can be charged to cover a

reasonable proportion of cost, and which one can be used to generate revenues more than their cost. The impact of the information technology and the adoption of the marketing approach will go a long way in improving the facilities for information users and enhance the reputation of library and information services and professionals. The GUL with a recent privilege of being given a special appreciation and reward by the National Assessment and Accreditation Council (NAAC), the library is expected to work with more zeal and dynamically in order to earn more on its quality services and achieve a special status in the area of academic librarianship.

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MARKETING OF LIBRARY AND INFORMATION SERVICES IN CHANGING INFORMATION LANDSCAPES

Mahender Pratap Singh

ABSTRACT

Marketing of library and information services in the information landscapes is very challenging work in developing country, like as India. The present paper discusses concepts of marketing are applicable to library and information service and its activities and how these activities can be successfully applied in the marketing of library and information services in changing landscapes and how to use of marketing in library and information services.

Because we know that in the present age that information is a marketable commodity. So whatever rules and trends applicable to other commodities for marketing same can be applied to information.

INTRODUCTION

Libraries and information centers are currently undergoing drastic changes especially with the application of computers. Conventional libraries are gradually being replaced by electronic libraries. In simpler words we can say that the paper based libraries are gradually being replaced by paperless libraries. The idea is that the CD-ROM is

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gradually becoming the more preferred media for storage and retrieval of information as compared to print media. It has certain distinct advantages e.g. it has capacity of storing huge amount of information, it occupies less space, it reduces cost factor both in terms of material and also its maintenance. In addition to this libraries are also getting linked to networks and are able to make available information which is available through the network. With the libraries going digital and entering into network, the concept of virtual libraries is also gaining popularity. A virtual library is practically a library without walls. In fact the library will be available on internet and one would be able to access the books, periodicals, journals, and so on of a library on its web the libraries will become global. This will help libraries in reaching a wider segment of riders, which is one of the geographical boundaries and any body sitting in any part of the globe will be able to access any library just on mouse click of his computer.

Marketing of library and information service in changing information landscapes implies transference of information to the perspective or potential user/customer for a consideration. The marketing of library product in changing information environment happens to be a recent phenomenon. It can be said that the prevalent time is the crucial time to accept and adopt and any new concept as we all are at quick march towards the new millennium, it is our prime duty to equip ourselves with all arms. We are living in information technology age. In this regard it is worthwhile to state that to live in information age it is vital importance to be well informed. As we need food to live and service, information is also required to live intelligently and competitively.

Information products and services like any other commodity are demanded in the market and the demand is affected by factors like price, performances, populatious, expectatious, income, seasons, technology and price of other goods. Information is demanded only when there is value or utility to the consumer. The supply of information products and services depends, on the price of the product, the cost involved in its production and the technology used. In the present scenario information is much pampered by the IT tools. There is wide scope for information to be marketed and managed by IT biased tools like internet, electronic media like CD-ROMs, VCDs, etc. In fact it receives more welcome from customer compared to traditional patterns of marketing and management.

DEFINITION

Hansen defined that marketing is the process of discovering and translating consumer wants in to product and service specification and then in turn helping to make it possible for more and more

consumer to enjoy more and more of these products and services.

According to Philip Kotler

The analysis, planning, implementation and control of the carefully formulated programs designed to bring about voluntary exchanges of value with target markets for the purpose of achieving organizational objectives. It relies heavily on designing the organizations offering in terms of the largest market needs and desire on using effective pricing communication and distribution to inform, motivate and service the markets.

Marketing management objective

The main goal of marketing is to maximizess sales of services and ensure customer satisfaction. To attain this goal the various types of information needed are :

Strategic

*Search for new markets and marketing strategies

*Analysis of competitor's strategy

*Technology and demographic forecasts and product changed

Tactical

*Advertising techniques and analysis of their impact

*Customer preference surveys

*Correlation of price and sales

*Sales force deployment and targets

*Exploring alternate marketing channels. Timing of special sales campaigns.

Operational

*Sales analysis by regions, customer class, sales persons

*Sales target versus achievement

*Market share and trends

*Seasonal variations

*Effect of model changes

*Performance of sales outlets

*Costs of sales campaigns and benefit

MARKETING TECHNIQUES :

A marketing techniques helps the organization to focus its limited resources for better management and determines what the user wants

and needs and then produces a product or service to meet those needs. There are a number of analysis and tools help an organizational analysis, competitive analysis and the marketing mix these are the marketing techniques describes below :

MARKET ANALYSIS

Market analysis begins with defining all the potential markets with which exchanges could take place. The most obvious market is the end-users of library services- library patrons, the parent institutions of libraries/Informatione enters, govt. agencies that provide funds and other institutions that have information needs but no libraries. Both funding and user markets should be identified in the market analysis. After identifying the markets, it is essential to establish the size of each market and the trends affecting the demand for services.

Market analysis also includes segmenting the total market in to smaller unit with distinct wants and needs the users of a market segment are similar to one another but different from users in other segments. Several criteria are used to segment the library market.

ORGANIZATIONAL ANALYSIS

An organization tries to establish what markets to serve and which products and services to offer. Strong consideration must be given to the objectives, strengths and weaknesses of the organization itself. Considerations in the analysis would includes resources available toe the organization, restrictions of any, attitudes of authorities, special expertise of staff, structure of the organization and successes and failures if any. Assessing the strengths of the organization can help turn opportunities in to successes.

USER ANALYSIS

Once the market has been identified, the marketer must identify the users within that market. Who can be the user? Is it a library director, the head of the department, the reference librarians, a professor, the board of directors, or a student? It can be any of the above. A useful way by which to organize these users is to categories them ,as influencers, deciders, purchasers or users of a service or a product.

COMPETITIVE ANALYSIS

Competitive analysis begins by identifying as many potential competitions as possible. In fact, identifying market will help to identify competitions and vice versa. Who is the competitor for a library and information centers? Competitors include other library and information

centers, library associations, for profit vendors (like information brokers), and library schools. Competitors also include other organizations for funding, for example, college libraries compete with one another for getting funds from authorities. An organization competes with others who seek funds from foundations. As library budget shrink, the competition for limited funds has become intense, placing information organizations in a highly competitive environment.

MARKETING MIX

While marketing is an approach to long term planning, it can also help make short term plans for the delivery of particular services to particular markets. A short term tools the helps with planning is the marketing mix, also referred to as the four p's of marketing after its four components namely products, price, place and promotion.

MARKETING ACTIVITIES

Market Research

Users of library and information centers are becoming increasingly demanding these days. Now they expect a wide choice, speedy delivery, easy access and a range of services such as' access to an online public access catalogue, electronic information systems. Including both bibliographic and full text services and sophisticated information services provide by subject specialists, such as current awareness, in-depth enquiry and research services, and information skill programmes besides the traditional ones. In response to users demands and to support teaching and research programmes effectively, the modern libraries and information centers are required to provide all these service. But before introducing any service, the libraries should have a much better understanding of user's needs and have closer liaison with them and a more proactive approach to identify the precise requirement of both groups and individuals, actual and potential users. All this will help in determining how well the needs and expectations of the users are met with by the existing products and services and how these can bet met with more effectively by improving the existing one or by developing the new ones.

Product Planning

The product planning of the library and information centers may range from books, periodicals to electronic documents and services from traditional ones like circulation, inter library loan, reference service to access to international databases, online researches and CD-ROM searches. Whatever the products and services of the library may be, these should be customer-oriented rather than product or service-

oriented. The model of 'one-sige fit all' has to be transformed in to 'customized services' model. While designing the new products and services or redesigning the old ones, the libraries must keep in mind the users and their informational requirements the existing infrastructural facilities available for the creation of products and services, technology to be used, library strengths and weakness in terms of resources, personnel and areas of specialist expertise.

Pricing

When information is being considered and sold as a commodity, the question of fixing price crops up. A chief characteristics of information is the uncertainty in fixing value etc. with the rapid advances in information technology.

Through the access to and timeliness of information has increased the price to be paid for such access has increased manifold. It also costs when information is gathered, arranged and repackaged. Thus the pricing policy can be profit making, break-even or nonprofit or subsidized for long time and the success of any services in libraries could be measured by the benefits by the recipients.

Now the question arises how much price a library should charge for the services. Should the motive be profit making or to realize only the actual cost? However, much depends upon the pricing policy adopted by the library. The pricing policy may differ for various service and from segment to segment as under.

* Cost recovery, by which the libraries cover only budgeted costs.
* Commercial pricing, when the libraries make a profit.
* Premium pricing, for a service which is in demand or of such high quality that the libraries are justified in asking customers to pay more.

Sales Promotion and Advertising

Librarian or information scientist should develop good communication skills and public relation skill. Because with good communication skill they can push forward in the marketing job. The librarians and information professionals will have specific objective for particular communications programs objective with regard to building and maintaining the perception of highly regarded quality organization. Marketing objective approach would utilize the empty spaces either to display or prompt the library product, like display of new arrivals or sale of old useful and valuable books at discount rate. Libraries and information centers also promote their activities by planning 'new' items or by advertising. Publicity is also done by staff

members during meetings, conferences, seminars or symposia. In financially crippled information organizations, publicity is usually the main promotional tool, yet few bother to avail the opportunities available.

There are other promotional tools and activities , which can buildup good market for services that is the good relationship, advertising, direct-making, publications sales force, press conference and press releases, physical presentation etc.

Distribution

Distribution pertains to dissemination of information through various channels. Traditionally, the users have to come to the library personally to receive or use the information, but the advent of information technology in libraries and information centers especially the computer, telecommunications and networking have altered the picture altogether. Now the users can have access to remote sources of information. Electronic bulletin boards and electronic documents offer new scope for distribution of information.

In modern libraries all the communication medias such as print. Radio, television, computer, telecommunications, videos can be employed for distribution of information. However, the choice of channels of communication and information will depend on the receiver of information and the facilities available in the library. From the marketing point of view, modern libraries and information centers should go for computer based information storage and retrieval as it provides a better flexibility in access to information in a Quality organization.

Use of marketing in library and information services in changing information landscape :

1. To make the users aware of the library product and service
   * Create awareness of the library
   * Create awareness of its offerings and expertise
   * Taking to existing users, find out why they use the library
   * Taking to people who do not use the library and why
   * Using mass media i.e. Radio, television, newspaper, periodical and journals
   * Provide additional services to special groups within community, such as , children, senior citizens, disabled and
   * Arrange talks, seminars, debates, cultural shows etc.

2. To make the users aware of the library services and product
   * Online services
     - Internet
     - E-Journals
     - E-Books
     - LAN-WAN
     - OFF line service
     - CD-ROMs
     - Audiovisual Aids
   * Other services
     - Bibliography
     - Indexing
     - Library catalogue
     - Abstracting
     - Translation
     - Reprographic
     - SDI and CAS
     - Digest service etc.

3.Dissemination of information and knowledge by documentation services

4.Public relations

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OPAC AND USER EDUCATION

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ABSTRACT

The present study highlights the impact of Information technology and the awareness of OPAC (Online Public Access Catalogue) in user education. Information Technology has changed the entire environment of the library as resources, techniques, services etc. In the new system the data can be stored within computer or the records computerized and then the required entry can be retrieved immediately through OPAC system in any format as text form, catalogue form etc. The catalogue which is available for search on-line is known as On Line Public Access Catalogue. In OPAC, we can search any recorded document by the name of author, publisher, title, subject heading etc. OPAC reduce the cost of maintaining a catalogue many files can be eliminated and decentralized is possible because staff can access the online files. Most of the user does not know about the use of OPAC, so library should prepare the kits or programme to increase the use of OPAC in users education programme.

INTRODUCTION

Computer has entered in every field of our life, because of its characteristics of accuracy, speed, space-saving, cost effectiveness. Today many books like encyclopedias, dictionaries are publishing electronically in the form of CDs/DVDs etc. The information technology has also left its impact on libraries. Information Technology plays a unique role in storing, managing and retrieving information effectively. Libraries

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are getting themselves transformed from traditional ones to Digital Libraries having widespread use of computers, telecommunication and microelectronics to facilitate on-line searching, easy access to information through CD-ROM, DVD-ROM, database, multimedia, network etc. Many libraries have started creating databases of their own in Machine Readable forms. The traditional methods of storing recording and retrieval have been changing by Information Technology.

The arts prints, charts, diagrams, equipment, filmstrip, flash cards, games, globes, kinescopes, kits, maps, microfilms, microfiche, microprints, motion pictures films, programmed instruction, disks, slides, study print, tape recording and videotapes etc. are multimedia materials, controlling and disseminating, which have become challenges for today's librarians as well as for users. In the age of Internet, user's expectation is increasing, he is eager to know everything, which is new. Now in the modern system, OPAC (On Line Public Catalogues) has replaced the Card Catalogue.

There are many physical forms of catalogue as sheaf, printed book form, cards etc. The bound book form of catalogue was in use over a long time, it was replaced by the loose - leaf book form. And loose leaf form was replaced by card catalogue, which is most popular form in these days. Information Technology has changed the entire environment of the library as resources, techniques, services etc. In the new system, the data can be stored within computer or the records computerized and than the required entry can be retrieved immediately through OPAC system in any format as text form etc. The Online Public Access Catalogue (OPAC) was first introduced in USA and later on in UK and now is introducing in Indian libraries also.

Most of the user does not know about the use of OPAC, so library should prepare the kits or programme to increase the use of OPAC in users education programme.

OPAC (ONLINE PUBLIC ACCESS CATALOGUE)

OPAC is known as 'Online catalogue', computer catalogue, Patron access catalogue' and OPAC is the modern and flexible form of catalogue, online usually instantaneous, sophisticate access to any record information and it is direct information with a computer. The catalogue which is available for search on - line is known as Online Public Catalogue. It is more than the traditional card catalogue executed in a different medium. It is an 'interactive' search module of an automated library management system. Any record is searched directly from a node within the organization or remotely through national and international networks. It is a public access catalogue in the sense that library user can search the records without the assistance of

library staff[3]. In the OPAC system, any document can be searched through a computer node in concerned library's database and other library database, which is connected by a network system to this library.

USER EDUCATION

In the age of computer, Libraries are changing their ways of rendering services to the users. In the changing environment user needs a specific training in the use of library services, with the application of Information Technology. User education means, educate the user or an introduction given to user to help them to make the best use of library. When a user comes to library for the first time, he does not know about various activities of the particular library. In user education library introduces the user about their services, operations, rule-regulations etc.

According to H. Mews: "An introduction has given to reader to help them, to make the best use of library."[1]

Orientation means: "An introduction, as to guide are in adjusting to the new surrounding, employment activity or the like"[2]

Initiation means: "To introduce into the knowledge of some art or subject."[3]

According to Norman Higham ' there are three aspects of user education: first, helping them to use the library; second, help them to use the literature; and third, using the literature for them' [4]

NEED

With the tremendous production of documents, the physical organizations in libraries have become very complicated. The situation has made things difficult for users to tap its resources effectively. The applications of new technology in information retrieval require training for users. The changing pattern of education has also increased the necessity and the urgency for user education. In early days' teachers taught the students by dictation but now days, under new methods the emphasis is on use of libraries. Today, most of the libraries are using computers for information storage and retrieval. Information retrieval from databases with the help of computer is called on line information retrieval system. **The use of on-line information retrieval system requires a good training on the part of users.** With the increasing of database in various disciplines, the needs of user training have become evident.

ONLINE PUBLIC ACCESS CATALOGUE AND USER NTERACTION

There are many traditional Methods of user education. The

advent of information technology in library has necessitated changes in the user education. Lectures, Library tour, Printed booklet, guides, seminars and workshops, orientation week, display and audio-visual method etc are the techniques of user education.

Librarians, Programmers and Professionals should prepare audio-visual materials to meet the need of the users. Films, tape slide, videotapes, audiotapes and software training kits (provided by the software suppliers) are audio-visual methods. Card catalogue form is mostly used form in the library for locating any document. It is done through Information Technology increasingly in use by the libraries these days. In the new systems, library users have not consult the card catalogue to search a book. Now the OPAC (On Line Public Access Catalogue) is being put in software, which is used by users to search books. Software supplier should provide a training kit especially for user with software to educate the user [5]. Initial knowledge of computer is required for users. In the electronic age almost all the users should have preliminary knowledge about the computer. **Libraries can educate the user in new systems by showing films, videotape and audiotape etc. Some programs of user education can be fed in these media.** Software supplier should make training kit in the software for OPAC module to educate the users. If this provision is not available in the software then library professionals and programmer should make such provision.

Figure 1. as a example of the OPAC module.

We can search a book in OPAC module through the following items[6]:

Author

Title

Publisher

Any Keyword

We can show such type of search module of OPAC to educate the user, to search a book by the name of author, title, publisher, and subject heading and any key – words etc. **(as in Figure 1.)**

Figure 1.

ONLINE PUBLIC ACCESS CATALOGUE

KEY WORDS KHANNA

NO. OF HITS

AUTHOR	02	TITLE	00	PUBLISHER	00
KEYWORDS	00	ABSTRACTS	00	OTHERS	00

LIST OF SEARCHED TITLE

KHANNA J. K. / COMMUNICATING KNOWLEDGE

KHANNA J. K / LIBRARY AND SOCIETY

KRISHAN KUMAR / REFERENCE SERVICE

BOOK DETAIL		STATUS OF BOOK	
AUTHOR	: **Khanna JK**	ISSUED	
TITLE	: **Library and society**		
KEY-WORDS	: **Libraries- Society**	TRANSFER	
CALL NO.	: **020 K145L**	ON SHELF	
ACC. NO.	: **2333**		

Suppose, we want to search a book is written by J. K. Khanna by author's name. We first type the surname 'Khanna' in the provided column (**figure 1**), than click. Now the screen shows numbers of hits, once again click the author twice, the screen shows the searched titles, again click the title, the screen shows the full details including the status of book (whether the book on shelf, issued or transferred).

In the above example **Figure 1** shows the only simple search module. In OPAC we can show search strategies using Boolean logic with logical operators as (AND, OR, NOT) to user as in **Figure 2.**

Figure 2.

BOOLEAN SEARCH

a.) USE OF 'AND' OPERATOR:

ORGANIC **AND** CHEMISTRY

b.) USE OF 'OR' OPERATOR:

CATALOGUE **OR** CATALOG

c.) USE OF 'NOT' OPERATOR:

MANAGEMENT **NOT** ADMINSTRATION

d.) Truncation:

PHYS? - For all terms related to physics

CHE? - For all terms related to chemistry

CHILD? - For all terms related to child

CONCLUSION

Old Library and Information centers maintain the conventional documents. Now the physical form of the documents is drastically changed in CD ROM, DVD ROM, Microfilms, Microfiche, and Magnetic disks, Magnetic tape etc. To cope with these, libraries have changed their ways of maintaining documents and providing services. It is therefore essential to educate the user about these new changes. The main aim of the library is to satisfy the users. Like a customer, user of the library has a full right to know about the products of the library (services of library). Libraries should change their traditional methods of user education in the context of changed reading material in the above form. India is a developing country and libraries are not fully computerized in the country.

The OPAC leads to space and financial saving and many persons can use this simultaneously. Most of the user does not know about the use of OPAC, so computerize library should prepare the kits or programme for educate the user about OPAC. Today, if examined from the view point of user's convenience and satisfaction, story reveals that OPAC's users are far from satisfaction. However the new techniques are applied into OPAC as simulate book shelves and images of books on screen 'icon' Graphical User Interface (GUI) present object oriented display.

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"PUBLIC LIBRARY IS FOR ALL: A MIRAGE IN THE VIEWS OF WOMEN"

S. Padmamma

ABSTRACT

The article reports the results of a survey conducted to identify the information needs of women and public library services at Shimoga district in Karnataka. Since women folk are essential for the life cycle of human race, their information needs must be identified and met with. Women have educational, political, cultural, economic, recreational, health and professional information needs of their own. There must be an information system was women's information needs are traced out and fulfilled without fail. In the Indian context the public libraries are expected to fulfill the information needs of everybody including women. In the changing scenario of information services women are deprived of their right for information. The information sources required in the public libraries meant for women are very meager and have failed utterly without basic infrastructure facilities required to provide need-based services to women. The study reveals the inability of public libraries to develop the necessary sources and services towards women. Also, suggests the measures to improve the situation that would bring a revolution in the public library system it self.

INTRODUCTION

Public Library is a social institution. It is expected to provide documents for all types of users whether students, teachers, general

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people, and women etc. Thus we can say that the function of the library is to develop the collection in such a way that it meets the demands/needs of the different clientele particularly women. The traditional way of development of collection is meaningless in the society because much of the information we can access through various networks, and the clientele is fully satisfied. But these types of sources are mirage in public library and the development of women. First of all the basic traditional sources are limited in our public library. Women are less awareness and less consciousness of public library resources. Because no books and no programmes in the public library related to women interest.

The services of libraries are essential for purpose of collection, presentation and dissemination of information to the users in the society. In this context, the public library system plays its role in dissemination of information through books, magazines, books on tapes, videos and CDs. The country libraries in the United States are also offering latest community services such as online book clubs, summer reading programmes, library volunteer, reading volunteers, library on-wheels, etc.

In the changing scenario of information services, women are deprived of their rights for information. The information sources acquired in the public libraries meant for women are very meager and have failed utterly to fulfill their information needs.

OBJECTIVES OF THE STUDY

The Study was undertaken with the following objectives :

- To find out the available information according to need based sources in public library.
- To find out women awareness of the resources.
- To find out the extent of use of the resources.
- To find out their requirements and engaged in different occupations.

To make recommendations to improve upon the awareness and use where necessary.

METHODOLOGY

The study area has been restricted to cover women population in Shimoga region. The study covered 3 categories of female (1) Girl students (2) working women (3) house wives. 180 questionnaire were randomly distributed to the respondents out of which 150 have responded with the respondence rate of 83.33%.

Table – 1

Demographic features of women respondents

Sl. No.	Demographic features %	No. of students %	No. of workingwomen %	No. of housewife %	Total %
1	Age group				
	15-25	50 (100%)	25 (50%)	2 (4%)	51.33%
	25-35	-	15 (30%)	22 (44%)	24.67%
	35-45	-	10 (20%)	26 (52%)	24%
2	Kannada	30 (60%)	35 (70%)	38 (76%)	68.67%
	Tamil	6 (12%)	-	5 (10%)	7.33%
	Telugu	5 (10%)	-	2 (4%)	4.67%
	Malayalam	3 (6%)	6 (12%)	-	6%
	Urdu	4 (8%)	5 (10%)	2 (4%)	7.33%
	Marathi	2 (4%)	4 (8%)	3 (6%)	6%
3	Educational level	-	-	2 (4%)	1.33%
	below SSLC				
	SSLC	6 (12%)	10 (20%)	15 (30%)	7.33%
	PUC	25 (50%)	6 (12%)	10 (20%)	4.67%
	Graduate	10 (20%)	22 (44%)	23 (46%)	6%
	P. Graduate	5 (10%)	5 (10%)	-	7.33%
	Others	4 (8%)	7 (14%)	-	6%

4	Income level				
	High level	10 (20%)	-	7 (14%)	11.33%
	Middle level	37 (74%)	50 (100%)	40 (80%)	84.67%
	Low level	3 (6%)	-	3 (6%)	4%
5	Marital Status				
	Married	-	20 (40%)	46 (92%)	44%
	Un married	50 (100%)	27 (54%)	-	51.33%
	Widow	-	3 (6%)	4 (8%)	4.67%
6	Occupation				
	Government	-	10 (20%)	-	6.67%
	Private	-	30 (60%)	-	20%
	Self employment	-	10 (20%)	-	6.67%
	Students	50 (100%)	-	-	33.33%
	Housewives	-	-	50 (100%)	33.33%

Table –1 reveals that the Demographic features of the women respondents like age, qualification, level of income, marital status, language and occuption.

Reading helps one in inventing better method of communication. Reading is an important part of communication and an essential aid to personal welfare and social progress. Reading is considered primarily a process of securing and reacting to ideas recorded in written or printed records.

Table – 2

Reading habits of respondents

Reading Habit	No. of Students	%	No. of Working women	%	No. of Housewife	%	Total %
Yes	50	100%	47	94%	46	92%	95.33%
No	-	-	3	6%	4	8	4.67%
Total	50	100%	50	100%	50	100%	100%

Table –2 explains that 100% of students, 94% of workingwomen and 92% of housewife have habit of reading. Only 6% of workingwomen and 8% of housewife do not have reading habit.

Table – 3

Reading time of the respondents

Reading Time	No. of Students	%	No. of Working women	%	No. of House wife	%	Total %
In working hours	-	-	-	-	-	-	-
In holidays	6	12%	15	30%	2	4%	15.33%
In free time	44	88%	35	70%	48	96%	84.67%
Total	50	100%	50	100%	50	100%	100%

Table – 3 reveals that the 12% of students, 30% of workingwomen and 4% of housewife prefers to read in holidays. And 88% of students, 70% of working women and 96% housewife prefers to read in free times.

Table – 4

Newspapers and magazines reading by the respondents

News-paper/ Magazine	No. of Students	%	No. of Working-women	%	No. of House wife	%	Total %
Daily News-papers	23	46%	45	90%	39	78%	71.33%
Weekly/ Monthly Magazine	7	14%	29	58%	18	36%	36%
General Knowledge books	10	20%	4	8%	4	8%	12%
Others	10	20%	4	8%	4	8%	12%

Women prefer different types of reading of magazines and newspapers. 46% of students, 90% of workingwomen and 78% of housewife are found to read daily newspapers. As many as 14% of students, 58% of workingwomen and 36% of housewife prefers weekly/ monthly magazines. Whereas 20% of students, 38% of workingwomen and 20% of housewife used to read general knowledge books. And 20% of students, 8% of working women and housewife prefers to read other kinds of magazines and newspapers.

Table – 5

Respondent's interests on newspapers in different area

Area of interest	No. of Students	%	No. of Working-women	%	No. of House wife	%	Total %
Health & Hygiene	25	50%	20	40%	29	58%	49.33%
New Taste	3	6%	10	20%	14	28%	18%
Current Information	15	30%	20	40%	19	38%	36%
Employment News	10	20%	13	26%	3	6%	17.33%

Among the 150 respondents, 49.33% are interested to read health and hygiene. 36% of respondents interested to read current information. 18% of respondents read to new taste and 17.33% of

respondents read employment news.

Table – 6

Purpose of Reading

Purpose of reading	No. of Students	%	No. of Working-women	%	No. of House wife	%	Total %
Educational	13	26%	11	22%	4	8%	18.67%
Informational	11	22%	20	40%	20	40%	34%
Cultural &	8	16%	16	32%	13	26%	24.67%
Recreational To enrich knowledge	28	56%	32	64%	21	42%	54%

According to this table, majority of the women (54%) prefer to reading is to enrich knowledge, 34% of the readers purpose is to collect information. 24.67% of readers are main purpose is to gain cultural and recreational information and 18.67% of respondents purpose of reading is to educational.

Table – 7

Information Collection	No. of Students	%	No. of Working-women	%	No. of House wife	%	Total %
Library	12	24%	10	20%	15	30%	24.67%
Radio	5	10%	17	34%	11	22%	22%
TV News-	32	64%	36	72%	29	58%	64.67%
papers	18	36%	31	62%	21	42%	46.67%

According to this table, we can find out 64.67% of the readers collect information from TV and 46.67% of the readers collect from Newspapers, 24.67% are collect information from Library and 22% of the readers collect from Radio.

Public library is called as people university to provide information. Women as also a main counter part in the society but hear they can access meager information. But it indicates collections are not relevant to their queries. So they can use only limited members.

52% of students, 68% of workingwomen and 46% of housewife are not using the public library. Because they said lack of time

(42.67%), lack of needed books in library (8%) and lack of current information in library.

Table – 8

Users awareness on public library services and facility

Library service and facilities	No. of Students	%	No. of Working women	%	No. of House wife	%	Total %
Reference service	4	8%	6	12%	7	14%	11.33%
Circulation Service	18	36%	19	38%	23	46%	40%
Current awareness service	-	-	-	-	-	-	-
Photocopy service	3	6%	-	-	-	-	2%
Space for reading	8	16%	12	24%	7	14%	18%
Toilet	10	20%	15	30%	8	16%	17.33%
Drinking water	15	30%	15	30%	8	16%	25.33%
Total	58	116%	59	118%	54	108%	113.99%

Table –8 reveals that, 40% of the respondents aware the circulation service. 25.33% of the respondents aware about water facilities. 18% of the respondents aware about space which is available in library. 17.33% aware toilet facility, 11.33% of the respondents aware about reference service and lastly 2% only aware photocopy service but no current awareness service among the respondents.

Suggestions to improve the services of public libraries

1. The public library staff should try to identify actual potential readers and create in them the love for books and reading, not electronical sources. Because the electronical sources in the public libraries are in mirage.
2. The public libraries have to concentrate on this group and convert them as the active users of public libraries and it is possible if the public library moves out of its four walls and

reach the public at large by way of mobile library service and home delivery system.

3. Major group of women respondents are not aware of the library facility. So the public libraries must have to provide awareness among the women folk about the present library facilities and services through orientation programmes and exhibitions etc.
4. Many facilities in library especially for women should be improved. Especially, a special place and special time, special information should be provided for the women.
5. Majority of the women wants health and hygiene information. So the library must provide documents that must be related and profitable to women.
6. Library should be made to meet the needs of the users related to their needs.
7. To attract more readers to the public library through the exhibition, latest editors, seminars of eminent personalities should be organized by the library from time to time.
8. Satisfaction with information seeking is difficult to define, it is equally difficult to measure- at least in a reliable and valid, they should provide

CONCLUSION

The concept of empowerment of women is catching up. Women's information needs must be given prior concern. It seems that public libraries in Karnataka are neglecting the importance of the concept. It affects the society adversely. Hence it is very essential to take necessary steps to improve the deteriorating situation.

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PUBLIC RELATIONS: BOON OR WASTE OF EFFORTS FOR LIBRARIES

M.T.M. Khan

ABSTRACT

Libraries are service institutions and users have always been the focal point of Library services. Public relations are the organized and planned efforts of a library which can establish and maintain mutual understanding between user and library. Realizing this importance of public relations in a library this paper highlights the steps involved in developing a public relation programme for a organisation (library) and factors effecting it. It also discusses the methods by which libraries maintain good public relations. Also highlights the task, code of Ethics and suggestions for maintaining effective public relations. The paper also throw light on the present practices in PR program and concludes that PR is very essential and vital for libraries. The public relations has become the order of the day. Through PR the goals of the organization can be realized very fast. The PR persons are well informed about their organisation and thus can satisfy any user efficiently. The Librarian will have to emulate this role.

INTRODUCTION

Public relations (PR) concerns any organization, commercial or non-commercial. It exists whether we like it or not and it is not for us to decide whether to have or not to have public relations in the organizations. Public relations consists of all communications with all the people with whom an rganization has contact. The public relation programme requires a series of cages, including:

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1 The determination and evaluation of public attitudes.
2 The identification of policies and procedures of an organization with a public interest.
3 The development and execution of a communication programme designed to bring out public acceptance and understanding.
4 This process does not occur all at once. An effective public relations programme continues over months or even years.
5 Public relations involves much more than activities designed to sell a product or service. The PR programme may involve some promotional programme elements but used in a different way.

As we all know that libraries are service institutions and users have always been the focal point of library services. The concept of PR always exist in libraries in one form or other. From five laws of library science enunciated by Dr.S.R. Ranganathan first four laws are directly oriented towards users. The public relations is an important tool for management and is used to make the resources and services exposed to the wider clienteles of an institution and also ensure a fair and free usage of the facilities, services and products of a library.

We have been talking about public/publics and therefore it is necessary to have clearer understanding of its means. Public/publics are those groups of people, internally and externally with whom an organisation communicates. Generally, public relations activities are not directed towards "The general public". They are aimed at carefully selected groups of people who are subdivisions or part of the greater general public. Public relations is more discriminating and that often means that it is less wasteful and more successful for communicating certain kinds of message.

TARGET GROUPS FOR LIBRARY PUBLIC RELATIONS

(i) The community (public);
(ii) Potential users;
(iii) Employees;
(iv) Suppliers of services and materials (information);
(v) Intermediaries/Consultants;
(vi) Distributors;
(vii) Consumers and users;
(viii) Evaluators.

While this is clearly a larger no. of target audiences that one would

aim to reach. The next problem is to decide which target group shall be given priority because it may be physically and financially impossible to entertain them all. The PR programme aim at doing following :-

(1) Public relations is concerned with people's attitudes towards specific issues because these attitudes may affect the organization so they become the starting point in the development of programs designed to maintain favorable positions or change unfavourable ones.

(2) It serves as an early warning system.

(3) It secures support internally.

(4) It increases the effectiveness of the communication. The better it understands a problem, the better the organisation can design communication to deal with it.

(5) PR image should only be a true impression based on experience and knowledge and understanding of the facts. To attempt to falsify an image is an abuse of PR. If PR is credible it must avoid false image making.

ESTABLISHING A PR PLAN

A four-step process is followed for developing a public relation plan:-

(i) Developing and executing the PR programme.

(ii) Determining relevant target audiences.

(iii) Implementation the PR programs.

(iv) Measuring the effectiveness of PR.

(i) Developing and executing the PR programme:-

Because of the broad role that public relations may be asked to play, the PR program may need to extend beyond mere promotion. A broader definition of the target audience, additional communications objectives, and different messages and delivery systems may be employed. The PR plan can be checked by following points:-

(i) Does the plan reflect a through understanding of the organisation (Library)?

(ii) Has the PR programme made good use of research and background sources?

(iii) Does the plan include full analysis of recent coverage and scope?

(iv) Does the PR programme describe several cogent, relevant conclusions from the research?

(v) Does the programme clearly describe what the PR activity

will be and how it will be beneficial?

(vi) Does the programme describe how its results will be measured?

(vii) Do the research, objectives, activities and evaluations tie together?

(viii) Has the PR department communicated with marketing throughout the development of the programme.

(ii) Determining relevant target audiences

The targets of public relations efforts may vary, with different objectives for each. As it is observed that non-users of library feel uncomfortable in library and they don't know anything about library. So people must know about the library and what it can do for them. In libraries generally the information retrieval units/centres do such work and this programme is directed towards both internal and external users.

(iii) Implementing the PR program

Once the research has been conducted and the target audiences identified, the public relations program must be developed and delivered to the receivers or the targetted audiences. A number of PR tools are available for this purpose, including "Press releases, press conferences, exclusives, interviews and community involvement". Other than these tools there are some effective tools in libraries which may act as effective tools for communication information to the target audiences viz.:

- Library Bulletins and Newsletters;
- Tours of library for new users;
- Articles (In case of special libraries articles in house journals, in case of academic libraries in college or university magazines etc);
- Announcement of new material in form of book marks, display etc;
- Library corner or column in newspaper (In case of special library in company newspaper, in case of public library in local newspaper and in case of academic library in university newspaper);
- Pictorial presentation of library (moving picture or posters etc);
- Distribution of Reading list and handbooks;
- Seminar, conference, meeting and lectures;

- Book week or library week;
- Display or exhibition;
- Annual report;
- Through library committee in case of public libraries;
- Discussions and projects assistance;
- Summer Training's, career guidance etc;
- Exchange of material.

Apart from the above mentioned tools there are other mediums also which help in PR programme as "Spoken word" are most effective PR medium. Similarly "Reference service" also seems to be very helpful in maintaining public relation because it provides personal assistance to users so that they may feel well attended in the library. Similarly audio-visual material like Films, Film stripes, tape-slides, overhead transparency are also helpful in communicating information about libraries.

Public relations may also misfire through mismanagement and a lack of coordination with the marketing department. The key to effective public relations is to establish a good program, worthy of public interest, and also manage it properly. To determine if this program is working, the organisation must measure the effectiveness of the PR effort.

(iv) Measurineg the Effectiveness of PR.

As with the other promotional programme elements, it is important to evaluate the effectiveness of the public relations efforts. In addition to determining the contribution of this program elements to attaining communication objectives, the evaluation offer other advantages: -

- It tells management what has been achieved through public relations activities.
- It provides management with a way to measure public relations achievements quantitatively.
- It gives management a way to judge the quality of public relations achievements and activities.

Research in the form of public opinion surveys may be used to gather data to evaluate program goal attainment. As well as both internal and external audits may also be used. Evaluation techniques may differ from year to year and from library to library, but the basic goal of a library survey remains the same; to judge about the working and performance of library. All things related with a library such as input, techniques, manpower and services have to be evaluated in relation with PR programme. Effective public relations helps to develop a positive image for the organisation. If it is found during the evaluation

of PR program that it do not have very positive impression upon the public so it can be changed accordingly. The person or department responsible for public relations must go through the checklist again and again until some effect can be shown. While planning the Pr campaign or programme for handling an issue the PR people must also try and set some standards for effectiveness of the efforts. For instance:

- The programme clearly communicates a unique and credible personal identity for the library.
- The dialogue with the public begins long before the library is under siege.
- The programme is based on a healthy respect for the audience's intelligence.
- The programme interests, involves and persuades the target group (users).

Before a programme is designed and launched it is strongly recommended that a Yardstick study be undertaken to determine the objectives to be achieved, and subsequently the impact and result of the PR programme or campaign should be measured. Such an advocacy PR effort requires a certain level of faith, commitment and courage on the part of management.

SHIFTS IN PR PRACTICES

We have seen a pronounced change in the nature in the way PR is being conducted today. Formally, PR was defensive and timid about the subjects it discussed. More recently the tone of public interest programs has become more aggressive. Further, there has been an extraordinary change in the PR techniques as well. Traditionally, the PR peoples talked to journalists and opinion leaders of all kinds to obtain support and endorsements. Advertising was the last tool they turned to. Now advertising is one of the first tools to be used by many libraries.

The Basic principles of seeking public support

The basic steps to follow to seek the public support in PR are:-

(i) Defining the problem.
(ii) Focussing the programme at the heart of the issue, or problem.
(iii) Planning.
(iv) Finding out where the public stands on the issue (researching).
(v) Keeping your policies simple, clear and honest.

(vi) Organizing your staff into a well-knit team.

(vii) Taking your case to the people concerned (target group).

(viii) Timing your programme appropriately and avoiding wastage.

It is an acknowledged fact that the user knowledge of library services is limited and they are inadequately informed about the various types of library services. Similarly many non-users and potential users have developed reasonably negative attitudes towards libraries and librarians through public relations their attitude and fears will be removed and they will become actual users of the library.

TASK OF PUBLIC RELATION PROGRAMME IN A LIBRARY

(i) Decide the PR budget.

(ii) Gather information about users attitudes.

iii) Make PR programme accordingly.

(iv) Communicate with the media.

(v) Plan Library activities like printed material, tours, display, bulletin and exhibitions.

(vi) Communicate with public through talks, lecturers, discussion, conference and seminars.

(vii) Evaluate the PR programme by users survey.

PR method should be wholly related to the library, its services and media.

CODE OF ETHICS

There is a need to have a code of Ethics, and also a statement of the library's values which they may publish as a part of their PR.

Given here are some pointers on how we can build lasting relationships and network better and a formula for the same:-

(i) Identify your goals.

(ii) Choose the right people/organisation.

(iii) Meeting and greeting people.

(iv) Find a common ground.

(v) Be sincere and show concern.

(vi) Update lists and cards.

(vii) Give and take

(viii) Keeping in touch.

(ix) Keep practising.

CONCLUSION

In recent years building rapport has come to be known as "Networking". Though the basic meaning of the two words is similar, networking means interacting with others to exchange information and developing contracts. It is about the number of people we know who can be of help to us in different circumstances. Therefore in order to be an excellent librarian and a resourceful person in terms of contacts, it is important for a librarian to not only build rapport with people but also practice networking.

Wining support of your target publics is the prime objective of PR. Public relations is the only means available to provide the countervailing force. It is not an attempt to control information. It actually adds to the supply of facts, opinions and interpretations from which the public shapes its own conclusions.

At last it is worth mentioning that staff plays effective role in maintaing public relations so good human relations in staffing help in good public relations also. Because if the staff is satisfied with the working environment they should deal accordingly with the public. So human relations and ultimately public relations are of paramount importance towards building high morale among staff and users and achievement of defined goals of the library.

PUBLIC RELATIONS IN THE CONTEXT OF CHANGING INFORMATION SCENARIO

Shiva Kanaujia

ABSTRACT

Public Relations are the important part of management of profit-making as well as non-profit organizations. Libraries are serving users and in the age of marketing of information products & services, here is a need of thorough study of their working, ways of serving the users and to plan out for future. The paper discusses the concept of Public Relation, its necessity in the current changing information environment. Highlights the need to introduce Public Relation and shows the relation with marketing program going on in libraries. Gives the idea of various techniques and methods of Public Relation in libraries.

PUBLIC RELATIONS AND PUBLIC RELATIONS PROGRAMS IN LIBRARIES

Presently in the age of consumerism, each organization is trying to woo its users, customers and consumers. The non-profit-making organizations are depending upon Public Relations (PR) program to attract the users, for whom they have designed their various kinds of services. Public relations are very important.

Library's effectiveness depends on the image presented to the potential users. Libraries have PR program to show the functions in the interest of its users. These PR programs help users in understanding the policies and library's services. The extent to which a formal PR program is organized and the amount of direct publicity

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undertaken will depend upon the type of library and its size and resources. Most PR activities will be applicable to all types of libraries.

NECESSITY OF PUBLIC RELATIONS PROGRAM IN CHANGING INFORMATION ENVIRONMENT

Since the past, the information environment has witnessed lot of changes in the methods of storing, generating, serving, accessing the information. Where all the information work were done manually, now a days various techniques of information and communication technology are helping the information professionals. The information requirement has seen the fastness in itself so it has become necessary to generate the fast methods to provide information to users. In this context, the changing information environment requires newly developed and faceted PR programs.

To change the stagnant image of the profession, PR programs can be very helpful. With the help of various PR programs, the changed image of profession, going on very programs with in profession can be informed to public in the context of current information environment.

MARKETING AND PUBLIC RELATION PROGRAM: COMPLEMENTARY TO EACH OTHER

Currently marketing is one of the most important parts among various programs to allure the users/customers. Growing interest in applying marketing concepts to library and information products and services is on account of the increasing threat from the emerging information industry comprising profit-based companies that distribute, repackage or improve access to information. The potential of information products and services itself is speedily expanding given the fact that all sections of society are involved in increasingly complex and multidimensional exchanges and require more and more information to fulfill their purposes and objectives in an environment that is being continually reshaped by new forces. Here is a clear need for libraries to woo back their patrons by eschewing their passive ways and adopting a more proactive approach to the provision of services. This is evidence that libraries have not fully exploited the comparative advantages that they possess in relation to private sector information agencies. These and other factors, such as rising cost, declining support and funds to libraries and a crisis of identity have made it necessary for libraries to reconsider their position and to utilize some of the tools that have made it possible for profit organization to operate efficiently, and profitably. One is the tools is PR under marketing. This is explained as following:

Consumer orientation

Emphasis should be on identification of consumer and diagnosis of user's information needs. Needs' can be identified in terms of quantity, time, quality and cost. Identification of information formats is also necessary. Information must be provided in the form, language, coverage and volume, which appeals or suits the user most. The medium of presentation is also very important. For planning and input agencies information may be given in floppies or tables. We should develop and mount new research projects to generate required information. It is needed to answer all the questions, and gauge future needs.

An approach to a PR under marketing planning process is to be identified and the stages in this process are analysis of the environment, information audit, information needs assessment, market opportunity analysis, tactical marketing program, and evaluation. Later on librarians can find out the exercise, simple and inexpensive to implement and therefore a good choice to try out the methodology developed.

Professional Attitude

Hartevelt, J.H.W. Van. (1993) [1] says that the role of information manager will primarily comprise the analysis and determination of information needs, the development of procedures which can structure information channels and ensure quality control, the design of information 'carriers' (input-output concepts, registration forms, tally sheets, etc.) and the development of databases, including access methods.

The librarians do have some concerns on application of PR to library services as they consider library as a service organization and not as a business house. They often believe that marketing is concerned with selling, advertising, industrial products and profit-motivated. Further they do not conduct and user-survey. They believe that "whatever the service we provide is essential and best in interest of users". This indicates the lack of visualization of marketing concepts in its totality. An approach is desirable to give the clear picture of PR approach concerned with marketing.

Graham, M. H. (1985) [2] states that with ongoing changes in the format of the reference materials and handbooks, information professionals cannot be barriers to users directly accessing the information they need. The role of professionals are changing, knowing end-user programming, serving as hot lines to help end-users, keeping abreast of new and updated databases and handling the complex questions and analysis that will continue to be. He says that stature of professionals will increase and their recognition will be greater.

Use of modern technologies

Use of e-mail to reach to public of libraries has been getting a great deal of attention lately. Unfortunately gathering of customer information is not as easy for the majority of Information providers. Information providers must utilize modern methods to develop awareness and analysis of their marketplace. Because of this and other factors, this recent trend of vertical integration is accelerating. To what extent this evolution will carry on is certainly going to occupy much time and thought over the next few years. With the use of modern techniques, PR can be enhanced.

Market research: User research

Market Research along with user research will become more important for creating a new genre of PR. For the librarians, this means lower profits. Users are demanding more satisfaction, tailored services, more access to information, easier-to-use systems, and more relevant information. Here is the need to do user research for making good relations with the general public of libraries.

Users interface, interaction and problems

The relationship between users, librarians and suppliers of information products has been a relatively stable one, with librarians acting as mediators in the delivery of information form suppliers to users. Creating fruitful and sensible PR can strengthen "Golden Triangle". Librarians and information providers can develop some helping programs for users and it will help in promoting PR.
For example, developing front-end packages is suitable to create familiarity with searching for the users of online searching. These packages will ultimately be found wanting. Packages with the required flexibility are tailored more for the intermediary than for the real end user will not be searching every day.

Evaluation of Marketplace

Librarian should carefully evaluate the requirements of his marketplace in regard to producing information products, which will eventually let the users understand that the relations with library are according to their information requirement and library is able to serve them.

Training for users

The training for users includes instructions regarding the overall operation of the new system, detailed delineation of how particular

subsystems operate, guidance on the operation of computer hardware, and hands on practice in the actual operation of the system. Developing easy-to-understand user manuals that provide information relative to various other matters i.e. operation of terminals and printers, functioning of and entering information into screen displays, retrieving information from databases, formats of reports provided by the new system etc can be of great help towards PR.

Understanding User Behavior and their Languages

It is necessary to understand the user behavior and their mode of asking for information. As information requirements are becoming complex due to emerging new disciplines and complex subject concepts, it is very important to be aware their real subject requirement. It will give the impact of good PR on users and in fact it is the basic idea of PR.

TECHNIQUES OF PUBLIC RELATIONS

Public relations program requires various small steps and programs. They can differ from one to another library. These programs are as following:

Rapport

The librarian should maintain a pleasant expression, speak clearly in a voice that can be readily heard but is not loud. Good rapport is not established when the librarian is abrupt or acts as if the user's question is an interruption.

To have a good rapport between the user community it is very much essential to understand/know

a. User need
b. User attitude/behaviour
c. User reaction to information services and information products

Tools to promote relationship

Here are three tools to promote the PR:

a. Behavior studies, to find out the patterns of interaction of the user community with the system without reference to any specific information-receiving event.
b. Use studies, to find out the use of communication medium such as periodicals, books.
c. Information flow studies, to find out the pattern of flow of information.

Satisfying Users

Professionals with good caliber should maintain the reference counters to deal with complex subject queries. Even when the answers/information could not be provided to the user, he should leave the library with a feeling that a thorough search was conduced for his query be a competent staff.

Maintaining Awareness of User Group Interests

An effective PR policy and much of the general publicity for the library can well be carried on through organizations, which in turn reach other people and represent a variety of interests.

Scanning Local Publications:

Regular scanning of local newspapers and magazines can provide much information required giving a topical service to individual and groups. Group interest, names of new officials, community events or problems with which books may be related and other similar useful information will be obtained in this way.

Writing for and Editing News-sheets and similar Library Bulletins

It focuses upon publicizing the services and promotional understanding of its objectives.

Interviewing

Interviews include answering questions, and presenting facts and figures to influential persons, and representatives of press, radio and television.

Steady Flow of News-stories

Publicity may be obtained by ensuring a steady flow of news stories and occasional feature articles in local newspapers, in-house journals, staff magazines, students' magazines, etc.

Printing Publicity

Printed publicity includes placards, posters, handbills, information folders, annual reports and similar material.

Distributions of Publicity Materials

It can involve displaying posters, distributing booklets, folders of handbills etc.

Giving Talks

Professional members of staff can perform this function. Talks can be classified, as PR will be on subjects such as special services, resources in special fields, literary subjects, library functions, library development, and careers in librarianship.

Organizing Lectures, Film shows, Recitals, Competitions, Extra-mural plays and Exhibitions

All these activities can be of great help for the PR program of any library.

Programs on Radio and Television

Various talks, scripts etc. can be broadcasted on Radio and Television in order to enhance PR.

Informing with in Premises

Placing proper signboards on the main street itself, which leads to the library with a proper label on the building indicating its name. This is important for the newcomers to locate the library. Displaying the timing of the library outside the library prominently so that user who visits the library when it closed should know when to come back again.

Communication

Libraries should communicate with the users on a number of occasions like, reservations, renewal of library tickets, etc. A warm and friendly personal letter for less frequent kind of communications would bear lasting impact on the users.

CONCLUSION

It is needless to emphasize the importance of the right attitude towards PR on the part of the library and information professionals in not only achieving a greater recognition of the profession but also promoting effective library use. In the age of marketing of information products and services, the impressions of PR program can be seen easily if applied effectively. Sooner or later the PR should become an essential duty of every library. Public relations in any library basically aim at bringing the library closer and nearer to the people of the society, no matter they user of library in current of potential users. PR is a strengthening force for making a library for the public. This is now high time where new information technology rapidly taking place, to make serious research on the PR. Professional Associations can provide help regarding PR programs in libraries. But it should not be random,

it should have definite goals and be justified through an analysis of needs.

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QUALITY MARKETING OF INFORMATION PRODUCTS AND SERVICES: A LOOK AT THE SYSTEMATIC PRESENTATION, STRATEGIC PLAN AND MARKET SECRETS.

Ranjana Srivastava

ABSTRACT

The libraries are traditionally a non-profit, .service organization with the concept of free service. Only recently they have become aware of the need to market their products ancl services. Along with the other reasons, responsible for this change, the most important one is the growing importance of information and transformation of societies from industrial to information societies. Information is now regarded as commodity and is subjected to marketing. The only need is to realize this fact by the librarians and information professionals and to adopt the marketing strategies from business sector. This paper discusses the reasons responsible for the need of marketing information services a products, core elements of marketing including marketing mix, marketing strategies for present and future needs. This paper also points out some common mistackes that take place in marketing and some tips for marketing. Marketing of information poses numerous challenges for library and information service professionals and marketing realities of non profit organizations are different from profit based organizations. These points are also discussed in this paper.

Information has been playing an important role in society since ages. No society has lived without information. But never before information has played such a crucial role in the transformation and

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development of a society as it is doing nowadays. Today information is power. It has the power of existence, development, division of the society (such as developed, underdeveloped, rich and poor). These divisions are due to the manifestation of unequal distribution of information. The information rich are materially rich, the information poor are materially poor. It is the information resources that endow any country with power, along with other resources. Hence the goal before any society is to become information rich. A society that consumes and generates the most knowledge and information is the stro11gest society. By and large the nations are moving from an 'industrial society' to an 'information society'. One of the characteristics of information society is that it has a communication network that freely circulates information about its basic societal invariants so that tl1is information is consistently, effectively and efficiently acted upon in the making of choices. Information is now treated as a commodity, to be bought and sold, with a price tag and is subjected to the rules of the market. This has given the librarians an oppolwnity to help and develop a systematic plan for handling information. The emergence of new technologies such as: dramatic increase of digital storage media; convergence of telecommunication and broadcasting; the availability of wealth of information resources accessible through the Internet and also increasing reduction of cost of computers in the marketplace, make it possible for librarians to introduce IT products and services to fulfill information needs of their customers. Libraries should promote the use of IT as an integral part of library services in meeting the changing inforn1ation needs of the community.

Marketing is a word used by many, but understood relatively by few. It is often used interchangeably with the terms 'promotion' or 'selling'. There is no single definition for marketing. The modern definitions of marketing are much broader. It covers organizations, people, places and ideas and show the wide ranging dimensions of marketing and can involve the activities of a non profit organization. Kotler and Blooms(l) define marketing as follows:

" Marketing is the analysis, planning, implementation and control of carefully formulated programs designed to bring out voluntary exchanges of values with target markets for the purpose of achieving organizational objectives. It relies heavily on designing the organization's offering in terms of the target market's needs and desire, and on using effective pricing, communication and distribution to inform, motivate and service the markets". Analysis of this definition reveal that marketing is a managerial process with carefully formulated programs. Effective marketing is customer oriented not seller oriented. The main components to understand the customer requirements are

need, want, demand, customer val ue, cost and satisfaction. Among these, creating and sustaining the demand for your product is the core, therefore, to keep a vigilant eye on the future needs of the customers is a must. In the ever changing market scenario it is a ground reality that the only constant is 'change', Markets are dynamic and virtually all products have a limited lite, which expires, when a new better product can be found. Marketing is an attitude and orientation towards your customers that puts the customer first. The concept of marketing is a philosophy of doing business where the needs and wants of the consumer are identified; and items are delivered to meet those needs. Consumers purchase products and services to meet their needs and wants, and help solve problems. By ensuring you aloe doing what the customer wants, needs, and expects; you will have repeat business.

Libraries and information centers have begun to realize that marketing of information products and services is an integral part of administration and management, especially as a means for improving user satisfaction and promoting the use of services by existing and potential users. The main factors, namely the information explosion, the technology revolution, escalating library costs, shrinking library budget and the need to be self suf'ficient financially are responsible for encouraging the library profession to develop a marketing approach in its operations and services. Some information service managers feel that marketing is inimical to the nature of their activities. But with increased competition in the world of information, marketing is a factor for survival. There are few facts which make marketing of non-profit organizations different from that of profit making organizations for eg., non profit organizations have variety of clients to satisfy, have to deal simultaneously with several objectives, mostly distribute services rather than physical goods and are subjected to close public scrutiny. Also the subjective concept of information make marketing difficult but not impossible. Certain facts that are true for any marketing also hold true for marketing of information products afid services. In order to market any product or item, certain basic concepts must be adhered to. To be successful, you must have a product desired by the public; you must develop an effective marketing plan; and you must make good use of promotion. Do not grow or produce even one item until you know who your customers will be; and always remember that most of your business comes from comparatively smaller section of customers so dissatisfaction among existing users due to diversion of efforts and attention to the newer segments at the cost of existing user satisfaction will adversely affect. In order to market any product or item, certain basic concepts must be adhered to. An understanding

of why customers buy as they do is important in the establishment of a marketing plan. The reasons people shop at a particular store are: (1) convenience, (2) variety of selection, (3) quality of goods, (4) courtesy of sales people, (5) integrity and reputation for fairness in dealings, (6) services offered such as credit or return of goods, and (7) prices. Keeping in mind the above reasons, five quality service attributes of IT products and services given by Shahar Hanum Jaafar(2), should be considered by librarians in providing quality services. They may be mentioned as under:

(a) *Responsiveness,* i.e. willingness to help library users with prompt services according to the specific time needed by the library user. Timeliness is crucial for quality information service, as information has value to its intended user only when it is delivered at the time when information is needed for decision making.

(b) *Reliability,* i.e. that library users have confidence and trust that information delivered to them are accurate and current for them to make quality decision making.

(c) *Availability,* i.e. that IT products and services are always available when users want to use them. IT products must be arranged systematically so that it is easy to locate. Library users should be able to reach library services from any locations at any time through integrated online library systems.

(d) *Caring,* i.e. that the library staff is able to provide friendly and personalized attention to each and every library user. For specialized and personalized information services, the library staff should be able to search, retrieve and consolidate information, not available in library collection, from other libraries or from the WWW, and repackage the information according to the specific users.

(e) *Environmental friendly,* that the library provides conducive learning environment for its users as well as its staff. The use of IT products and services must be made easy and user friendly so that it will not deter users from making full use of its services. Continuous maintenance of computer systems should be given priority so that the users do not encounter frequent computer failure. User education programs should be systematically planned to guide users to the wealth of resources in their subject area of their interest. Introducing IT products and services will change the image and reputation of the library from merely meant for to preparing for examinations. Changing the public perceptions of a library as

a print-based learning center to IT- based resource center is important. Innovative and creative IT products and services will attract potential users and retain the existing users.

MARKETING MIX

The core elements of marketing are :

1. market research or market analysis
2. market segmentation
3. product design
4. pricing
5. distribution
6. product promotion
7. marketing audit

The development of an effective marketing strategy requires the specification of the marketing mix. The marketing mix incorporates 4 key components, namely, Product, Price, Place, Promotion.

I.T. Products and services

IT products refer to sources of information and knowledge contents that are available in electronic forms such as CD-ROMs, interactive video, films, audio digital products, online publishing, public domain and commercial online databases available through Internet and other propriety databases available through various private network providers. In addition, there are cable and satellite TV programs with varieties of channels that provide information to masses. This fast development of Information Technologies has provided new possibilities for libraries to introduce IT products and services to its customers. Libraries should market its IT products and services so that the investment made by the government or their parent organizations will benefit the society at large, and that IT resources are fully utilized by library users. A marketing programs for IT products and services must be introduced. Marketing IT products and services will enhance the library image as a knowledge resource center. Libraries should adopt marketing approach in the provision of library services bearing in mind that the purpose of business is to create and keep its customers. The focus of the marketing programs must ensure that library users (customers) are satisfied with IT products and services being offered. Customer satisfaction is important for libraries as it provide the following advantages. Firstly, libraries will continue to receive financial support from the government and public contributions. Secondly, libraries will be able to continuously add new IT products and services that will entice library users to come. Thirdly, by

introducing IT products and services, it will create new images for libraries as infomedia, infotainment and edutainment centers, hence creating learning environment that are enjoyable and entertaining for library users.

Pricing

It is the marketing activity that determines the price of the product on the basis of costs as well as market factors such as distribution channels, discount structure, competitors prices, ability or willingness of customers to pay, and so on. Product pricing changes with the change in technology. Clague(3) has suggested the following guidelines on charging of information services.

(a) Charge enough
(b) Know what you want to achieve
(c) Keep pricing structure simple and stick to it
(d) Identifying and monitoring expenditure
(e) Setting fees
(f) Maintaining the achievements of income goals

Place

The next component of marketing mix is place or distribution. It is the marketing activity concerned with distributing the product from the manufacturer to the customer, making the product available and easy to buy. Following are the major channels of dissemination as identified by Saracevic and Wood(4):

* Interpersonal delivery
* Group personal delivery
* Strategic placement.
* In-house dissemination
* Local depositories
* Mass media
* Broadcasting
* Mail
* Telephone
* Computer network

Promotion

Nowadays advertisement through different media is the most powerful tool for effective marketing of any product and service

including information products and services. A systematic and organized marketing plan will raise the library image as innovative library rather than as storehouse of printed materials. The library will gain higher status and recognition from stakeholders for funding. Promotion of its IT products and services can be made through the traditional means such as production of brochures and posters, compaign, library tours, library and information month, advertisement in newspapers TV etc., participation in trade and business exhibition etc. or untraditional means such as Internet. Internet and the WWW provide a variety of opportunities to the Information professionals in outreaching to their clientele. We should publicize and market our resources and services in the Net. Knowledge of Web publishing technology, the art of creating and launching Web sites is a prerequisite for it.

ENVIRONMENTAL ANALYSIS

Marketing acts as a driving force in achieving quality IT products and services, and maximizing customers' satisfactions at the lowest delivery cost. A market orientation program that promote the use of IT products and services in libraries need to be instituted in order to create superior values to customer by increasing benefit relative to the cost of IT products and services. This involves undertaking a market opportunity analysis. Market opportunity analysis refers to "a formal methodology that assesses macroenvironmental trends, customers, competitions and distribution channels in order to focus on the needs of a market segment". To create customer satisfactions, it requires libraries to scan market environment that has major impact on the information needs of its present and potential customers.

Strategic marketing requires library to maintain an information system that collect data pertaining to library users for planning future library services throughout the country. Information and data pertaining to changing information needs of library users compiled from regular surveys, trends relating to subject/ topics that are frequently referred to by library user, frequently asked reference inquiries, that reference librarians received, statistic on usage of library resources, profile of library users registered for special services, profile of expert groups who can be tapped for specialized information sources, directory of libraries and the strength of their special collections and services rendered, directory of library IT vendors and IT publishers, and their performance indicators, etc must be maintained. It is essential that libraries constantly scan the external environment in term of ecpnomic, cultural, educational, technological and political developments that will have major impact to library services.

MARKETING STRATEGIES

Marketing techniques are varied and not all enterprises can afford to use all the marketing techniques. Furthermore, different situations require different techniques. The marketing manager must be able to select those techniques that are necessary for a particular product in a particular situation. Therefore, successful marketing includes the art of deciding which techniques to use in different situations. Marketing strategy also means selecting various techniques in proper proportion and balance. Information services that libraries offer must fulfill information needs of their present and future library services. Strategic marketing requires libraries to understand their customers changing information needs in order to provide customer-focused services. Environmental changes that are taking place at national and international levels have and will continue to influence information needs of the society.

Quality marketing requires an integration of marketing strategies, such as: *forward marketing* that focuses on customers, *internal/inward marketing* that focuses on staff development, and *reverse marketing* whereby libraries form strategic alliances/ partnership with IT suppliers. The integration of these three marketing strategies is vital for total quality marketing of IT products and services. Libraries should develop long-term strategies to make their visions to become part of the nation-wide digital libraries a reality.

(a) Forward Marketing

Forward marketing takes into account the information fteeds, both present and future, of their customers. It includes segmentation of users and refers to the process of analyzing a large heterogeneous markets in terms of smaller homogeneous submarkets in response to different product preference. Segmentation can be based on such criteria as professional, education levels, etc. Only a purposive and meaningful segmentation helps one to understand the needs of the market. It also encompasses systematically planned user education programmes to provide inviting, user friendly environment. Forward marketing of services products and services are essential in order to attract more people to use library facilities. Changing the public perceptions of a library as a print-based learning center to IT-based resource center is important. Innovative and creative IT products and services will attract potential users and retain the existing users.

(b) Internal Marketing

To provide quality services and product involvement of trained professional is of utmost importance. They contribute to the fulfillment of library's objectives and to achieve competitive edge. So libraries

and information centers are required to develop their human resources. As an organization, a library exists to deliver value to its customers, and this is best achieved by adapting a long-term perspective to the development of its people for the achievement of quality services. The objectives and future course of action should be communicated to all levels of staff so that they are fully aware of their role in achieving those objectives. With experiences and proper training in IT, staff will become the most knowledgeable asset of the library. Continuous training in IT is essential as IT products have shorter life cycle and new IT products always appear in the marketplace. However rich or well equipped the library is, its success is directly proportional to the competence of the staff. It is the well qualified staff which projects the image of the library amongst its users and society at large.

(c) Reverse Marketing

The quality of IT products and services depends also on the availability of IT products supplied by IT suppliers. To introduce innovative products and services, libraries should be in close contact with IT suppliers, such as publishers of IT products, software houses, computer vendors, database providers, telecommunication service providers. IT suppliers will be able to provide information on the state-of-the-art of IT as well as the latest IT products in the market. This is done through reverse marketing with suppliers. Treating IT suppliers as customers and partners will mutually benefit both libraries and IT suppliers.

MONITORING AND MARKETING AUDIT

The library should institute a monitoring system when new library services are being introduced. Monitoring system is designed to measure the effectiveness of IT resource being used and the reaction of library users as well as to assess the effectiveness of the marketing strategy to promote IT products and services. As IT products have shorter life cycle, librarians need to monitor its use and the extent that the new IT services being introduced sustain the interest of library users. Innovative and creative ways of marketing IT products and services must be considered. It is also essential to monitor changes that continue to take place in the external enVironment and in the IT marketplaces as these changes may lead to changes being taken in the process. Introduction of IT means changing new ways of doing things, and may have profound effect upon the culture and social structures of libraries. The possibilities of library users accessing OP AC from remote places and request for reservation, loans, and even membership registration online can alter the library's boundary with the external environment by changing its relationship with its users,.

book suppliers, and other libraries as well as opening its resources to the global community. All these should be closely monitored to avoid conflict among staff.

The review process involves feedback from staffs involved in providing the services, feedback from the library users as well as library suppliers. Data collected as the result of monitoring and reviewing the IT services is analyzed and conclusion is drawn about the effectiveness of the marketing strategy. It must lead to the strength and weakness deviations from the set targets and the causes thereof. The information is used to shift the strategy toward a more effective direction. Non-productive services and facilities should be phased out and reexamined to determine the reasons for its failure. Efforts and resources should be redirected and focused an area where demand is greater. Complaints and failures should be addressed and problems dealt with. Comparision with other libraries to measure and to compare its service performances with other libraries/information centers is also important.

COMMON MARKETING MISTAKES

Lambing and Kuehl (5), provide six common marketing mistakes that business entrepreneurs often make. The first is the failure to develop" a suitable competitive advantage. The second is to focus on the product or service instead of the benefit of the product. The third mistake is a failure to define the target market. Mistake number four is underestimating the competition. The fifth marketing mistake is having an excessive optimism about the idea, product, or service so that short comings or pitfalls are not. The last mistake is the establishment of prices without knowing the effect on the demand.

Since marketing of library services and product is comparatively a new concept and borrows marketing concept from business sector so to have thriving business the above mentioned mistakes should be avoided.

PROFESSIONAL SKILLS FOR MARKETING

Professional knowledge and skills required by information officers for marketing information and library services are:

- Perception of user's needs knowledge of conducting users surveys etc., ability to obtain feed back from users and the most important quality is capability of taking right decision at right time.
- Technical knowledge, such as ability to use the internet, creating a web page etc.

- Knowledge of various marketing strategies.

DIFFICULTIES IN MARKETING INFORMATION SERVICES:

Four most common difficulties in marketing library services are pointed by Joseph Jestin(6).Theyare:

i) The relatively low level of knowledge and lack of agreement on user requirements, wants, and needs.

ii) The subsidized non-market environment in which most scientific and technical information products and services are used.

iii) The virtual impossibility of estimating the value contributed by information products and services to the efficiency and conduct of research and development and the advancement of scholarly pursuits

iv) The general economic unsophistication of those, mostly schooled in the humanities and the non-market-oriented library school environment, who purchase information products and services.

MARKETING SECRETS

According to Larson(5) the ten most important marketing secrets are:

1. Have a commitment to the marketing program.
2. Think of the marketing program as an investment.
3. Ensure the marketing program is consistent
4. Make sure the prospective customers are confident in you.
5. Be patient in order to make a commitment to sales.
6. nderstand that marketing uses an assortment of weapons.
7. Understand that profits come subsequent to the sale.
8. Make sure your business is convenient for your customers.
9. Evaluate the effectiveness of your marketing program and plan.

These can be successfully applied for marketing information services.

CONCLUSION

Every library whether small or big, is engaged in the marketing process knowingly or unknowingly. Every activity exercised towards the promotion of use of library comes under the concept of marketing. The only need is to accept the term 'Marketing' by the librarians and

adopt the marketing concept and procedures from the business sector. Nowadays the survival of a library greatly depends on its image among its users. This image should be the outcome of the quality and effectiveness of the services. Marketing of products and services is the only method to achieve this objective and this is the demand of time. Frorh the above discussion it may be concluded that marketing is not a one time job but a continuous process and for the fulfillment of the five laws of library science it is a must.

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USER EDUCATION IN ACADEMIC LIBRARIES IN THE CHANGING DIGITAL ENVIRONMENT

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ABSTRACT

User education enhances the optimum use and exploitation of the library collection and services, individually or collectively. Emphasis has been given to study planning, organizing & implementation of user education program in this paper. The probable barriers while undertaking the program are listed and also feasible solutions to overcome them are suggested. It also discusses the feedback and evaluation methods and concludes by emphasizing strongly the need for conducting of user education program regularly in the academic libraries in view of the emerging digital environment.

INTRODUCTION

Developments in computers, microelectronics and communication technologies have radically changed the library and information environment. The computer has pervaded every aspect of our life because of its accuracy, speed, compactness and cost effectiveness. Traditional libraries were dominated by print publication and the access mechanisms were largely manual.

The radical shift from standalone libraries to library and information networks available via the Internet, can provide end users with a seamless connection to Internet based services. The traditional

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approach to information processing and organization are being transformed due to the advent and interaction of rapid advances in the area of computer technologies, electronic resources and telecommunication networks.

The development of new technology makes direct access to information easier for users. Digital library has a range of activities generally focused on providing networked user access to a wide range of information resources. A digital library is an assemblage of digital computing, storage, and retrieval and communication machinery together with software to reproduce and extend the services provided by conventional libraries. Digital libraries are systems providing a community of users with coherent access to a large organized repository of information and knowledge. Digital convergence from print to graphics, to sound to sensory experiences through virtual reality has already moved beyond the printing process. Today knowledge existing in many forms from text, graphics, sound, algorithms and virtual reality simultaneously is distributed in digital representation over worldwide network and is accessible by anyone.

INFORMATION TECHNOLOGY AND USER EDUCATION

There is no doubt that the information environment in libraries is changing. Libraries are either automated or in the process of being automated. IT in the context of libraries poses a considerable challenge for librarians. Librarians have to educate the users with little or no knowledge of computers how to search the electronic information.

Instruction on the use of CD-ROMs, DVDs, OPAC, forms a basic step to searching computerized database, which might lead to more sophisticated searches like searching other databases through Internet thus being exposed to more information. The knowledge of how to navigate the Internet is now becoming a basic requirement for information professionals. This would enable librarians to carry out instruction on the use of Internet. Users need to be introduced to different on-line catalogues and their search procedures.

PREREQUISITES

The programmes of user education in academic libraries are generally based on certain prerequisites;

- Students need information in order to successfully complete their education
- The library be able to satisfy students' information needs
- Information is so packed and stored that users can find the information they need with some set of instructions

- When user learns how to locate information, they will be able to apply the same or similar strategy to find other information when need arises
- It's a basic learning for life long learning

PLANNING, ORGANISATION & IMPLEMENTATION OF USER EDUCATION (UE) PROGRAMMES

User education programmes should aim to make all users aware of the information resources available, both directly in the library and from external sources and enable users to enjoy the search for information. Thorough planning is needed to ensure that all activities carried out are towards meeting the institutional goals. While planning for user education programme, specifically for the maximum and optimum utilization of information, one must consider the following activities;

- Understand the goals of the institute served and the role of library in fulfilling those goals by serving the user community
- There should be proper written guidelines for user education
- These written guidelines and objectives of user education should be implemented effectively by using appropriate methods. Implementation of UE includes; (a) the course materials, like, lecture notes, handouts, guides & practical questions (b) guide to literature & instruction tools like, AV aides & films, transparencies, photographic slides, work book etc
- Organising the library UE programme can be divided into three parts (1) Orientation: Introducing the new user to the layout & structure of library building and location of various resources & services of library (2) Subject oriented instruction: Guides to use of particular subjects like location of text books, periodicals, use of dictionary & encyclopedias, preparing bibliography on given topic (3) Literature search training is more useful for researchers point of view & treated as education for life to search information. Basically it includes, use & preparation of indexing & abstracting journals, sorting of information, preparation of dissertations & theses, documenting & evaluation of materials collected
- Lastly Evaluating the impact of UE on users

BARRIERS

Implementation of the user education plans can be effective only if the existing or possible barriers are taken into consideration. They may be:

In a digital scenario

- Need for teachers & students to be computer literate & experts in new technologies
- Technical problems with computers such as crashing & slow online connections
- No agreement on standard for describing all objects. This hinders providing of seamless access making cross searches difficult
- High user expectations from the internet with the feeling that much data is free & available in the library
- Users of the opinion that they do not need any assistance to surf the net
- Items on the OPAC not found on the shelves
- Not enough computers available
- No access to the university network at study centers or in work placement locations
- Requirement for multiple passwords
- Copyright problems
- Hyperlinks not working, slowness of the www, difficulty & cost of printing retrieved documents
- The need to redevelop websites to include all resources
- Adding of electronic resources to the OPAC so that the users see the print & electronic materials listed together

Besides these we find the following barriers in conventional scenario - insufficient resources, exam oriented teaching learning process, not fully skilled library staff, very less chances of inculcating the library use habit & above all lack of a national information policy are also considered as major hindrances.

These are some barriers to user education. But every problem also has its solutions. So also these constraints can be overcome

OVERCOMING THE BARRIERS

Prominent Management Gurus state to treat problems as challenges & convert the calamities into opportunities. Though there are many problems in conducting user education programs, one can always find the solutions and it is known that even with the advances in technology, the librarians' posts are not going to be obsolete as no machine can provide the personal services provided by the librarian.

The first step towards overcoming the barriers to user education programs would be involving more staff. The user education program

could be organized effectively by;

- Thinking about a team approach, involving more staff in some way
- Getting practical suggestions from all sources
- Thinking about the right environment to be created for the teaching experience
- Providing professional development programs for the staff

This can be achieved by following the steps given below;

- Start small
- Have a focus
- Work with supporters and interested staff first
- Tackle essential problems
- Be flexible
- Know the resources in the area for which you are planning
- Integrate into existing programs
- Develop your expertise
- Advertise your successes

The other major barrier can be the technology itself. With the ever-changing technology the systems may become incompatible very quickly. One should always leave some scope for up gradation. Accordingly provision should be made in the budget. Attempts should be made to have the latest technology in the library.

While conducting the program attempts should be made to inculcate the positive attitude in the users' minds. Instead of just providing library orientation, more practical sessions should be conducted. The venue of program should be a combination of library and classroom. The aim of user education program should be to make the user more confident while accessing the library materials and make them self-sufficient. The user education program should prepare the user to face any challenges posed by technological complexity. The emphasis should be on self-instructional material, learning package and computer-assisted instruction.

A greater investment in user education program will be needed to ensure efficient use of library resources.

FEEDBACK AND EVALUATION

Evaluation generally attempts to measure the realization of pre-specific goals and objectives & it can be directed towards the use of teaching aids and instructional methods. Any evaluation is carried out

to find out the effectiveness or overall performance of the program.

This evaluation can be done keeping in view the four major perspectives.

1. User perspective
2. Staff perspective
3. Collect statistics
4. Make administrators aware of what you are doing & why?

A system of evaluation based on the feedback must be developed to rectify the faults from time to time. The feedback can be obtained by using different methods like questionnaires, interviews, suggestion boxes, etc. It should be a continuous process. It should be a base for improving any program as well as to decide whether a particular program should be continued or modified.

CONCLUSION

The user education day by day is becoming an important aspect of information work on the use of information, which itself is becoming more & more complex. With the availability of sophisticated tools like mini computers & microprocessors time lag between information generation & access is reduced. Educating the user effectively & efficiently can help the process to further reduce the gap. Thus, the underutilized system could be fully exploited.

In a country like India an organized and planned user education program needs to be developed which is strong both on techniques & methodology.

A mere transformation of library & information centers from conventional to technological environment will not suffice unless users are instructed, trained & oriented to survive in the same environment. As users find themselves puzzled & confused in the fantasy of the technological world, the need for instructing & guiding the user becomes imperative. For this purpose emphasis should be laid on self-instructional material, learning packages & computer assisted instruction. Commercially available education kits & education through demonstrations should also be promoted. Needless to add, a computer literacy program will form the backbone of such an instruction programs.

However, without provision of liberal budgetary support; active interest and participation of the canserned managements in providing state of the art infrastructure, it would be unreasonable & unrealistic to expect the librarian to be in a position to provide any worth while assistance to give the necessary fillip to any sort of user education in the context of fast emerging digital environment.

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USER EDUCATION IN NETWORKED ENVIRONMENT WITH SPECIAL REFERENCE TO NATIONAL INSTITUTE OF TECHNOLOGY LIBRARIES IN INDIA: ISSUES AND CHALLENGES.

Jitendra Shrivastava

ABSTRACT

(This article defines User Education, describes need of User Education Programms, objectives of User Education Programme, the networked environment and NIT. Libraries, traces origin, history and development of REC's in India (now named as NIT's). Describes status of User Education Programms in NIT's of India and points out issues and challenges of User Education Programme, lastly recommends that the user education programme should be run on regular basis and it must be included in all the courses of studies in all the NIT's of India).

INTRODUCTION

The user is an important component of any information system or library. The library works as an effective and comprehensive communication centre as well as resource centre also. Due to new emerging IT & communication technologies there are number of web based and online resources are publishing. User in not very much familiar with these new emerging resources such as online and web based resources. Internet resources. OPAC, etc., an important, factor

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in ensuring optimum use of information and web based resources is therefore the user education and training of users, their working, reading habits and work environment etc.

The optimum use of library resources entirely depends upon its educated user. In a networked environment it becomes necessary to educate the user to use a computer system.

USER EDUCATION

The terms user education, user instruction, user orientation and user assistance are synonymous and have been often used interchangable. The aim of 'Orientation' Programmes is to familiarizes the users with finding information with in a particular library and to help them through their course. This is a short-term objective. The user education is a broader term and consists Orientation and Bibliographic Instruction.[15]

ALA Glossary of Library and Information Science defines user education as "The term which encompasses all type of activities designed to teach users about library services, facilities and organisation, library resources and search strategy. It includes instruction in the use of one or more reference sources as a part of reference transations, library use presentation and bibliographic insturction".[1]

NEED OF USER EDUCATION PRO2RAMME

1 Changed methodologies of teaching and learning in higher education in recent years have necessiated the use of literature by students for the completion of their project assignments, dissertations, term papers and reports.

2 Dué to information explosion, user and researchers are unable to themselves abreast of the current information.

3 Due to increase in electronic publishing specially in the field of science and technology.

4 Due to increasing use of Internet based resources, on line resources and OP AC (On Line Public Access Catalogue).

5 To make use library resources independently.

6 To introduce user with the library and library resources.

7 To increase academic level of students.

8 Due to many users are reluctant to approach staff members with their problems.

9 To increase the use of library resources.

10 To develop awareness among users for the use oflibrary,[12]

OBJECTIVES OF USER EDUCATION PRO2RAMME

Objectives of User Education Programme are as follows :-

1 a general orientation to available facilities and resources.

2 the teaching of the organisation of literature in various disciplines as well as basic reference tools in each discipline;[2]

3 to create an awareness and understanding of the basic relevant library and information sources and services;

4 to bridge the gap between the potential user and the collections;

5 to enhance user's abilities to select appropriate information sources and systems for a given information need;

6 to offer instruction in the effective and efficient use of the available library facilities and resources;

7 to develop user's knowledge and skills to access or retrieve the information required and if necessary in restricting and repackaging the information so retrieved for assimilation and effective use; and

8 to help in the assessment of existing library and information resources and services based on the use made of them.[3]

METHODS OF USER EDUCATION PROGRAMME

Following are the methods of User Education Programme :-

1. Lecture.
2. Seminars / Workshops.
3. Tutorial/Demonstration.
4. Library Tour.
5. Practical Exercise.
6. Individual Help.
7. Audio / Visual Instruction.
8. Printed Media.
9. Programmed Instruction.[13]

Each method has own advantages & disadvantages.

THE NETWORKED ENVIRONMENT AND NIT LIBRARIES

The role of libraries and information centre are also changing and challenging with the advent of fast growing Information Technology, since last decade specially with the emergence of computer application, tele-communication networks, fax, CD-Rom, E-mail, optical scanning, hypertext and hypermedia, videotext, multimedia

technology, on line database, electronic publishing, voice mail services, tele-conferencing, radio paging and mobile phone system etc.[4]

Computer networks are growing rapidly around the world. The amount of information available on these networks is also spreading very fast. Computer and communication technologies are providing the library and information professional with a challange as well as a chance. The challenge is that if the LIS professional do not respond to the environmental changes, they would out of mainstream of the information profession and other will take away the role out of them. The chance is that with the help of the enabling technologies, they can make their services more effective and valuable for their customers.[5]

With the tremendous development in ,computer networking and communication technologies, efforts of networking in various countries got a boost in implementing successful operations of national and international computer networks in the past, networks were mainly used for business and commercial application, but in recent years the libraries and information centers started the use of networks for resources sharing.

The use of electronic information resources is increasing today instead of using printed resources. "Internet based resources are increasingly use for scholarly purposes. However the details regarding scholar's use of the resources are still unclear as are the problems and concern scholars have when they use e-sources for research".[6]

Some important electronic resources are as given below :-

1. Electronic Journals
2. Bulletin Board for Libraries, UK
3. Directory of scholarly electronic conferences.
4. Directory of electronic journals and newsletters.
5. On line catalogue.
6. OPAC / Online Public Access Catalogue) on Internet.
7. On line databases. 8. Electronic Books.[7]

HISTORY AND DEVELOPMENT OF REGIONAL ENGINEERING COLLEGES IN INDIA

During the Third Five Years Plan, Government of India approved a scheme to established seven Regional Engineering College, each with an annual intake capacity of 250 students. These were conceiv,ed as large sized ones by the standards than prevailing in the country and they were to function on an all India basis. These colleges were to be evenly distributed among the four regions of the country: Eastern,

Western, Northern and Southern. Later more such college was established at different places. The REC'S were started to meet the needs for technical persons in different areas of engineering each of these college is affiliated to a state university geographically nearest to the college campus. Admission to these institutions is not limited to the students of the state or the region in which the college is located.

These new regional college are centrally sponsored institutions and represents a joint and cooperative enterprise of the central Government and the state Government concerned. Initially REC's were established in the following states :-

Madras	-	Tiruchirapalli
Rajasthan	-	Jaipur
Punjab	-	Kurukshetra
Orissa	-	Rourkela
Assam	-	Silchar
Kerla	-	Kozhikodo
Gujrat	-	Surat

The Kozhikodo and Surat College have already been sanctioned and started functioning in the current year i.e. 1962. The Regional Engineering Colleges are intended to serve the country as a whole for the training of technical personnel for various projects in the Fourth 'and subsequent plans. Each college will offers degree courses in the basic branches of engineering viz, Civil, Mechanical and Electrical Engineering, Courses in other fields as for instance Chemical Engineering, Metallurgy, Mining etc. may also be offered depending on the advice given by the All India Council for Technical Education in due course.

Each college will conduct five year integrated course in engineering with an annual admission capacity of 250 students.8

THE ORIGIN OF REC'S

The establishment of Regional Engineering Colleges (RECs) was a logical outcome of the industrial and economic policies of the Government of India during the 1950s. The implementation of various development projects during the First Five Year Plan revealed the urgent need for assessing the availability of technical manpower in the context of planning for the future. This important task was entrusted to the planning commission which, in turn, appointed the Engineering Personnel Committee (EPC) for the assessment of demand and supply position in respect of technical manpower.

Based on the information from various departments of their

manpower requirements during the second five year plan, the EPC recommended that in order to "meet the shortages, capacity in existing established institutions should be expanded fully". The EPC was, moreover, of the opinion that, in addition to the existing technical institutions, new colleges would have to be opened to supply the ne,cessary technical manpower.

The recommendations of the EPC were accepted by the Planning Commission, which sought the views of the All India Council for Technical Education (AICTE) about establishing new engineering colleges. The AICTE, in turn, appointed the Ghosh Chandrakant Committee to examine the proposal of establishing new technical institutions in detail. This committee, recommended establishment of 8 new engineering colleges, each with an annual intake capacity of 250 students. The recommendation was accepted, by the Government of India, which approved the establishment of 8 centrally, sponsored Regional Engineering College under the programme of "Further Expansion of Technical Education in the Second Five Year Plan".

ESTABLISHMENT OF RECS

Under the scheme of "Establishment of Regional Engineering College" (RECs), the institutions to be established were conceived as large size ones by the standards then prevailing in the country, and they were to function on an all India basis.

During the first phase, the Ministry of Human Resources Development (known then as the Ministry of Education), Government of India, approved the establishment of eight RECs. These colleges were to be evenly distributed among the four regions of the country, viz, Eastern, Western, Northern and Southern, to set right the regional imbalance in the demand and supply for technical personnel. In establishing the 8 RECs in the first phase, the following considerations were given priority.

1. The new engineering colleges should be spread more evently to ensure progressively equal opportunities for technical training allover the country.
2. Large-sized college would be more efficient than the equivalent small colleges; and
3. The proposed colleges would have to meet the additional manpower requirements of the country as a whole and, therefore, would have to function on an all-India basis.

The location of some of the RECs was determined by the considerations like proximity to the already existing facilities. For example, the AICTE had decided in 1958 that two of the eight new

engineering college should be established in each of the steel producing centres, viz., Durgapur and Tatanagar. The special facilities that would be available for technical education and training in these industrial localities could be utilised to the best in this way.

Ever since the Government of India decided to locate the first public sector steel plant at Rourkela, a town in the very heart of the most important mineral belt in India, the Government of Orissa was pressing for the establishment of a higher institute of technology at Rourkela. It was strongly felt that the facilities that would be available in the most modern steel plant, along with the local ancillary industries, would provide the necessary industrial activity to foster excellence in technical education. Hence the Government of India, on the recommendation of the AICTE, approved the establishment of the ninth REC at Rourkela in the second phase. It was also decided, moreover, that since 9 of the then 15 Indian States would have facilities for quality technical education, it would be desirable for the remaining 7 states too to have such facilities. Thus, in order to provide every State of the country with a Regional Engineering College, the Government of India approved the establishment of 7 more RECs during the second phase. Subsequently, when the State of Punjab was split into three States (Punjab, Haryana and Himachal Pradesh), two more REC's were established at Hamirpur (Himachal Pradesh) and Jalandhar (Punjab), respectively, thus bringing the total number of RECs in the country to 17. The details of the location of these 17 RECs and the year of their establishment are shown in Table-I given below :-

TABLE -1

S.No.	State	Location	Yr. of Establishment
1.	AndhraPradesh	Warangal	1959
2.	Karanataka	Surathkal	1960
3.	Maharashtra	Nagpur	1960
4.	Madhya Pradesh	Bhopal	1960
5.	West Bengal	Durgapur	1960
6.	Bihar	Jamshedpur	1960
7.	Jammu.& Kashmir	Srinagar	1960
8.	Uttar Pradesh	Allahabad	1961
9.	Gujarat	Surat	1961
10.	Kerala	Calicut	1961
11.	Orissa	Rourkela	1961
12.	Rajasthan	Jaipur	1963

13.	Haryana	Kurukshetra	1963
14.	Tamil Nadu	Tiruchirapalli	1964
15.	Assam	Silchar	1977
16.	Himachal Pradesh	Hamirpur	1985
17.	Punjab	Jalandhar	1989

STATUS OF USER EDUCATION IN NIT LIBRARIES

The method of user Education to use computer system in NIT Libraries is as shown in Table 2. From this table it is obvious that four NIT's are using lecture method they are:

i) VNIT, Nagpur
ii) SVNIT, Surat
iii) MNIT, Jaipur
iv) NIT Kurukshetra

VNIT is using Seminar / workshops method.

Two NIT's are using Tutorial/Demonstration method they are :-

i) SVNIT, Surat
ii) NIT, Silchar

Four NIT's are using Library Tour method they are :-

i) MANIT, Bhopal.
ii) VNIT, N agpur
iii) NIT, Kurukshetra
iv) NIT, Silchar

Two NIT Libraries are using Practical Exercise Method they are:-

i) VNIT, Nagpur
ii) MNIT, Jaipur

Seven NITs Libraries are using Individual Help they are :-

i) MANIT, Bhopal
ii) MNNIT, Allahabad
iii) SVNIT, Surat
iv) NIT, Rourkela
v) MNIT, Jaipur
vi) NIT Kurukshetra
vii) NIT, Silchar.

Three NIT Libraries are using Audio Visual Instructions they are:

ii) MANIT, Bhopal

Table-2 Status of User Education to use computer system & methods of User Education

S. No.	Name of NIT	User to use a Computer	EducationMethods of Users Education to use Computer System								
			Lecture	Seminars/ Workshop	Tutorial Demonstration	Library Tour	Practical Exercise	Individual Help	Audio/Visual Instruction	Printed Media	Programmed Instruction
1*	NIT Warangle	Na	-	-	-	-	-	-			
2	MANIT, Bhopal	Yes	-	-	-	✓	-	✓	✓		
3*	NIT Durgapur	Na	-	-	-	-	-	-			
4	NIT Jamshedpur	Yes	-	-	-	-	-	-	✓		
5	VNIT Nagpur	Yes	✓	✓	-	✓	✓	-	✓	✓	
6*	NIT Sri Nagar	NA	-	-	-	-	-	-			
7*	NIT Surathkal	NA	-	-	-	-	-	-			
8	MNNIT Allahbad	Yes	-	-	-	-	-	✓			
9*	NIT, Calicut	NA	-	-	-	-	-	-			
10	SVNIT, Surat	Yes	✓	-	✓	-	-	✓	-	-	
11	NIT, Rourkela	Yes	-	-	-	-	-	✓			
12	MNIT, Jaipur	Yes	✓	-	-	-	✓	✓			
13	NIT Kurukshetra	No	✓	-	-	✓	-	✓			

14*	NIT, Trichi	Na	-	-	-	-	-	-			
15	NIT, Silchar	Yes	-	-	✓	✓	-	✓		✓	
16	NIT, Hamirpur	No	-	-	-	-	-	-			
17	NIT, Jallandhar	No	-	-	-	-	-	-			

iii) NIT, J amshedpur

iv) VNIT, Nagpur

Two NIT Libraries are using printed media, they are :-

i) VNIT, Nagpur

ii) NIT, Silchar

Surprisingly, two NIT Libraries NIT Hamirpur and NIT Library Jalandhar are not running any User Education Programme.

From the above analysis we can draw a conclusion that mostly NIT Libraries are using individual help method to use a computer system for its user, this method is not effective. It has been observea that initially Audio Visual Instruction method is best for library orientation / introduction to educate users. NIT libraries can prepare their video film highlighting various sections, services and collections of the library and display before users on regular basis.

ISSUES & CHALLENGES OF USER EDUCATION

To organize user's education and training programme, is not an easy task. It is a complex problem because user's habits, motivation and facilities offered differ within an organization and from one organization to another. Their areas of specialization, nature of information need, change in curriculum and their age groups also vary. Moreover a small number of users do more reading, while a large majority of users is not actively engaged in the pursuit of information search, collection and use. Even the research scholars who are making serious attempts in the matter of reading and gathering information cannot claim to be in touch with all the latest developments in their fields.[10]

Following are the some issues and challenges, which may be possible reasons for the negligence of user education in libraries :-

i) lack of library oriented lectures by teachers;

ii) limited library resources;

iii) lack of trained staff;

iv) lack of readers awareness towards library ;

v) lack of teaching ability among librarians;

vi) absence of organisational policy towards Library User Education Programme; and

vii) No time schedule for user Education Programme.

RECOMMENDATIONS & SUGGESTIONS

User Education in NIT Libraries is neglected aspect. User is an

important component for the library. User's are not aware with the emerging new IT and Communication Technologies. Merely individual help to user is not adequate for using a computer system, as NIT Libraries are suffering from library staff as well as trained personnels. The optimum use of library depends upon its educated user. Following are the some recommendations and suggestions, which may be useful for User Education Programme :-

i) Library orientation / Introduction must be included in 1st semester of all the courses of study.

ii) Bibliographic Instruction should include in 2nd semester onwards.

iii) The Indian National Scientific Documentation Centre (INSDOC), New Delhi, has acquired some commercially available kits such as. How to use "Science Citation Index", etc. some of the kits are being developed through INSDOC's own efforts, keeping in view the local needs.

iv) Some of the Indian Institutes of Technology (IIT) Libraries give some kind of orientation courses or education to their users. One of the best programmes is run by IIT Madras. I I Every Thursday at 3.30 pm, an audiovisual programme is arranged by the library which introduces the users to the library, its information services and some information tools such as Physics Abstracts, Chemical Abstracts, Engineering Index etc. NIT Library should also arrange this kind of audiovisual programme for its users.

v) User Education programme should be run on regular basis

vi) User Education programme must be included in daily class timetable.

vii) An interactive library software should be development for user education and it should be loaded in OPAC'S.

SUGESTION

India has decided to upgrade its 17 Regional Engineering College (REC's) in phases to National Institute of Technology (NIT's) in response to growing demand for more scientific and technical manpower.

When compared to countries like Japan, which has 110 scientists and technical personnel per 1000 people and 7.1 people per 1000 involved in research and development. India has a much lower ratio of 35 per 1000 in terms of scientists and technical manpower and 0.3 per 1000 involved in scientific research.

But in sheer number with one billion plus population. India has one of the highest numbers of scientists and technical personnel. To meet the increasing demand for more scientific and technical manpower India would upgrade 10 REC's (Regional Engineering College in the first phase and give more autonomy to function as independent deemed universities.[14]

User Education Programme should be essential for the optimum use of Library resources, because maximum use of library resources depends upon its education user. The NIT Libraries have not yet been developed to an appreciable extent in India. The prime reason being that several libraries lack of trained staff, absence of library policy towards User Education Programme. The author strongly recommends that Library Orientation / Introduction programme must be included in 1 st semester of all the courses of studies in NIT's of India. Further more author suggests that there is an urgent need in a networked environment to run 'User Education Program' in all the NIT's of India.

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USER EDUCATION IN UNIVERSITY LIBRARIES

Rajesh Singh
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ABSTRACT

Deals with the use and importance of User Education in Indian Universities. Discusses in brief the essence of librarianship. Points out various newly emerging problems faced by users in getting effective and efficient library services. Describes and discusses the basic features of a good university library. Shows the implication of Information Technology (IT) on libraries and information centers and their services. Defines User Education and User Education Program (UEP). Delineates in brief the objectives and importance of User Education Program. Discusses the use and importance of user's assessment for UEP. Describes UEP for students and faculty members, both.

INTRODUCTION

"A library is a collection of books kept for use. Librarianship then, is connecting a user and a book. Hence, the very life of a library is in the personal service given to the people[1]." The first law of library science enunciated by Dr. S.R. Ranganathan, the father of library profession in India "Books are for use" is said to be the essence of library profession. He also visualized personalized reference service as the essence of librarianship.

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Today, libraries and information centers attached to higher educational institutes are semi-mechanized or rather mechanized systems. There is an exponential growth of documents, users and to some extent of staff. Further to the quantity, the variety of documents, particularly multidisciplinary documents produced as a result of inter-disciplinary researches, poses peculiar problems to the users. The mechanical and semi-mechanical methods in acquisition, processing, storage and retrieval of documents containing desired information baffle the user community. The inclusion of modern information technology (IT) in libraries and information centers; such as computers, CDROM, telecommunication networks, multimedia, etc. for quick, effective and efficient service has also posed problems to users. Though these modern information technologies have changed the way, library profession used to think and act, ignorant users should be guided to handle them. In the present context, contrary to what Dr. Ranganathan had visualized, the library profession with its limited resources of money, manpower and material is not in the position to cope up with the ever-increasing complexities of the profession by providing personalized reference service.

UNIVERSITY LIBRARY

The basic feature of a good university library is its complete identification with the university in its strive for conservation of knowledge and ideas, teaching, research and publication [2].The measure of library excellence is the extent to which its resources and services support the university's academic pursuits. It is the nature of the university, which determines its objectives and programs, and the library contributes to the realization of these objectives by acquiring, processing, organizing and disseminating macro and micro thought. It is rightly hailed that library is the heart of university.

However, regarding the precise objectives and functions of a university library, there is difference of opinion. Wilson and Tauber has assigned six functions to the university library:

1. Conservation of knowledge and ideas;
2. Teaching;
3. Research;
4. Publication;
5. Extension and services;
6. Interpretation.[3],

Arthur T. Hamlin[4] elucidating the functions of a university library observes that conservation of knowledge is an important function of

the university as a whole, and that it is through the university library that it carries this function to its conclusion.

Dr. S. R. Ranganathan views that the university library helps the academic communities in five stages. In the first stage called *Preparatory Study*, reading materials should be gathered, organized and attractively presented to the students on all the subjects of study before the class lecture to rouse curiosity. In the second stage, called *Parallel Study* the librarian should provide another set of reading materials for parallel study after the class lecture to maintain curiosity. At the third stage, a still another set of reading materials should be served for *Follow up Study*. The fourth stage directs the librarian for the use of leisure time. The librarian should feed students with entertaining and elevating books for use during leisure time. According to Dr. Ranganathan library services are needed in the fifth stage only in the case of more advanced students, the research fellows and the teachers themselves, where library is concerned with the conservation of the research potential of the academics. For the purpose, the library should pick up and organize the nascent thought in every field of knowledge and plough it back into the minds of the research workers. A close analysis of the functions of a university library makes it clear that it is the soul of a university, the sun around which all teaching and research revolves.

USER EDUCATION

Necessity is the mother of invention. The above necessitating factors have given birth to the concept like 'User Education'. The history of user education can be traced back to the imagination of professional librarians all over the world. The names of Louis Shores, Patricia B. Knapp and Thomas G. Kirk along with the names of undergraduate colleges like Montieth, Earlham, Swarthmore, Hampshire and Wabash are recorded as landmarks in the annals of user education. Patricia B. Knapp completed her report "An experiment in co-ordination between teaching and library staff for changing students use of university library resource in August 1964 in pursuant to a contract with the United States, Office of Education, Department of Health, Education and Welfare[5]." The project was undertaken at Monteith College in April 1960 for "exploring methods of developing a more vital relationship between the library and college teaching". It was Patricia B. Knapp who attempted to build a theoretical framework for user education "because it is useful in relating library skills to the academic community...[6]."

On user education Jacques Tocatlian, Director, a.i. General Information Programme speaks for himself. "For the purpose of

Unesco's program, user education and training has been defined in a generic way to include any effort or program which will guide and instruct existing and potential users, individually or collectively, with the objective of facilitating:

a. The recognition of their own information needs;
b. The formulation of these needs;
c. The effective and efficient use of information services; as well as,
d. The assessment of the services[7]."

The UNISIST document has noted "three basic tasks for a national focus" in user education. The important one is "basic training in the use of existing information sources [8]."

A close scrutiny of the above views manifests that a user education program should be designed to acquaint the users with:

* Resources of the library;
* Variety of documents and their peculiarities;
* Marking and parking patterns;
* Use of tools and techniques of IT;
* Use of retrieval tools;
* Organizational structure of the library;
* Do's and don'ts in a library and information center.

Educating the users is the proper solution for non-use and misuse of library resources. It also improves the quality of use. User education is the bridge that branches the gulf between the academic community and library profession. It aims to provide necessary knowledge and skill of information search and retrieval to the user of a library. It should be a joint enterprise of academics and libraries. No user could fully utilize the resources of a library without knowing about it. The "Educational arms[9]" of a higher education include "Competence in the skill of information retrieval and the use of the library for research purpose[10]." User education, thus, enables the users to make independent use of the facilities of a library.

USER EDUCATION PROGRAM

User Education Program (UEP) is "a procedure whereby students are taught to use library devices such as the card catalogue; bibliographical tools, such as periodical indexes, subject reference sources etc.; and to utilize effective search strategies in the library[11]."

The UEP should be designed and planned to focus on the following components:

* User awareness;
* Library orientation;
* Familiarity with library reference room collection;
* Bibliographic instruction;
* Interest profile; and
* Familiarity with the handling of modern IT.

These components are closely inter-related. They should not be viewed in isolation.

PLANNING UEP

Learning has been defined as a process that helps to modify behavior permanently, so that behavioral changes occur in human beings and those persist continuously. Logically UEP ought to be so designed so that changes occur in the minds of users towards libraries-to the extant that they are able to make maximal use of library resources and services independently. It is a better proof of education to know how to use a library than to posses a university degree.

An UEP needs a careful planning and execution. Planning pre-supposes preparation. A good lot of preparation is needed on the part of library personnel.

USER'S ASSESSMENT

Prior to planning an UEP, The library should asses the knowledge of the user community about libraries and library services. For this purpose a structured questionnaire be circulated among the users. Personal interviews with users may also be carried out. Such a questionnaire shall have queries regarding:

a. The user's details—socio – economic background, category, age and library memberships of the user;
b. Use of the library—frequency of visit, subject of interest, kind of documents he often needs, reading habits, book buying etc.;
c. Knowledge about library services;
d. Use of other libraries;
e. Problems often encountered in the use of libraries;
f. General attitude to libraries, books and readings;
g. Other information sources that are generally used.

Assessment of user's need is very important for conducting a successful UEP. User of a higher educational institute mainly consists of students and teachers. Separate UEP need to be designed and developed for students and teachers. Because their information needs, their approach to library and level of comprehending widely differs. A student is to be trained in the effective use of the library resources, whereas a teacher needs to be educated as to how he can plan for a library centered education and exploit the various educational tools and variety of documents.

UEP FOR STUDENTS

* **Know your Library:** A brochure containing all details of the library – its collection, various sections, services and working procedure – should be provided to all the new users at the time of registration as library member. Initially this will be a great help to the new entrants and ultimately help them to exploit the services of the library fully. A survey conducted by the author under the title "An evaluation of the services of Central Library B.H.U.: Based on users survey[12]" revealed that due to lack of proper publicity some services of the library are not properly utilized. 100% of Under Graduates (UGs) and Post Graduates (PGs) have been found aware of the Text Book Section but only 12.25% UGs have been found aware of reprography (Photocopy) service. With the same reprography service 44.64% of PGs and 94.11% of Research Scholars are aware of.
* **Display:** The next step in an UEP should be display of charts, tape-slide presentation to provide an over all picture of the library and information center and its services. Although this method over laps some of the areas and scope of 'know your library' brochure method, but the display should be designed as an aid to the first method. The tape-slide presentation should be intended to provide an interest-provoking opening to the display. It will be more effective if it is in a diagrammatic sequence instead of in lecture form.
* **Group Instruction:** The aim of an UEP is to familiarize the users with the resources and services of the library. In the beginning of the academic session library workshop should be arranged for the new comers. Library staff should present in a condensed form all about the library and its services, with suitable demonstration. It is called 'Group Instruction' and will be more effective in library premises in presence of

concerned faculty members. "While the teaching faculty have the central responsibility in the educational enterprise, librarians help them carry out that responsibility much more effectively and at the same time enhance it, while the two groups – teaching faculty and librarians can and should work together, rather one can do the others job[13]." To assure proper response to the teaching needs the library instruction program should be integrated with formal and independent studies.

The scope of such group instruction may range from – how to use catalogue cards; find books on shelves and consult various reference sources – to functions and services of various sections.

* **Training in Finding:** At the next step the users are to be given some practical lession in fact finding. An entire range of reference work of interest to the target group should be collected and displayed. Library staff well acquainted with these sources should be employed to train and guide the users. The users should be given an idea about the various sources either by a lecture or by displaying certain diagrams. They should be encouraged to look up their own topic of interest.

  As far as the technological devices are concerned, the users should first be given some tutorial lectures in classroom environment for handling the computerized devices, used in the particular library for automation. Further they should be practically allowed in the library premises under proper expert guidance to handle them and search for various information sources. This will slowly but steadily help the users community in long range to obtain electronic information through technologies, which are some thing alien to them.

* **Local Resources:** The next step in an UEP should be to familiarize the users with local sources of information. It should include information about all the libraries in the area, their collection, specialization, service hours, rules and regulations, networks and databases they are connected to, etc. This will help them to understand the concept of resource sharing, inter-library loan, etc.

* **National Resources:** At the final stage the users should be given an idea about national and international sources and services. This should cover, National Library (ies) and documentation centers; as well as international systems and

services. A detailed description should also be provided about the various indexing and abstracting services, computerized databases, networks, facsimile transmission etc.

* **Summary: Pamphlets and Evaluation Forms:** At the end of the program a summary pamphlet giving a rewinded picture of all that has been said and shown to the users should be circulated among them. This will help them to have a repeated version of the entire UEP. Evaluation forms should be provided to the users and they should be requested to provide their assessment opinion and suggestions for improvement.

MODERN INFORMATION TECHNOLOGY

The inclusions of modern Information Technologies (IT) in libraries have bettered the library services. Now it has enabled a library to capture, store, manipulate, distribute information; to provide need-based browsing and retrospective search services to the users; to update the existing services and initiate and provide new services; to retrieve and disseminate the information in user defined format; to digitize the documents for space saving and preservation; to hold large number of databases in CDs; to support library functions such as acquisition control, serial control, circulation, stock maintenance etc. and developing in house databases; to encourage and provide necessary facilities for networking and resource sharing at local level; to access union catalogue of participating libraries in the network; to have access to a number of national and international journals which are being produced in a machine readable form; and above all to improve the efficiency of library functions and cost effectiveness of library operations.

However, at the same time, there is an urgent need to familiarize the users with handling of these technologies. As a part of 'Group Instructions' they should be trained to search, locate and access electronic information through computers and its various aspects. Frequently used commands should be printed and placed besides all user terminals. The users should also be familiarized with the handling of various networks such as –UNIX, LYNIX, LAN, CD Network, Regional Networks, INTERNET, etc. The use of microfilm readers should also be demonstrated to them.

UEP FOR TEACHERS

Teachers tend to be isolated from the normal system of communication open to the students and researchers. They are often unaware about the existing sources of information, trends in discipline, and teaching

skills, and some times, even fail to articulate their own information needs. Hence a special UEP should be structured for the teachers. In addition to program summarized above, special emphasis should be given to bring in the knowledge of teachers various aids available to them in making teaching more effective, and as to how a teacher can help a student in exploiting the resources of the library to its best advantage. Teachers may help to inculcate library-going habit among the students. It has been found that the students on the basis of references provided by the teachers frequently consult various documents.

While designing an UEP for teachers, they should be given a comprehensive idea about various secondary sources and their use. The aim of teacher-oriented program should be to help them to develop the 'Library Centered' teaching. Suggestions may also be provided as to how a teacher can act as a catalyst for the increased use of the library by the students.

CONCLUSION

With all their tools and techniques the library profession is not able to provide access to desired information. Personalized reference service to each and all is also not practicable. Hence, an UEP, particularly in higher educational institutes is essential to maximize the use of library resources.

To design and conduct a successful UEP the library professionals are also required to be trained to develop certain attitudes, skills and competencies. They must develop analytical and communication skills; co-operative attitude; information retrieval and instruction competencies. They should be able to predict future information environment.

From manuscripts to CD-ROMS, from chain and locks to open access, library profession and services has under gone a drastic change. The impact of new information technology (IT) has changed the way, we the librarians used to think, visualize and act. The continuous developments in the field of IT will continue to influence the library profession. Since technology never stands still, it always advances libraries have taken shape of information centers and librarians have become 'Information Scientists'. Hence, planning and conducting UEP not only to provide every reader his/her document but also to provide every document its reader is the need of the hour.

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USER EDUCATION: A WAY TO PROMOTE THE USE OF LIBRARY SERVICES

Babita Jaiswal

ABSTRACT

Knowledge and information are power. Over the centuries man has gathered an immense mass of information. As the sum of his knowledge grows, he must continually seek more efficient and effective methods of storing and retrieving information pin-pointedly, exhaustively and expeditiously on demand. A well-stocked, well-staffed and well-organized library becomes the sine qua non of modern information system. To encourage the use of library and to participate in the teaching and research programme as well as to become a nucleous of intellectual gravity for the community it serves the, library staff provides various types of services. User education is one of them. User education is a comprehensive service and a process of making the user self reliant in locating, sorting and repacking information. It is service by which we can promote use of libraries. For this library professionals have to organise, plan and pro0vide user education efficiently and effectively.

Article deals with the concept and need of user education. Describe how we can provide user education effectively and challenges faced by library professionals in providing user education.

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INTRODUCTION

There is a story about a librarian at one of the colleges. He was stopped while rushing across campus one day, a book under his arm, and was asked how things were in the library. "Just fine", he replied. "Or they will be just as soon as I get this last book back on the shelves". This shows that for nearly a century, librarians saw their role to make sure that the materials in their collections stayed there, often literally chained to the shelves. Only few lucky ones might have access to the collection of libraries. People belonging to the lower strata of society had no right to education; hence no right to books. Ewart Bill –the first Public Library Bill of England –was opposed on the ground-"**that too much knowledge was a dangerous thing and that libraries might become centres of political education**". Also in the Moscow at the inauguration of the library school in 1913, it was asked in the National Duma "**how the government tolerate library courses, which would pave the way for revolution**". (1) By and large it was only due to the evolution and wide spread of the concept of democracy, emergence of librarianship as a profession and information society, libraries became an important centre of information for everyone. Subsequently the responsibility of the librarians has increased to ensure that the use of its information sources, resources and services are maximized to benefit its users, hence the necessity for user education programmes. The general objective of user education programme is to design a system to teach potential as well as existing user about library services, resources and search strategy.

WHAT IS USER EDUCATION

The phoenix of user education has risen from the ashes of reference service. The concept of user education was discussed by the American Library Association at its first conference held at the end of the 19th century. The user education concept received further inputs from Patricia B.Knapp and her report. The report stressed the need of "**coordination between teaching and library staff for changing student to use of university library resources**" and for "**exploring methods of developing a more vital relationship between the library and college teaching**". (2) The meaning of user education can understand in three level-

At unit of language level – the word user education is combination of two words, User meaning who use anything + Education meaning systematic training and instruction. In the context of library the meaning of user education is systematic training and instruction to those who use library.

At layman level –Guidance or instruction to the library user for using library resources.

At conceptual level – If we see the various definitions, meaning of user education will be clear. The following definitions will highlights what user education is-

1. Fleming (1990) defines user education "**as various programmes of instruction, education and exploration provided by libraries to users to enable them to make more effective, efficient and independent use of information sources and services to which these libraries provide access**". (3)
2. ALA Glossary of Library and Information Science-"**User education encompasses all types of activities, designed to teach us about library services, facilities and organization of library resources and search strategy**".
3. Nancy Fijallbrant and Ian Malley-"**User education is concerned with the whole information and communication process and one part of this involves the total interaction of the user with the library. This should be continuous process starting with school and public libraries and with possibility of extension into academic and specialized libraries**". (4)

So user education is a program designed to equip users with the knowledge and skill to use library and information resources effectively and confidently.

NEED OF USER EDUCATION

The recent decades have witnessed repeated elaborations on the trend towards an information society. From the early efforts of visionaries such as H.G. Wells (World Brain), Vannevar Bush (Memex) to more recent acclamation of the information society arrival by authors such as Daniel Bell (post-industrial society) and John Naisbitt (Megatrends), the popular culture has increasingly accepted that the industrialized world is being transformed into a knowledge-based world. In this knowledge based world there are World Wide Web technology to retrieve information. But till now libraries plays significant role. It is because the WWW has opened the door to a world of information resources, but most databases are not freely available, and information that is available varies in quality and value. As in America it is proved by a survey that "**despite increasing competition from other information sources available ... libraries continue to be a primary source of information and education for the American**

public". (5)

But it is also true that libraries have changed their face to a great extent due to information explosion and use of new technologies for storing, organizing and accessing information. Furthermore, user needs education to become productive and effective users of information. Eugene Garfield once said "**that the scientists and technologists and the other scholars and experts waste time and fumble with their information needs because they do not have any training or awareness of the information provisions and library activities**". (6) The need for the user education may be essential because of these reasons-

1. In the Information Society a far greater knowledge potential is accessible than ever before and the challenge of the library is to make use of this growing potential. There emerged urgency and eventually a mission to educate the users how to use the library and their resources effectively. The need to be able to use library and information sources effectively by the users has in many cases become more important than the acquiring of factual knowledge itself.
2. Library collection are not used to their optimum level. Fidzani -" **It is believed that improving users' knowledge of their libraries' collection and services could be a motivating factor for more usage and more demands on the library**". (7)
3. Librarians need to identify and develop the new role that the 21st century demands of information professionals. While users require services that teach them how to locate and select information, they also need to develop strategies to use and interpret information as a basic skill to ensure their survival in the information age.
4. Intelligent and responsible users of the information society should expect basic rights of access to information. Educational and training systems allow them to effectively execute such access. And through user education librarians can guide and train users. As the Rader remarked that "**Librarians are uniquely qualified to assume an active role in the new teaching environment because of their skills in collecting, evaluating, organizing and providing access to information.**" (8)
5. There is an enormous waste of resources due to nonuse and misuse in all types of libraries. This presents a great challenge. Educating the user is the proper solution.

6. Due to shrinking budgets, it is necessary for libraries to encourage users to make greater and better use of available resources.
7. Educating the library user improves the quality of use. User education aims to provide knowledge and skills necessary for a user to find his way.
8. A new library user would not be familiar with the ways of the library. He would not know about rules, regulations, and services of the library. The tools of the library are not easy for a beginner to understand. There are many particulars about the arrangements of documents, the layout of various sections, and the kind of services being provided. All this requires some sort of orientation; otherwise new users might feel inhibited in using the library.
9. The application of information technology in different type of libraries has gained sufficient momentum. At this junction it is important to realize that most of the user do not aware with this technology. And those who are aware are not well versed in handling these technologies. So it is important to educate the user how to locate and select information with the help of information technology. As White stated that "**Librarians, as knowledge professionals, would teach about doing research to this new clientele who have the technology at hand and many of whom have been seduced by how easy it is to browse the Web. They have heightened expectations but not necessarily the skills to frame questions and narrow their searches effectively, to find answers, and to evaluate the sources and interpret the reliability of the information retrieved. Librarians will educate them. For the foreseeable future, the "expert system" people will use to seek answers to information problems will be librarians (more appropriately, information specialists), whose traditional expertise as information searchers will have to expand to navigate skillfully the growing web of interconnected electronic databases".** (9) With the explosion of information, user must become information literate.
10. Information literacy is defined as an individual's ability to recognize a need for information, identify and locate appropriate information sources, know how to gain access to the information contained in those sources, evaluate the quality of information obtained organize the information, use the information effectively. In an information literate environment,

users engage in active self-directed learning activities, and librarians with the help of user education facilitate learning.

11. There is a gap between what librarians build up in their library collection and what the user looks for. And user education proramme try to fill this gap.

HOW TO PROVIDE USER EDUCATION EFFECTIVELY

In the information age new information and technological changes occur faster all the time. In such an environment users must be taught how to find, organize, evaluate and use information. This mandates that the traditional user education programme must be restructured. In this context user education should not be provided once but it should be continuous process, which should cover use of the internet resources, library catalogue-manual as well as opac, abstracts, bibliographies and reference books. While restructuring the user education programme we must keep in mind the following aspect –

1. User Education Programme must be organized at different levels —
   * Foss pointed out that user education should be organized at different information levels to ensure that needs of all users are met. The first stage provides a general introduction to the library. The next stage is concerned with more subject and bibliographic material. The third stage of instruction would cater for the needs of advanced and research students. His levels of user education on information levels. (10)
   * The China Ministry of Education recommended three levels of user education based on the users educational background. The first level is library orientation for freshmen; the second courses of bibliographic instruction for juniors and seniors; and the third is more sophisticated user education involving the sorting and summarizing of documentation and the studying and analyzing of information for all graduate students. (11).
2. User Education Programme must be-
   * user-centered,
   * interactive and dynamic
   * enabling group work on real library problems,
   * enabling user to determine their own routes for searching the information,
   * emphasizing competencies like information literacy to

support lifelong learning.

3. User Education Programme must consider the following trends of user-
   * number of users are growing,
   * different user bring different experiences with them,
   * because of the differences between user, there is a need to accommodate different learning styles, customization and alternative learning routes,
   * programme have to take more into account the different experiences and backgrounds of users,
   * there is a trend towards lifelong learning.
4. User Education Programme must be designed in a way that the user will be able to retrieve themselves -
   * accurate and authoritative information,
   * timely information,
   * cost-effective information,
   * alternative sources and forms of information,
   * direct access to information.
5. User Education Programme should try to develop following skills-
   * Task definition – Define the task (the information problem), Identify the information needed to complete the task.
   * Information Seeking Strategies - Brainstorm all possible sources and select the best source.
   * Location and Access - Locate sources. Find the needed information within the source.
   * Use of Information -Extract relevant information.
   * Synthesis-Organize information from multiple resources. Present the information.
   * Evaluation– Judge the process (efficiency). Judge the product (effectiveness). (12)
6. User Education Programme must consider the user information need and seeking pattern. On the basis of that librarians have to educate them. For ex. If our users are interested in web resources so we have to design our user education programme in that way. As Stooley pointed out that "**teaching strategies should respond to user characteristics, their perceived needs, learning objectives and available resources. Adult users want only enough information to meet their immediate needs, and hence favour short modular training**

and flexible timing of instruction". (13)

7. User Education Programme foci should be:
   * Formalized instruction programs as collaboration between library and teaching faculty.
     1. Faculty-initiated classroom instruction aimed at identifying resources for specific class assignments or topics. Information resource Centre also emphasized **"user instruction is most effective when it is tied to a specific assignment"**. (14)
     2. Internet searching modules covering Knowledge of browser, search engines, websites, handling e-mails etc. to be integrated into course curricula.
     3. Instructional sessions for new graduate students, conducted for groups and for individuals.
     4. Library tours of both as arranged class sessions and as adhoc events for users.
   - One-on-one instruction at the library's service desks or by appointment.
     1. Interactions at the library service points for eg. Reference desks, lobby desk.
     2. Formal appointments with library staff.
     3. Web, e-mail and telephone queries.
     4. Interactions with peer advisors via the One-2-One Program.
     5. Chance interactions with library staff, including student employees.
   - Promotional events.
     1. Orientations for various student populations.
     2. Sessions where librarians teach discipline-specific class as well as specialized classes on topics such as distance education, copyright, and web design.
     3. Targeted events for new faculty.
     4. Library booths at *Centralized Student Services* check-in and New Student Orientation.
     5. Printed brochures of how to use library and library pathfinders.

By paying attention on these aspects users will become more information literate and acquire valuable life-long learning skills. Faculty will obtain better results from their students as well as greater knowledge of what the library can offer in terms of teaching and research assistance. Library employees will see that their cooperative

efforts within the organization not only help to ensure a quality product, but also help to create a knowledgeable and confident library staff that can strive toward reaching their fullest potential.

CHALLENGES OF USER EDUCATION

Libraries provide a support service to the institutions they serve. It is important to understand the goals of the institution served, to enable librarians to come up with a mission statement, which should reflect the library's commitment in helping the institution achieve its goals. Thorough planning is needed to ensure that all activities carried out are towards meeting the institutional goals. Among those activities user education programmes aim is to make all users aware of the information resources available, both directly in the library and from external sources and enable users to enjoy the search for information. It is interesting to note that many of the objectives listed by libraries stressed the self-sufficiency of users through a successful user education programme. However there are several challenges faced by the librarians, which hinder the effective and efficient implementation of user education programmes in libraries. These challenges are-

1. The first challenge is to meet the problem of untrained and inadequate number of staff. This problem is affecting most of the libraries. And due to these libraries are not able to conduct user education training programmes, which meet the present day requirement.
2. New information technology in libraries poses a considerable challenge for librarians. Librarians have to teach users with little or no knowledge of computers how to search the information with the help of new technology. User education programmes should aim at sensitizing users to the value of information technology, so that they can learn to appreciate and use them.
3. The Internet poses another challenge to the librarians. It affects their job and working practices. Knowledge of how to navigate the internet is now becoming a basic requirement for information professionals. This would enable librarians to carry out instruction on the use of the internet. Users need to be introduced to different on-line catalogues and their search procedures. Libraries should not only see themselves as users of internet but also as providers of information from the Internet. There is a growing need to support users in the form of training to provide them with skills needed for effective exploitation of online resources.

4. To involve faculty in user education programme is also a challenge. Most of the libraries do not get the full participation of faculty in library Instruction.
5. To draft a written policy of user education is also a big challenge for libraries. Written policies and objectives on user education provide a basis for self-evaluation. This could be used to answer questions like, is the user education programme achieving what it was set out to achieve?
6. Providing effective user education in limited budget is also a challenge for library professional. With rare exception, libraries are experiencing slight increases in materials budgets, educational and general operating budgets, and staff salary lines. Current budgets are insufficient to keep pace with the skyrocketing cost of materials, the increasing burden of capital expenditures for technologies that rapidly become obsolete, the need for retraining or recruiting and retaining staff with the skills required to use and maintain the technologies and to educate users for optimum utilization of library resources.
7. Last but not least to deal with different type of users is also a big challenge for librarian. Some user may hold negative attitude towards user education programme, certain style of educating or towards library professionals. Some user may be deterred from taking up education opportunities by unhappy memories of colleges and schools. At the time of the user education library professionals have to deal with these user. It is really a very challenging task. Library professionals who have knowledge of psychology can deal with these users effectively.

No doubt there are so many challenges, which library professionals have to face in providing user education. But if library professionals will do serious efforts they will be able to get their unique position in the web environment. Maheshwari quoted an incident in his lecture i.e. **"Lord Rutherford the great pioneer of Nuclear Physics when he was told that America was going ahead in Nuclear Physics because they have a lot of money. Once said-" Americans have money. We donot have it and so we have got to think". There is no substitute for hard work and serious thinking and with sustained and serious effort we should be able to go long way even with our meagre resource and capital"**. (15) We should always remember this..

CONCLUSION

In the technology and electronic information environments educating user will be a challenging job for library professionals. The value and benefits of the user education become more critical in this environment. Demand for training in information use electronically, and most especially, on the Internet, are increasing exponentially. So there are major opportunities available for library professionals. Role of library professionals becomes very important because they are the persons who can guide, instruct user properly to search relevant information from a mass of information. Rader pointed out **"Librarians can add links to the resources — print and electronic — available in their collections and on the web. They can explain how information resources in a particular subject field are organized and how students can find their way in subject areas that are relatively new to them".** (16) Henri and Lyn also pointed out that **"librarians will serve as an interface between the public and information and they also guide users, through interviews, to the most pertinent information"**(17).

At this time Library professionals are especially well positioned through their information expertise to prepare and train users for effective performance in the information age. This is library professionals chance to emerge as trainers and teachers. So librarians have to come up with strategies to ensure effective and efficient user education programmes.

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WIND OF TECHNOLOGY IN LIBRARIES: SMART CARDS

M T M Khan
Archana Upadhyay**

ABSTRACT

The advent of Information Technology (IT) has facilitated the electronic storage and transmission of recorded knowledge. Linking of computers with telecommunication has revolutionized the expansion of information systems. New challenges and opportunities are emerging due to integration of new information technologies and ever increasing users. The application of IT in the libraries has made it more near to them as it gives the user some new services and facilities. Smart card is such a facility. This article presents study of the Smart cards, their structure and usefulness to library environment. It also discusses various advantages of the deployment of Smart cards in Libraries. Although at present it is the emerging technology as far as libraries are concerned but will sweep the libraries in near future and provide a hi-tech look to libraries.

INTRODUCTION

There is a visible impact of information technology on the functioning of our library and information centers. The information revolution is rapidly widening the scope of application of IT with promise of ensuring timely access to relevant information to users at all levels on one

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hand and on the other enhancing the productivity in information work and services. The modern libraries are equipped with modern forms of technology which is making libraries more dynamic.

As we all know that housekeeping operations in a library have been automated successfully viz.: acquisition and accessioning, circulation work, cataloguing, serials control, resource sharing etc. The emerging trend in the context is the use of "Smart cards" in place of Borrower's and (Borrower's ticket, Reader's ticket or user or membership card whatever we may call it).

SMART CARDS

Smart card is a plastic card. These are credit card sized with an embedded microchip that can be programmed to accept, store and send data. They have a tiny display that provides user with new password earch time they log in system the smart card is a protable data-store device with provision for identity and security. Most smart cards mange binary text and numeric data. Special hardware is usually required to read the information stored on the card. These can contain 32 KB of data and programms that are protected by advanced security features. Chip can process different kinds of information, and therefore various industries organizations and institutions use them in different ways. It can accommodate a variety of uses that allow you to make purchases from a credit account, use as library card, Identity card etc.

It differs from the prepaid telephone card, or debits card because it contains microprocessors and memory chips that provide intelligence and the ability to store a significance amount of information. Smart cards can be either contact based or contactless. A contact based card needs an external voltage to power the integrated chip. It also requires a clock frequency and an input output path for data transmission. A contact less card on the other hand uses electrical coupling to t5ansfer data and the data transfer take place by modulating power signals, some contact less card that works over long distances, uses radio waves.

The major features and statistics of the smart cards are given in the following table:-

3 FEATURES OF A SMART CARD

Parameters	Features
Storage Capacity	- 100 times more than the average magnetic strip

Logo	-	Card issuer of co-brander's logo
Material (Size and Shape)	-	Plastic used for plastic card is 0.8 mm thick and can be embossed
Identification Data	-	User's identification data is embossed on the card
Security Measures	-	Photograph of user
Transfer Rate	-	Compatible reader govern who or which machines can read or write card data
Accessories	-	It also has an optional button to share and send audio data over phone, to allow cards to be used with telephones rather than special readers
Standards	-	The size the card is determined by the international standard (ISO 7810). The ISO 7810 standard also defines the physical characteristics of the plastic, including the temperature range and flexibiliy. postion of the electrical contacts and now the microchip communicates with outside world.

4 STANDARD SETTING ORGANIZATIONS FOR SMART CARDS

1) Smart Card Industry Association (SCIA)
2) Smart Card Forum (SCF)
3) Global Chip Card Alliance (GCA)

The mission of these organizations is to spur the use of smart cards. This card is like all in one and useful for different purpose such as Identity Card. Library card, Report card, canteen card, Health record, Insurance card, Internet Access Control Card, Staff profile card etc. This convenience of these cards has been pursuing several organizations to deploy smart cards. Smart cards are better protected from misuse than, say conventional cards because the smart card information is encrypted. With a smart card, theft is practically impossible because a key to unlock the encrypted information is required, and there is no external number that a thief can identify and no physical signature that a thief can forge. In addition, smart cards provides the advances f portability and convenience.

5 USE OF SMART CARDS IN A LIBRARY

The use of smart cards in a library makes it working and record keeping very easy, as the library staff does not need to look up the register every time a book is issued or returned. The following steps will illiustrate the usefulness of the card in the library:-

1) To issue a book to a user.
2) Smart card is inserted in the computer.
3) Library staff types the details of the book in a prescribed format.
4) Details are recorded on the library's computer as well as on the users smart card.
5) When the book is brought back (returned), library staff inserts card in the computer.
6) The computer opens the account of the user, library staff records return of the book, any penalty levied is also recorded, which is automatically sent to the accounts section through the institutions computer network. This record is also available on the students smart card.
7) The card will also record the entry and exit time of the users in the library, with the help of this card the following records of the use of library, by the users, is instantly available:—
   i) At what time he /she has accessed the facility
   ii) For how much time he/she has used the facility.
   iii) Presently libraries provide Internet facility, so it is very essential to keep record of internet use by the users. His/ her (User) record of using the Internet is also available in the smart card.

6 ADVANTAGES OF SMART CARD IN A LIBRARY

1) The photograph of the user is printed on the card as well as digitally encrypted in the chip. The identity of the user can easily be verified by comparing the photo on the card and photo on the computer screen as soon as the smart card is inserted in the card reader which is connected to the computer. The photograph in the chip can be edited by the Institution. This facility of smart card prevent its misuse as in case of Borrower's card.
2) The smart card is a very cheap and simple tool for security applications. The users can be authorized or debarred from using a facility or utility. No physical cheek would be required.
3) Quicker and easier to operate.

4) Reduce manual losses via misplacement and theft.
5) Reduce manual work
6) The advantage of speed and accuracy is even more visible and important.
7.) Smart card are less prone to human error as is the case with Borrower cards.
8.) More efficient issue/return service to users because it allows fact transactions.
9.) It works as a means of attracting users towards library.
10.) The use of these cards will make the library hi-tech.

In this way it helps to improve the quality and effectiveness of library services. The user as well as the library has a well kept record of the transactions that have been taken place in the library. A lot of physical movement of paper in the Library and the account section is eliminated.

7 COST

Cost may be a factor for many libraries but as we know that these smart cards are used for various purposes so the cost is shared by them all. The cost per card shall be around:

Rs. 250/- Per card

Similarly cost of the card readers are as follows:

Independent reader units (per unit)

Desktop Reader/Writer (Contact Based) Rs. 12,000/- Per reader

Contact-less) Rs. 50,000/- Per reader

8 SOFTWARE

The software for the smart card will be developed and then can be integrated with the existing software operations or a complete integrated software can also be d3veloped. The design of software for smart cards will depend upon the task which is going to be assigned to smart cards in the institution.

9. INDIAN SCENARIO

As we all know that smart cards are designed to replace the traditional magnetic strip cards introduced at the end of the 1960s. The use of smart cards in India is in very preliminary stage in libraries. Many institutions in India are using smart cards for multiple purposes such as:-

(i) Sciendia Fort School, Gwalior

(ii) Delhi School of Management and Professional Studies, New Delhi

(iii) Dhiru Bhai Ambani Engineering College, Surat.

(iv) RBI sponsored SMARS project at IIT Mumbai, Experts believe that SMARS was a right step towards standardization smart and systems. RBI also asked the Bureau of Indian Standards (BIS) to recommendation.

Not only educational sector but other sectors like Telecom, Transport, Health, Communication, Banking Industrial, Government Department etc. are also using these cards for multiple purposes.

10 RISK INVOLVED

Some people criticize these cards as being very costly and for the risk of its use by the user after leaving that institute. It is a matter of great concern for the institutes and organizations that resulted into the following:-

10.1 Disablement of the Card:

Some functions of the smart card will disabled by the institute before the students leave it. The smart cards can also be programmed automatically in a particular year and on a particular date. This is to prevent misuse of the card.

11. CONCELUSION

These are just some of the benefits and applications of the smart cards. We have to imagine the applications, the amount of time reduced the amount of paper work eliminated and the amount of increased efficiency gained. The possibilities are infinite.

It is often observed by us that to have so many cards like Indignity card, Library card, Driving card, Credit cards, etc. in wallet or purse is very problem creating. The solution of this problem is in the form of smart cards. As far as Libraries are concerned, smart cards will replace the library cards (Borrowers card) and delimit the misuse of the same. This technology helps librarians to deliver better service and improve efficiency in providing them. They provide more security features also.

There are number of obstacles in the development, implementation and acceptance of smart cards in the libraries, so efforts from librarians are needed to encourage their use. As it is mentioned earlier that India has missed the industrial revolution but it is not in the position to miss

the information revolution, otherwise it will be thrown out of the race. Librarians, being information professionals, have some responsibility in this context.

Library and Librarians who can navigate and fetch the users requirements will survive, others will become part of history. The time is tickling fast, and we are getting left behind. Unless and until we make a right move in right direction, we may not able to surge ahead.

USE OF INTERNET IN TOWNS - A CASE STUDY OF UJJAIN (M.P.)

Leena Shah
Divik Kumar
S. Kumar

ABSTRACT

Introduces growing importance of Internet in every field of life. Provides objectives and methodology of the study and its limitations. Analyses responses from 60 users from 6 parlours in different localities of Ujjain. Finds that chat & entertainment are most common uses of Inet, mostly used by people upto 25 years of age, mostly H.Sec. and under graduate students.

INTRODUCTION

Now a days no one ask for home address but e-mail address. Likewise no one is interested in asking phone number but in mobile number. Without an e-mail account number one is understood to be backward and computer illiterate. Now you can see very little material with postmen but load of messages in e-mail accounts.

All this has began with proliferation of computer and opening of cyber cafes. The cyber cafes spread from metro's to cities and towns moving ahead in villages. It is no more necessary to have your own P.C. which was a costly affair little ago. To have an e-mail account was prestigious affair. Now just go to a cyber cafe, and open your box for e-mail and check often as and when you require. All this has become so cheap and easy within reach of common men. Chat facility

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on Inet attracting youths and often affairs are being established during chats.

Entertainment is yet another popular use in these parlors. Though popularization of CD/ DVD players have made entertainment easier even at home but many youth prefer a cyber cafe for privacy .

Off course educational use of internet can no where under estimated. Youth for their studies and career guidance use net . Now a days, persons having relative outside country make use of net to call @ RS 5/- per minute on net, much cheaper to any other telephone service. Video conferencing , e-commerce, e-governance are other applications of Internet used in specific environment by classed users. According Garner Dalaquest, South Korea has achieved 54.8% broadband penetration into house, Ist globally. As compared to this, USA has 11% , Japan 6.2% England 1.3% . Australia 0.6% home penetration .So Koreans use Inet based services utmost. India is yet to touch these figures.

The survey has been conducted in the cyber cafes at public places open for public and used on payment. We have not covered internet facilities available in institutions of research, commerce and government offices.

We have selected Ujjain, an ancient historic holy city, a good tourist place and good educational centre with an university ,engineering colleges, medical college and many professional and traditional colleges besides schools at all levels. It is one of the 5 important towns of Madhya Pradesh. It can represent many towns of India, where modernization of community is in process but traditions are still intact.

OBJECTIVES

1. To conduct a survey of cyber cafes in the Ujjain city.
2. To analyse data collected as to who are users of these Internet Parlors.
3. How frequently they use Inet ?
4. What the users' search ?

METHODOLOGY

An interview schedule cum questionnaire has been administered to the users using cyber cafe .The answers were received in many parts of the city at different timings during Oct. 2003 when pressure of studies are neither zero nor at its peak. In all 60 users have

been interviewed. The survey was done in parlors situated in old and new city.

LIMITATIONS

Survey is limited to few users in a specific month . Variations may be obtained and analysed during various months throughout the year . A survey of 1000 users can make this work more comprehensive. Case studies may also be done by obtaining data form same users in different months for comparison.

ANALYSIS

In all 6 parlors have been surveyed. These parlors have 5-9 computers using Celeron and Intel P5/P4/ P3 PC's, open from 10.30 a.m. 11.00 p.m. and have one or two Internet connections from various service providers like BSNL, Airtel and Cable connections . No one have ISDN or VSAT connectivity. Two have separate wooden partitioned chambers and rest have made partitions by the use of heavy curtains. The rates of parlor varies from RS. 10/ - per hours to RS. 15 and RS 20 per hour. According to managers of these parlors the clientele use these parlors for following purposes :-

	Purpose	No. of Managers
1.	Research & Education	4
2.	Literature survey	-
3.	Chat	6
4.	E-mail	6
5.	English Movie	2
6.	Others	-

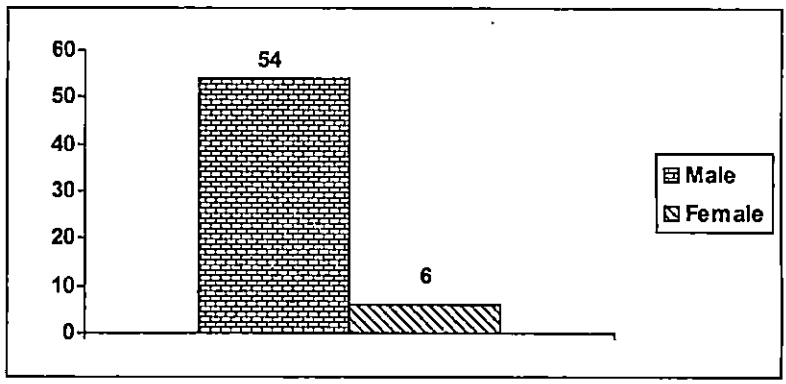
The table, shows that they are used for e-mail and chat in all the cases, entertainment comes next. Use for research and education is also one of the uses, according to the managers. The analysis of users survey is given in foregoing paragraphs.

Gender Ratio

In all 60 Internet users have filled questionnaire. There were 90% male and 10% female users.

Table 1 : Gender Ratio

Candidate	Total	%
Male	54	90%
Female	06	10%
Total	60	100



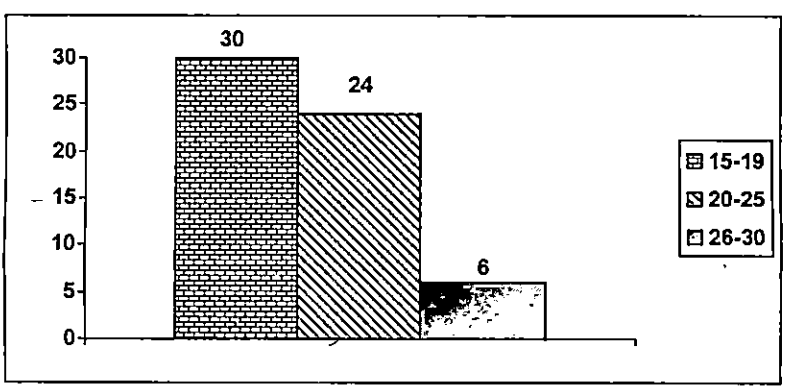
Graph 1 : Gender Ratio

Age Distribution

In the survey 50% users are teenagers , 40% are between 20-25 years of age . Only 10% users are about 26-30 years of age .

Table 2 : Age wise Distribution

Age wise	Total	%
15-19	30	50%
20-25	24	40%
26-30	06	10%
Total	60	100



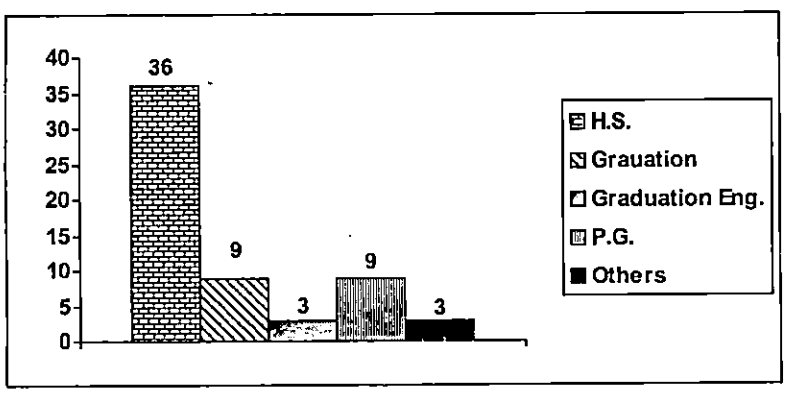
Graph 2 : Age wise Distribution

Educational qualifications

60% users are Higher Secondary only . There are 15% graduate and 15% Post Graduation . 5% are Professional and 5% have other qualifications.

Table 3 : Qualifications of Users

Qualifications	Total	%
H.S.	36	60%
Graduation	09	15%
Graduation Eng.	03	5%
P.G.	09	15%
Others	03	5%
Total	60	100



Graph 3 : Qualifications of Users

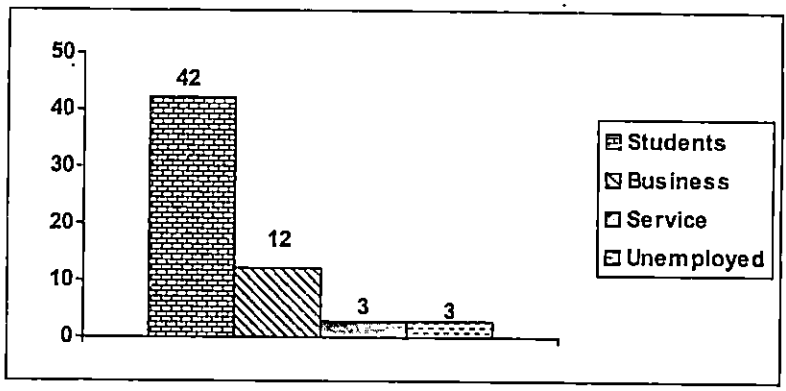
Profession

70% users are students , 20% are businessmen and only 5% are in service . 5% are unemployed users.

Table 4 : Profession of Users

Profession	Total	%
Students	42	70%
Business	12	20%
Service	3	5%
Unemployed	3	5%
Total	60	100

Graph 4 : Profession of Users

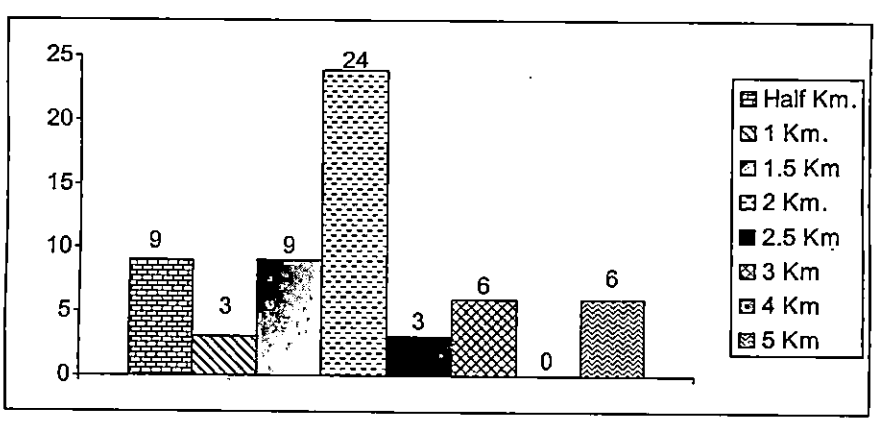


Distance of Internet Parlor

35% users use Internet within 1.5 Km from their homes , 45% users use parlor within 2 to2.5 Km from their homes . 20% users go for more than 3 km to use a parlor.

Table 5 : Distance of Internet Parlor from Users' residence

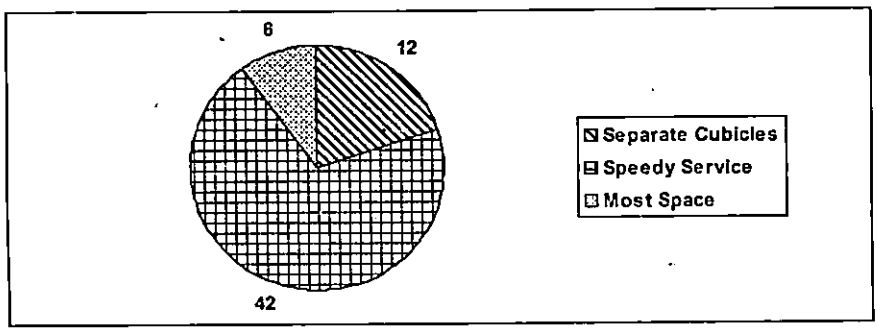
Km.	Total	%
Half Km.	9	15%
1 Km.	3	5%
1.5 Km.	9	15%
2 Km.	24	40%
2.5 Km.	3	5%
3 Km.	6	10%
4 Km.	0	0
5 Km.	6	10%
Total	60	100



Graph 5 : Distance of Internet Parlor from Users' residence

Table 8A : Reasons for selecting a Cyber cafe

Reasons	Total	%
Separate Cubicles	12	20%
Speedy Service	42	70%
Most Space	06	10%
Total	60	100

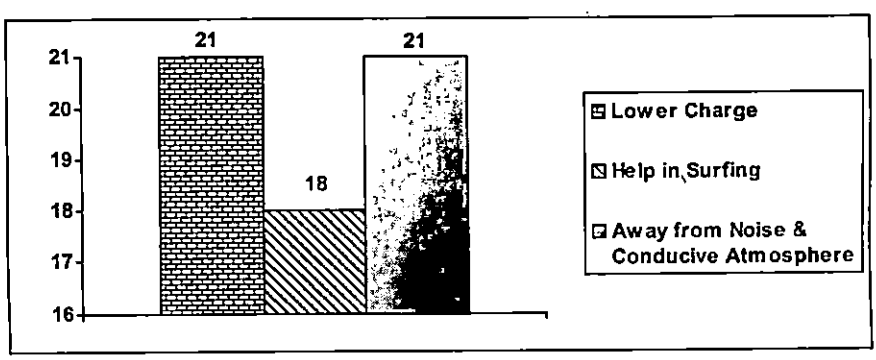


Graph 8A : Reason for selecting a Cyber cafe

Similarly 35% user prefer a cyber cafe with less charges and 30% prefer where help in surfing provided by the manager. 35% prefer a parlor with quality physical facilities and noise free and conducive atmosphere.

Table 8B : Reasons for selecting a Cyber cafe

Reasons	Total	%
Lower Charges	21	35%
Help in Surfing	18	30%
Away from Noise and Conducive Atmosphere	21	35%
Total	60	100



Graph 8B : Reason for selecting a Cyber cafe

CONCLUSION

With the above discussions, it is clear that cyber cafes (Internet Parlors) are still in infant stage in towns of India. The cyber culture is yet to be developed. The PC's are still to be as popular as TV's. Government may take initiative for penetration of PC's in more and more homes by reducing custom duties on computer parts and tariff on Internet connections and telephones. Wireless telephony and cheaper note book PC's may increase use of Internet in next decades. Government may launch e-India project to increase use of Internet specially for education and research purposes. The PC's, now commonly understood a tool of entertainment will penetrate most homes when e-learning is more popular. Students in future will no more be dependent on books but on Internet for their daily home work. Uses are more than abuses, if properly channalised and understood.

SUGGESTIONS

Following suggestions are made on the basis of the study:-

1. More computer based education at all levels.
2. Less custom duties on PC's and their parts.
3. Cheaper telephony and wireless telephony.
4. Launch e-India at earliest.

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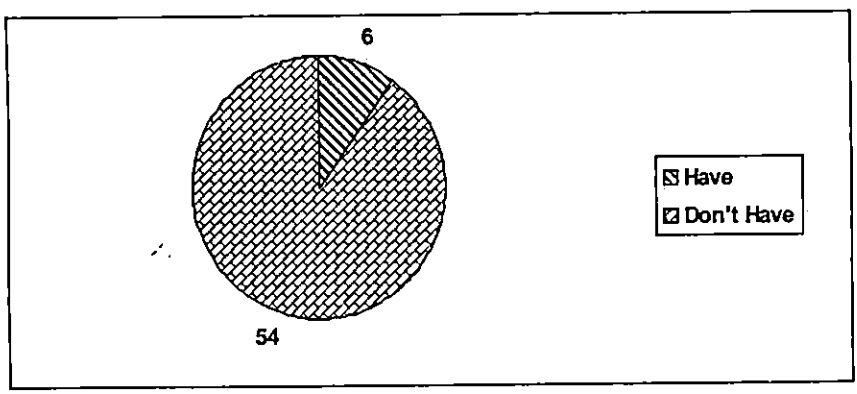
Internet at home & School

No user has Internet connection at home. It means all those who come to parlor do not have Internet connectivity at homes in Ujjain.

These who come to parlor do not have Internet facilities even at their schools. Only 10% have facilities in their schools.

Table 6 : Internet Facilities at School

Categories	Total	%
Have	06	10%
Don't have	54	90%
Total	60	100



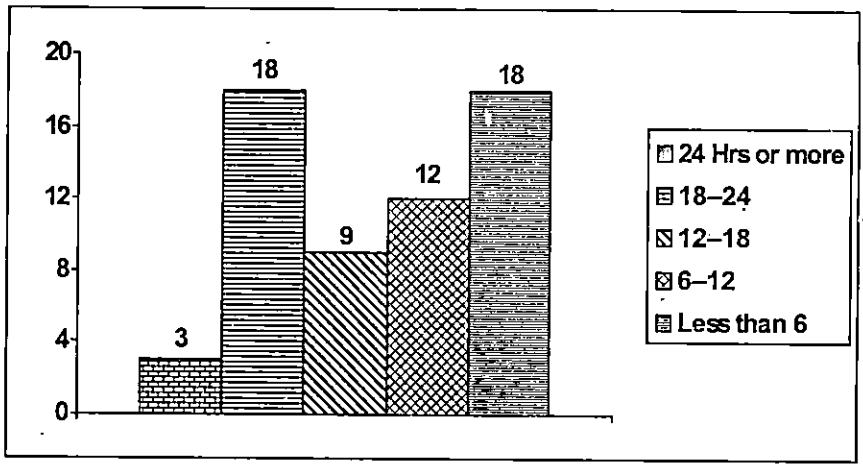
Graph 6 : Internet Facilities at School

Time spent in Parlor

30% users during survey use Internet on an average less than 6 hrs per weak .20% use for 6-12 hrs per weak .15% use for 12-18 hrs per weak 35% use for 18 hrs or more per weak .

Table 7A : Time Spent in Parlor

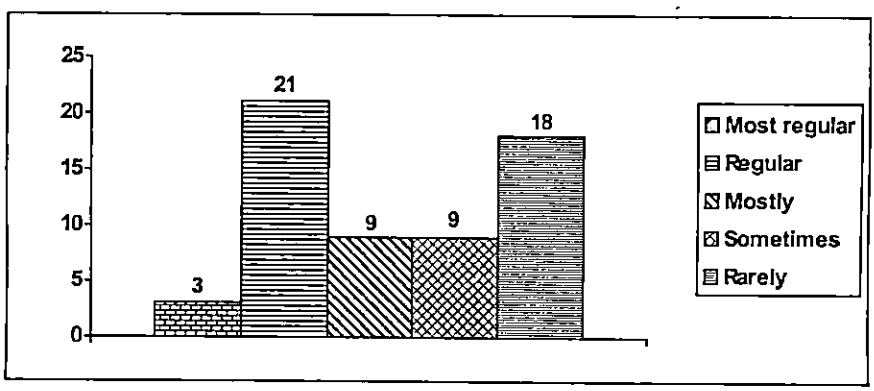
Hours per week	Total	%
24 hrs or more	03	05%
18-24	18	30%
12-18	09	15%
06-12	12	20%
Less than 6	18	30%
Total	60	100



Graph 7A : Time Spent in Parlor

Table 7B : Punctuality

Categories	Total	%
Most regular	03	05%
Regular	21	35%
Mostly	09	15%
Sometimes	09	15%
Rarely	18	30%
Total	60	100



Graph 7B : Punctuality

Reasons for selecting a cyber cafe

70% users prefer a cyber cafe in the basis of speed of Internet. 20% prefer cyber having separate cubicles, 10% wants spacious cyber cafes.

CHANGING SCENARIO OF LIBRARY SERVICES IN DIGITAL ARENA

By

Rabi Narayan Mishra

ABSTRACT

[Library, the nucleus of teaching and research has changed its service from traditional to electronic form due to overwhelming growth of published information and more specifically for the fiscal constraints and storage management. No Library or any Information Center could able to provide total published literature in any subject and impart services to the user community due to the price hike of journals, versatile titles added with the varied interest of the users. Electronic collections and services-there by, is the only option left out to satisfy the needs of the users. The stunning development of computer technology coupled with telecommunication technology has brought a dynamic change to the concept of library. The print and paper media were replaced with non-print media with the help of CD-ROM, Floppy, Computer. etc. Internet became the most viable tool for designing the traditional library to the "Digital Library" in the electronic milieu where the crucial functions largely depend upon the computers, communication facilities, and electronic equipments. The Internet made a constructive contribution to establish the true image of Digital Libraries in shape of electronic storage of information, retrieval, document delivery, accessing of information & services through various databases, inter-

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library loan, acquisition, price control transfer of files, transfer of information etc.]

PROLOGUE

Libraries impart information and documentary services to the user community through accumulation of published documents such as, books, manuscripts, journals, and other sources of recorded information. They commonly include reference works, such as encyclopedias that provide factual information and indexes that help users find information in other sources; creative works, including poetry, novels, short stories, music scores, and photographs; nonfiction, such as biographies, histories, and other factual reports; and periodical publications, including magazines, scholarly journals, and books published as part of a series. The traditional age of services has witnessed many ups and downs that ultimately precipitated to the confinement of electronic insurrection. The emergence of Telecommunication technology, Computer technology coupled with the Internet, particularly WWW (World Wide Web) that is a hyper-based Internet tool revolutionized the library service to a vibrant change. Publication sector dramatically preferred supplying information through non-documentary form ie, through CD-ROM (Compact Disc-Read only Memory). Artificially created boundaries were surmounted with the emergence of Internet making the globe into a 'Global Village' through networking technologies. The global information structure consists of communication lines, communication satellites and linked up computers in the form of Internet which enabled the scientists, technologists, librarians, information officers etc. to share their knowledge and resources etc. to keep them abreast with the current developments in their own subject fields and this enabled information services to provide universal access to information.(Ganapathy etc.;1997;153). The information blast in print and electronic media as well, created the predicament of current awareness, update, storage and retrieval of information. Internet, a federation of networks has been defined by stalwarts like Joe Abernathy as 'a network of all kinds of computers that use myriad operating systems where packets of data travel from system to system till they reach their destination electronically (Abernathy; 1995; 132-9). Butler in 1994 (Butler; 1994) has, however, defined Internet as 'At one level it is a vast collection of large and small interconnected computer network' extending all the way around the world. Internet along with other electronic devices such as, CD-ROM, Floppy, Magnetic Disc, play a crucial role in promoting the concept of 'Digital Library'.

DIGITAL LIBRARY- THE PERCEPTION

The Libraries and Information Centers in the rudder of present information technology age no longer reckoned on the traditional shape of meeting the necessities of the users rather, they adopted innovative technological devices to assure the varied tastes of information requirements of the user community. The recorded appearance of information in the digitised bits could able to reach the user's personal computer through the track of information technology. The Internet and WWW technologies nest the technological surroundings and intellectual impetus to establish the Digital Library- a library without any physical survival in any edifice building. It, however, can be defined as an electronic information collections containing large and assorted repository of digital objects such as, text, images, maps, sounds, videos, catalogues, indices etc. that can be retrieved seamlessly by a myriad number of users without any geographical domain. Terence R. Smith (1997; 105-07) has defined Digital Libraries as 'Controlled collection of Information Bearing Objects (IBO) that are in digital form and can be organized, accessed, evaluated and used by means of heterogeneous and extensible set of distributed services that are supported by Digital Technology'

Digital Library, the concept as conceived by Clifford Lynch in 1995 is that it is a system providing a community of users with coherent access to large, organized repository of information and knowledge. The Digital Library is not just one entity, but multiple sources seamlessly integrated. The Digital Libraries endow with a structured and planned entrance to information stuffing in a dispersed environment and assist users in searching, evaluating and utilizing resources irrespective of their format. Improved information retrieval and enhanced document delivery capabilities are widely acclaimed strength of Digital Library in a networked environment though Internet and Intranet in Library and Information Center. Internet allocate swift access to a extensive assortment of information sources in the globe by enhancing a uniform interface to a vast array of textual and multimedia through HTTP (Hypertext Transfer Protocol). The web, being a hypermedia-based system countenances connecting amongst electronic sources (Arora; 2003; 6). The Digital Library, Electronic Library and Virtual Library practically are not in existence as that of traditional library. However, the interaction with storage of information through computers, CD-ROM and other electronic devices and browsing of information through Internet symbolizes the feeling of its existence. These libraries have become an indispensable source of information for promoting research and development irrespective of subject areas without any geographical boundary. Hence, the

primary components of Digital Libraries are:

- Collection of geographically distributed digital information;
- Users of geographically distributed areas;
- Representation of digital information;
- Seamless access; and
- Diverse collection.

According to William Saffady, the Digital Library concept can be pertained to the following areas (Matson; 1997;p.88).

a. Machine-readable data files, often with scientific and technical applications;
b. Components of the emerging National Information Infrastructure;
c. Various on-line databases and CD-ROM information products;
d. Computer storage devices on which information reside such as, optical disk, juke boxes or magnetic tap autoloaders; and
e. Computerized networked library systems.

SERVICES OF THE DIGITAL LIBRARY

The Digital Library is a solution for storage of information in electronic form and proper distribution of all types of digital contents stored in ditised bits. The Digital Libraries available in various forms are restricted not only to the size of files, the format of content which are available in a structured form of software on CD-ROM including video clips, full length movies, but also extend its jurisdiction to rapid communication, Boolean search, browsing of information on internet though World Wide Web (WWW). The services extended in the digital surroundings are multiple by nature. Electronics encompass an exceptionally broad range of technologies. An ever-increasing volume of information is transmitted in digital form. The computer technology especially Internet has allowed the users to access to knowledge without any geographical boundary through computerized indexes of scientific and technical journals, which are accessible from centralized services over telephone lines. These central databases are being supplemented by new techniques derived from digital audio and videodisc technology, which provide locally, and at low cost, access to vast amounts of information in text and graphic form (Britannica 2001 CD). In addition to the above services in Internet environment, the following are some prominent and worthy blessings to the user community in digital surroundings (INFLIBNET; 2003;P.56).

Electronic Mail (E-Mail);
FTP (File Transfer Protocol);
Remote login;
Current Awareness Bulletin;
Bulletin Board Service;
World Wide Web (WWW or W³);
E-Publishing (Electronic Publishing)

Electronic Mail (E-Mail)

The messages or information through electronic form are transmitted and received by digital computers through a network. An electronic mail, or E-mail, system allows computer users on a network to send text, graphics, and sometimes sounds and animated images to other users. Though principally, E-Mail was premeditated to target communication between a pair of individuals, it has now been proved to be the most viable media of extensively recognized communication system among a spacious cluster of users through computer technology and telecommunication technology. E-Mail is the most effective and flawless means of interpersonal communication method for different groups with mutual interests to exchange information, ideas and perk up their co-operation (Patnaik; 2001p.506).

FTP (File Transfer Protocol)

In Internet gamut, the files containing text, graphics etc. in hypertext are transferred among the computers on a network through File Transfer Protocol. It is an effective means to copy files from a remote host to own computer and vice-versa. Thousand of systems connected to Internet have file libraries that are accessible to the public. Libraries and Information Centers are no exception to it as seamlessly the files along with text; image, sound etc. are transferred through Internet for users.

Remote Login (Telnet)

Any computer equipped with a modem and some software can be got at tenuously. Telnet enables a user to communicate from his computer to remote computer irrespective of its location in the globe. It also appropriates sending or receiving messages or files including execution of programmes from a distant computer. Telnet provides a remote admittance to thousands of other computer services on Internet Libraries of information and huge databases of research materials are available through telnet. The telnet interface is a text based and the user enters his login name and password before gaining access to the system (Agrawala; 1999; p.26).

Current Awareness Service

Current Awareness Service (CAS) is one of the important facets of services in Internet that facilitate the latest and update information in the field of research and development irrespective of subject field. The CAB is also available through CD-ROM and On-line databases. The information recorded in databases are obtainable in shape of CD and National and International databases through on-line which dwells of natural-language texts of documents and further, number-oriented databases chiefly contain information such as statistics, tables, financial data, and raw scientific and technical data. Such databases provide ample information in a particular field. Large databases have become increasingly most important in Library and Information centers as a good number of users make access to promote research and development. Governmental agencies, business organizations, and universities usually maintain the largest databases covering a wide range of fields. These databases contain texts of such materials as abstracts, reports, legal statutes, wire services, newspapers and journals, encyclopedias, and catalogs of various kinds. Moreover, the Libraries used to maintain reference databases that contain bibliographies or indexes that serve as guides to the location of information in books, periodicals, and other published literature. (Britannica 2001 CD). The databases used to play a vital role for providing Current Awareness Service which also include Bibliographical Database, Documentation list, New additions of Titles in Publishers Catalogue etc.

Bulletin Board Service (Network News)

Internet materializes to be one of the prime provider of Bulletin Board Service which is otherwise is known as Network News. The newsreader software appropriates a person to study messages that have been posted to a newsgroup or to compose and send a message to the group. Diverse fields consisting of topics such as, Science, Politics, Education, Entertainment and Employment opportunities etc. are accessible in the Netnews with out any restrictions to place with few restrictions to particular organisation, city, country etc. Further, the Bulletin Board Service grants an individual to (i) Select one or more discussions groups of Internet (ii) Periodically check to determine whether new items have appeared in a discussion (Jayaprakash & Bachalapur, 2002; CD). This also supports to receive new article on the interested field by the participants of the news group. Netnews software handles newsgroup subscriptions locally; the software keeps information about the newsgroups a user has joined and the articles the user has read in a file on the user's disk (Ibid)

World Wide Web (WWW or W³)

World Wide Web prevalently the Web is the leading information retrieval platform of the Internet that makes the sense of turning the globe to a Net village through computer network. The Web enables the users an easy access to a vast array of documents and information irrespective of area that are connected to each other by means of hypertext or hypermedia links. The hyperlinks are nothing but the electronic connections that link related pieces of information in order to allow a user easy access to them. Hypertext allows the user to select a word from text and thereby, access to other documents that contain additional information pertaining to that word. However, hypermedia documents feature links to images, sounds, animations, and movies. Browsing on Internet enhances the information access in a significant way. Internet browsing services use an interactive paradigm that allows a user to view documents from remote computers without performing tedious file transfers (Ibid).

E-Publishing (Electronic Publishing)

Electronic Publishing alleviates dissemination of publications in electronic form with lucidity that is also cost effective. The technology imparts universal accessibility and flexibility. With the help of this technology, the Libraries and Information Centers built a sound collection development of journals, books, and reference books etc. that is very much amenable to readers with the help of computer. The Libraries used to extend this facility with the help of Intranet connections to the various wings of the Library as well as the Departments. The E-Publishing that is a successful venture of electronic age can be defined as the publication process where the manuscripts are transferred to electronic format and distributed to the users. F.W.Lancaster (1989;p.316-25) has rightly pointed that, in the most sophisticated interpretation, the full capabilities of electronic media including motion, sound and interactive features are exploited in the creation of a completely new publication forms. Further, the fusion of electronic, computer and telecommunication technologies with publishing can be called as E-publishing to denote the sense of information source publication in Machine-readable form which are distributed on magnetic tape and video discs and can be accessed like any other databases. The journals that are available in electronic form in the field of Library & Information Science are figured in the following URL sites (Swarna & others; 39(3); 2002;p.272)

- Index Morganagus
  http://www.sunsite.berkeley.edu/-emorgan/morgangus/index.html

- Bubl Information Service
  http://bubl.ac.uk
- Washington Research Library Consortium's Library Oriented List and Electronic List
  http://www.wrlc.org/liblists
- New Electronic Journal and News letters
  http://www.gort.ucsd.edu/newjour/toc.html
- Scholarly Electronic Journal
  http://www.library.msu.ac.th/arec/e-journal/nid.html
- Serials in cyberspace
  http://www.uvm.edu/-bmaclenn

IMPACT OF DIGITAL LIBRARy SERVICES

The submission of Computer and Telecommunication technologies in Libraries and Information centers has advanced the aptitude of information acquisition, processing, storing and retrieval and more particularly the Electronic Document Delivery System. There is a incredible percussion of this in the Digital Libraries service in all quarters including the impact of electronic publishing in general and electronic journal in particular which proved to be an inherent capabilities for manipulation, searching and acquiring of information resources. The Digital Libraries could admit a direct interaction among the end users with the various networks and information resources in remote access areas without any geographical limitations. The Boolean search of full text through browsing made it a positive solution to the emerging problem of the scholar in the midst of ocean of information.

The Internet is arguably the electronic resource that is now having a most dignified and significant percussion of library services and operations and on the professional activities of librarians. There is a tremendous brunt of the application of IT in Libraries and Information Centers, which elevated the competency of information acquisition, processing, storing and retrieval and more specifically in Electronic Document Delivery System (EDDS), The digital library could admit a direct interaction among the end users with various networks and information resources in remote access areas without any geographical boundary. Added to this, the tremendous success of CD-ROM as the optical medium of choice for the thousands of publishing firms led to the generation of optical information storage system through CDs at par with E-Publishing for its storage of good quantum of data, durability, crystal presentation, and affordability. The Electronic Journal, periodically available through on-line has been

defined by Mc Millan (1991;p.97-108) as serial produced, published and distributed nationally and internationally through electronic networks. The major impact of the transfer of electronic information in the Digital Libraries is concerned with the quality, authenticity, and reliability of information services. In addition to this, the mode of transfer of information could be well effective through electronic clipping services, & electronic reference service, (Moorthy & Karisiddapa; 1996;p.25-31) in Digital Libraries. The electronic preservation through selection, acquisition, organisation and above all the standardization, creation of Metadata, Display technologies are also the important components of impact of the Digital Libraries. The preservation, according to Lupone (2000;p.30) is important as it captures culture and access important concepts of the present Digital Libraries that are evolving into digital community by uniting people with common interest in a new way. The most significant contribution of the digital age in regards to e-governance is that, the digital certificates that are digital credentials are being awarded through a physical process.

CONCLUSION

The Digital Libraries in the 21st century posses new challenges in the age of advanced computer technology and telecommunication technology era which has an obligatory impact on networking systems to solve the promising problems of the user communities who entail information in a multidimensional areas. The Digital Libraries, the hub of storage of information in digitized bits and flow through computers and telephone lines without any geographical ambit to the users and thereby, changed the world in to a global village. The varieties of electronics products through on-line and off-line proved successful for information acquisition, storage, management, dissemination and retrieval in the digital age. During 1970's the Digital Library that were basically restricted to minicomputers entered to a drastic revolutionary change in 1990's with the swift development of IT and multidisciplinary expansion of software technologies paved the way for inclusion of text, image, audio, video, graphics including hypertext and hypermedia within the ambit of Digital Libraries. The fusion of electronic, computer and telecommunication technologies with publishing can be called as e-publishing to denote a sense of information source publication in Machine Readable Form which are distributed on magnetic tape and video discs and can be accessed like any other databases (Moorthy and Karisiddapa; 1996;p.16) in the field of telecommunication technology, the Integrate Services Digital Network (ISDN) which is an Integrated Digital Network (IDN) the digital switches and digital paths are sued to establish a varieties of service such as Digital Facsimile,

Teletext, Database Access, e-Fund Transfer, e-Mail, Image and Graphic Exchange, Document Storage and Transfer, Video-Conferencing etc. (IGNOU; 1995;p.48-49).

In the networking sphere, the Internet made a constructive contribution to establish the true image of Digital Libraries in shape of electronic storage of information, retrieval, document delivery, accessing of information through various databases, interlibrary-loan, acquisition, price control transfer of files, transfer of information etc. Further, CD-ROM, optical videodisk and other latest technological developments also made significant contributions for understanding the tenor of electronic service through Digital Library. The transform of service from customary to electronic form has become imminent in view of application of computers, creation of databases, downloading of information on a wide field, international databases from NET etc. in the Libraries and Information Centers- thereby generating a lot of opportunities to the users to access a vast array of information in many fields without any geographical edge.

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DESIGNING AN INFORMATION SYSTEM TO MEET THE CHANGING INFORMATION NEEDS OF USERS

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ABSTRACT

Information needs of users are not static and common in organisations. Different approaches made to understand the user information seeking behaviour and changing information needs. Most of the studies embedded in theoretical frame work based on previous studies in the fields of information retrieval and user information behaviour@[1] left the information workers with lettle guidance.

The importance to the digital libraries and web-based information retrieval and services become more prolific for information access for many users world wide. The Library and information professionals need to learn more on users information seeking behaviour and interactions with information retrieval technologies@[2]. The mist of information problems necessitated information workers some guidance to understand the users and their information seeking behaviour. Libraries can not exist in isolation, always attached to an organisation to meet the information needs of its users.

Libraries carries its organizational responsibilities and resembles all its activities according to the objectives of parent organisation. The user of information system is

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also part and parcel of the organisation. Most of the information they seek is a process of work they carry in the organisation. To understand the information needs of the user first of all one has to understand the nature of the organisation they are working. Analysing the organisation as a system reveals the strength and weakness of the information system it contain and information intensity at different levels in the organisation. The information needs of the users arise out of the work they carry in the organisation.

INFORMATION NEED

The survival and development of an organisation depends on the system of information system it is having, the organisational design itself will be an information system in which information should flow in right paths@[3]. All records and documents in the organisation contain information, information processing is the regular activity in the organization.

ORGANIZATIONAL INFORMATION NEEDS

The hirarichical flow of information in an organisation reflects its value at different nodes and levels. It also shows the organisation as a system which have little or more thrust on information. All organisations need to have a potential information system on their own suitable to their organizational needs. If we agree the organisation as a system the method of system analysis pertaining to information needs at different sub systems provides a solution to identify the information needs at different levels of the organization.

NATURE OF THE WORK IN THE ORGANIZATION

An organisation contains many sub-organisations as sub-systems. Certain sub-systems may have greater information intensity with compare to another information intensity may also differ. Understanding the nature of work in sub-systems provides an account of information needs in the organization. A well aware information officer in an organisation can find the information needs by analysing and making frequent visits to sub-systems and talking to people about their work reveal a great deal about the information needs.

ELEMENTS TO ANALYSE THE ORGANISATION AS A SYSTEM

Analyse the nature of the organisation and its functions, aims and goals.

* each sub division of the organisation and each process of work in the sub-division.
* information intensity of each process.
* level of information need in .
* division or sub-division that are most information intensity.
* nature of information required either internally generated or external.
* Identify the levels of users whose information needs are frequently changing and multi dimensional.
* users needed regular guidance to information sources.

FACTORS TO OBSERVE IN EACH SUB-SYSTEM

* What are the works that are processing in a specific subsystem.
* How much work processed
* in side the organisation
* out side the organization
* and collaboration with others.
* How information reaching / brought in to the work place.
* What external links to information sources exist.
* How they are used.
* What current problems exist in the sub-system / individual desk / organisation.
* What extent the information helping in solving the problem.

Observing these factors make the information personal well - informed person in the organisation and facilitate design an effective information system save money, material and man power of the organisation.

PERSONAL INFORMATION NEEDS

To understand the individual user or personal information needs the information workers has to analyse each user in the organisation. To understand the users personal information needs, the following observations may be made possible to understand each user.

* Monitoring inter - library loan requests.
* photocopying request forms.

* awareness information services programmes.
* comments and opinions of users.
* government information on the related subjects of the organisation in specific and manpower development and welfare in general.
* reference services analysis etc.,

INFORMATION SEEKING BEHAVIOUR

Information seeking can be understood in two senses, it is a continuous activity in general, but a organisational user it is highly event driven phenomenon many times that event may be more important either to the user or to the organisation. People have well developed formal information seeking skills. The process has to be relearn on each occasion, if, such occasions or events are widely spaced.

Apart from information seeking through formal information source, users go for informal information sources as a first choice after that they opt for the formal sources like libraries as second or third sources or further. Personal interaction in the organisation yields much work related information and it is an immediate information source. Some times it is as give and take or hirachichy. In majority cases users rely on the direction of some one who searched information previously. The comments and trust of the previous searcher have impact on the validity of information available through formal sources. The users resort to formal source like libraries for information in certain conditions as

* The user need information immediately .
* Can not spare much time to locate the information.
* The users knowledge of information sources is short.
* Un willing to revel the real reasons for wanting information.

SERVICES DESIGNING

The result of the analysis of an organisational information needs address to design appropriate information system. It should be around the needs of the information users and information seeking behaviour. A fact to know is that nobody can design a permanent suitable information system to an organisation, redesigning is necessary from time to time since the organisation, its users and its functions change over time.

CONCLUSION

Designing information system is to serve better to the user who is centred to all activities of library and information profession, understanding the user is possible and highly relevant to design and creation of effective library and information services. Continuance of the information profession depend upon in design and development effective information services and deliver it to the user needed intime.

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DIGITAL INFORMATION AND DOCUMENTATION MANAGEMENT ENVIRONMENT (DIME) IN HEALTH AND ALLIED SUBJECTS: AN ANALYTICAL STUDY OF LESA

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ABSTRACT

This paper identifies the importance of information management and its vital role in leather science abstracting (LESA) and indexing services in CLRI for leather industrial development. Indicates the leather information scientists, documentalists'/ documentation officers' role in relation to information and documentation management environment services and creating awareness for leather and allied subjects access facilities in Leather Science and Technology (LEAST) innovations for R&D and academic carrier developments in CLRI .Brings out a brief review of information and documentation management concepts/ services which are essential for socio- economic development in leather and allied industries. Outlines the impact of digital information management environment service access facilities using WINISIS software application in relation to LESA. Highlights the constraints in the effective use of digital information access in leather information management products and services in leather and allied

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subjects from the Indian context. The constraints such as i) lack of awareness towards the leather science and technology innovations ii) lack of interest 0 n the part of user community in knowing the IT based leather information products and services etc; In the light of constraints in Indian context towards the effective use of digital information and documentation management products and services, certain Planning strategies are provided for effective information management in CLRI for effective information access in leather and allied subjects and concludes objectively that the IT based service access facilities which are essential for R&D support in CLRI and to enhance Total Quality Management (TQM) for effective information handling in leather and allied fields in the leather world scenario and brings out a sequence of operations in information management without much of human interventions.

INTRODUCTION

The digital information management is playing vital and viable role in Leather Science Abstracting and Indexing (LESA) monthly, International Periodical information and documentation services for information access facilities to the Leather information user community in leather and allied subjects such as Raw hides and skins, proteins and collagen, pre-tanning, post-tanning, leather chemicals and leather auxiliaries etc. in Leather Science and Technology (LEAST) innovations for leather and allied industrial development. The WINISIS software application tool is being used for information access from LESA database service for R & D support and academic career development in CLRI and to enhance the Total Quality Management for effective information handling in leather and allied subjects in the leather World scenario for socio-economic development in leather industry.

OBJECTIVES

This paper has been designed and developed with the following objectives:

- Identifying in vital role of Information and Documentation Management in Leather Science Abstract and Indexing services in Central Leather Research Institute.
- Identifying subject wise dissemination of records in LESA database.

- Identifying the rank list of contributing leather subjects in LESA database.
- Distribution of citations in LESA database.
- Periodical-wise distribution of records in LESA database.
- Identifying the rank list of periodicals
- Identifying the authorship pattern citations in LESA
- Identifying the constraints in the effective use of Digital Infonnation in Leather and allied subjects.
- Identifying the provisions/planning strategies for effective Digital Infonnation Management Environment for effective infonnation access in leather and allied fields.
- Identifying in Infonnation /Documentations Scientists effective role in Digital Infonnation Management Environment.

SCOPE OF LESA

Leather Science Abstracts is a valuable reference tool for knowledge dissemination in Leather and allied subjects. LESA is a monthly international abstracting and indexing current awareness service periodical publication containing the subjects such as Footwear technology, Leather chemicals and leather economics etc appearing in about 500 scientific and technical periodicals published allover the World. The abstracts are presented under well-defined subject headings and include indexes. This current awareness service can be accessed for retrospective search for a specific subject study like this present study for the state-of-the-art of the subject etc. The WINISIS software application tool is being used for infonnation access in leather and allied subjects from LESA Database service in CLRI for leather infonnation scientists.

METHODOLOGY

LESA -an international abstracting and indexing tool for leather professionals was selected as a database for this study. As a current awareness infonnation and documentation service source in leather and allied fields, LESA database is second to none for leather professionals. The LESA database is being provided since 1968 onwards and for leather information analysis purpose, the special emphasis was given to volume 34 (11-12), November and December 2002, to study various trends in leather and allied subjects.

IMPACT OF INFORMATION MANAGEMENT IN LEATHER AND ALLIED SUBJECTS

The information scientists/Documentation Officer are having vital

role in content analysis and content management for knowledge dissemination in Leather and Allied Subjects for leather industrial development in CLRI. The bibliometrics analysis has been evolved in this study to identify its effectiveness based on case study method in LESA database. The results of this study are as follows.

Subject wise distribution of records in LESA

Table 1 provides the subject-wise distribution of records under study.

Table 1

Subject -wise distribution of records in LESA Database

S. No.	Subject Areas	Coverage for Total No.of records n=128	Percentage	Rank
	Leather Science and Technology			
1.	Leather Industry, History, Economics, Education Management.etc.	20	13.33	IV
2.	Raw Hides and Skins	2	1.33	VIII
3.	Proteins and Collagen	5	3.33	vII
4.	Leather Chemicals and Leather Auxiliaries	21	14	III
5.	Leather Finishing Materials	8	5.33	VI
6.	Leather Properties - Quality Control	8	5.33	VI
7.	By products	5	3.33	VII
8.	Tannery-Environmental Aspects	12	8	V
	Leather Products			
9.	Footwear	24	16	I
10.	Leather goods	23	15.33	II

It is observed from the Table 5.1 with regard to the subject-wise analysis of records in LESA database indicate that out of 128 records in LESA database, 24 records (16%) are from footwear, 23 records (15.33%) are from leather goods, 20 records (13.33%) are from leather Industry etc and followed by other subjects stated in the above table. The contributions are more in footwear subject as indicated in the table 5.1 and stand at number one in ranking.

Distribution of Document Sources/citations in LESA database

Table 2 presents the distributions of citations in LESA database

Table 2

S.No.	Document types	Citations	Percentage
1.	Journals	123	96.1
2.	International standards/Patents and s cifications	5	3.9
	Total	**128**	**100.0**

It is clear from the table 5.2 that 96% of records/citations in LESA database are from Journals and followed by 4% from international standards/patents and specification sources.

Periodical-wise distribution of records in LESA database

The periodical wise distributions of records in LESA database are seen from table-3 understudy.

Table -3

Periodical -wise distribution of records in LESA database

S. No.	Name of the periodical	Coverage	Percentage	Rank
1	Agei. Bol. Techn. (Spanish)	1	0.8	26
2	Analytical Chemistry	2	1.6	12
3	Angewand Chemi	2	1.6	13
4	Asian J.ofMicro.and Biotechno-logical Environmental Science	2	1.6	14
5	Bio-Chemistry Journal	2	1.6	15
6	Bio-tech and bio-engineering	5	3.9	6
7	Chemical Weekly	7	5.5	4
8	Colloid and polymer science	1	0.8	27
9	Cuvio Pelli Mater concian (Italian)	1	0.8	28
10	Current Science	2	1.6	16
11	FootwearNewsIndia	22	17.2	2
12	Indian Journal of Chemical weakly	2	1.6	17
13	Indian Leather	4	3.1	7
14	JALCA	2	1.6	18
15	Journal of Clean Production	4	3.1	8

16	Journal of Colloid and interface science	3	2.3	9
17	Journal of environmental science Health Part A:TOXIC/Hazardous substances and environmental engineering	2	1.6	19
18	Journal of Hazzar materials	2	1.6	20
19	Journal of Inst.Chem. (India)	1	0.8	29
20	JSLTC	2	1.6	21
21	Leather Haute Market	2	1.6	22
22	Leather Age	1	0.8	30
23	Leather crafter saddler journal	26	20.3	1
24	Leather Trend	2	1.6	23
25	Leather Wear	3	2.3	10
26	Molecular physics	3	2.3	11
27	Pige Kexue Yu Gongcheng (Chinese)	7	5.5	5
28	Polymer	2	1.6	24
29	Standard World Monthly Addition	10	7.8	3
30	Travelware	1	0.8	31
31	World leather	2	1.6	25
	Total	**128**	**100.0**	

The periodical-wise analysis of the records reveals that out of 128 records in LESA database, 26 records (20.3%) are from 'Leather Crafter Saddler Journal' and 22 records (17.2%) are from 'Footwear News India' followed by other periodical sources. The ranking of periodicals are given in Table-3.

Authorship pattern citations in periodicals in LESA database

The Table-4 provides the authorship pattern citations in periodicals in LESA database

Table- 4

Authorship pattern citations periodicals in LESA database

Sl.No	Authorship pattern	Citations coverage for	Percentage
1.	One	44	34.38
2.	Two	22	17.19
3.	Three	18	14.06
4.	More than three	10	7.81
5.	Not mentioned	34	26.56
	Total	**128**	**100.00**

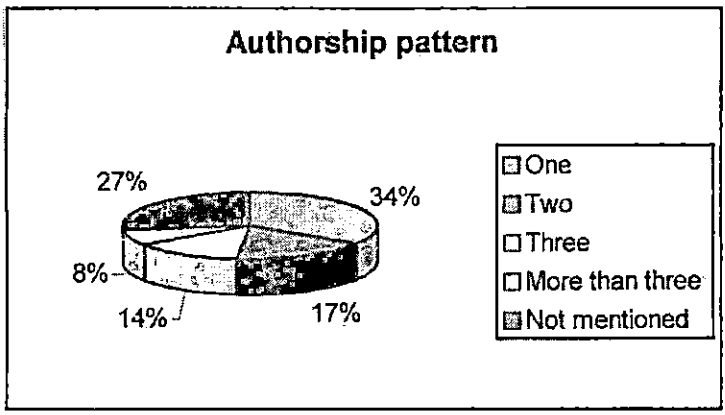


Fig. 1 Authorship pattern

It is evident from the Table-4 that a majority of contributions cited in LESA database are single authored while a considerable number of contributions resulted from the collaboration of two authors. Multiple authorship is a well recognized feature in modem leather science and technology and there has been a consistent trend towards the increased collaboration pattern in leather and allied fields and about 27% of records LESA database are anonymous based on data analysis while surveying the authorship pattern views on LESA database. Nearly 35% of single author have been cited from various periodical sources.

MAJOR FINDINGS

Following are some of the important findings of this study:

1. Over 96% of records in the LESA database are from journals.
2. It covers nearly 10 different major sub fields in the Leather and allied subjects.
3. Single author makes a majority of contributions included in LESA database, while a considerable number of items resulted from the contribution of two authors.
4. Nearly 26% of the articles, author name have not been mentioned.
5. "Leather crafter saddler journal" and "Indian Leather journal" occupies first two ranks in the journals covered under this study.
6. It is to note that Indian journal occupies the second rank in the journal ranking.

BARRIERS TOWARDS DIGITAL INFORMATION ACCESS IN LEATHER AND ALLIED FIELDS: AN INDIAN SCENARIO

Certain common factors/barriers can be identified that come in the way of digital information access in leather and allied fields in Indian Scenario. They are:

- Lack of coordination among the information professional people towards the progressive view on IT based leather information products and services.
- Lack of funding facilities in the developmental programs and policies.
- Lack of initiation and involvement by the information professional people in implementing the government developmental programmes and policies towards the information and communication technology facilities for societal development in leather and allied fields.
- Lack of information and documentation science professional people and lack of IT application based education training for information product and services and leather information and marketing etc.

PLANNING STRATEGIES FOR INFORMATION MANAGEMENT IN LEATHER AND ALLIED SUBJECTS

In the light of constraints in Indian context towards the effect use of IT product and services, certain planning strategies are provided to enhance the Total Quality of Information Management in present Information Scenario in Indian Leather Sector Library, Information and Documentation Centres in near future. The planning strategies are:

- Provision of adequate funding facilities for IT based Information Product and Services.
- Implementing the National Information Policy for information and documentation management activities.
- Providing the computer education and training to the Information Scientists/Information Managers towards the effect use of IT application sources such as database creation and maintenance, CD-ROM Technology, Internet, E- mail access facilities in relation to information marketing.
- Provision of infrastructure facilities like Internet, CD-ROM workstations in information and Documentation centers.
- Providing orientation programme to the leather information

user community periodically as and when the Library, Information and Documentation Centres. acquire the new products.

CONCLUSION

The procedure involved in the design and development of LESA database will enable other R & D institutions to develop similar databases in their respective disciplines for providing the bibliographic services either on demand or in anticipation. The quantitative study of such databases would throw light on the nature of research being carried out in the area of leather and allied subjects. It will also facilitate for the identification of core journals, core authors, and core countries that produce research output in the field of study.

END-USER TRAINING FOR MINING THE WEB: A REAL TEST OF OUR PROFESSIONAL METTLE

Jagtar Singh

INSTABLE ENVIRONMENT

Library and Information profession is in transition. We have moved away from atoms to bits. With the emergence of the Internet, and convergence of computer and communication technologies, information has become fluid and transcendental. Since there is no competition for space on the web, a lot of junk is being made available by the amateur authors in the public domain on the web. In this paradoxical situation, end-users have more information than they can manage, but less information than they actually need. Therefore, there is an immediate need to manage chaos on the web and empower the end-users with the techniques of the technology. Information literacy and end-user training can play a pivotal role in enabling the end-users to search and retrieve pertinent information from the web and also to survive the onslaught of information pollution. The symbiosis between information needs and technologies should be understood and then explained to the end-users. Information needs should lead the integration of information and communication technologies into our systems. But the situation is totally opposite in case of many libraries and information systems in India. Preservation of, and access to information has been the mission of the library as a metaphor of our documentary heritage since its inception. IFLA, UNESCO, and OCLC have made concerted efforts to provide massive access to information seekers in a cost-effective and timely manner. We have been

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associated with the printing technology since last five hundred years, and our mind-set is fine tuned to the use of print-based publications. But the emergence and convergence of information and communication technologies has given rise to new resources and services, as well as new challenges and opportunities. Information seekers, today, are interested in real time access to information and the Internet and the Web have the potential to provide instant access to pertinent information. But there are many problems in this regard. There is no stability in digital documents and new formats and services are emerging day by day. As such, library and information professionals, as well as the end-users many a time feel bewildered. Therefore, there is a continuous need for end-user training in the web-based resources and services. We have been providing library instruction, bibliographic instruction, and user education traditionally. But these services were basically library specific and designed primarily for print-based publications. Since there is a shift from print-based publications to digital documents, there is a strong need for end-user training. In this paper, an effort has been made to build a case for end-user training on continuous basis to enable the information seekers to get quality information from the visible and the invisible web.

The developments in computers, microelectronics and communication technology have radically changed the library and information environment. Gone are the days of stand-alone libraries, in which the strength of a library was judged less by the quality of its resources and services but more by the number of documents available with it. Traditional libraries were dominated by print-based publications and the access mechanisms were also by and large manual. Today with the convergence of computer and communication technologies there is a sea change in the library scenario. If we look around us, we find that there is a shift from stand-alone libraries to library and information networks; from print-based publications to formless data; from intermediary to end-user model. As such, our libraries should not work as just-in-case store houses of books; rather these should be just-in-time gateways to pertinent information, whereas library and information professionals should play the role of gatekeepers. One stop shopping centres or information gateways like BUBL, available via the Internet, can provide the end-users with a seamless connection to the Internet-based resources and services. Moreover, we are surrounded by automated, digital and virtual libraries as well as by data networks, specialized networks and library networks. World Wide Web and the Internet have further made the job of library and information professionals more challenging. "The development of new technology makes direct access to information easier for service users and while information skills are required to collect and present that

information there is likely to be less of a role in the future for information workers as intermediaries between the users and information sources. This has brought about a shift in the power balance between the information worker and the user with the users being empowered in terms of their access to information." [1] In fact, there is a paradigm shift from `parent-child` relationship between information provider and user to `adult-adult` relationship. As such, our real job should be to empower the end-users by developing network related competencies among them. The new role for the professionals in this regard should be that of facilitators and instructors. New formats and mechanisms are being developed to cope up with this rapidly changing and fluid environment. The existing gap between the generation and use of information is further widening in the present situation. "A major aim of user education is therefore to widen the use of a range of library resources which will enable academics to improve their teaching and research and students to improve their learning and achieve better results in their work." [2] In the print-based environment we had been talking of library instruction, bibliographic instruction and user education programmes. Initiation of users, lectures to library users, library tours, pamphlets and brochures, audio-visual aids and in few cases user education programmes were the main tools and techniques to enhance users' awareness and instruct them with the objective of enabling them to make efficient and effective use of library resources and services in meeting their information needs. These tools and techniques now need be supplemented in the changing environment. Keeping in view the information technology-based developments, end-user training should be the focus of user education.

THE ESSENCE

User education and training is essential to put library resources and services to efficient and effective use. It helps to publicize a library's resources and services and communicate with the end-users. It also helps the library and information professionals in getting users feedback. Indirectly, it provides an opportunity to build and further improve the image of a library. Above all, user education and training is the best way to implement the philosophy propounded by Five Laws of Library Science by Dr. S. R. Ranganathan. Otherwise also, there is no place for fixed and static structures and mechanisms. Library and information' resources and services must be flexible and dynamic, because the professionals are required to work as facilitators to the end-users in catering to their information needs. As such, they must be equipped with professional competencies, which include a solid professional knowledge base, pertinent skills and a positive attitude.

Only this way they can meet the challenges of the networked environment and satisfy the growing, diversifying and demanding universe of end-users." Users have their own set of values in relation to access, concerned with identifiable values such as need, immediacy, level, quality, use, currency and perceived end use or value. Value can range from expected or wanted change, or to commodity/market values." [3] As such, the library and information professionals must follow the golden principle of " customer creating value satisfaction.' They should add value to their resources and services on regular basis. Only this way they can build and develop their image. Information professionals' basic responsibility is to satisfy the end-users. For this purpose, they need to develop a few personal and professional competencies. "... we can with some success condense the SLA Competencies Statement to five broad component issues, with these five key words: resources, content, media, manager, (or management), and advocate (advocacy)." [4]

The need for user education and training has become more urgent because in the Network environment we are heading towards fee-based library and information services. This is because huge amounts of money are involved in establishing and developing the infrastructure for enabling an existing library to become a gateway, as well as an active partner of a library and information network. Otherwise also, today it is very difficult to sustain the traditional just-in-case paradigm, as in the face of declining budgets it is very difficult for a library to be self-sufficient. Therefore, there is a trend towards just-in-time paradigm of developing library collections. In simple words, we are moving from ownership model to buying access to external information. Commercial vendors and bibliographic utilities, such as, MCB and OCLC are playing a pivotal role in this regard. But huge costs are involved in accessing and retrieving that information which is not internal and lying elsewhere across the globe. The communication charges involved in accessing this information from a developing country like India are not within the economic limits of every institution. Moreover, we are heading towards the end-user model of accessing the networked information. In this context, it becomes therefore essential to develop online search skills among the end-users. "...the best thing we can do for aspiring searcher is to provide them with strategies rather than detailed, recipe-like instructions for every tool. This strategic approach seeks to help the users analyze their queries; help the users grasp the basic types and principles of Internet search tools; and determine which type of tools might provide the most likely starting point for their type of question. The premise behind this approach is that if we can help users master various Web conventions, and differentiate amongst the various types of tools- subject lists, word-searchable indexes, searchable newsgroup

archives- they will be able to adapt as new tools appear and current tools change. If they can analyze their question in order to make an informed choice about which tool to start with, their searching will be more efficient and, hopefully, successful." [5]

THE CHALLENGE

It is evident from the preceding observation that information sources have become more complex and costly. The traditional services, such as reference service, current awareness service and selective dissemination of information need be supplemented by selective elimination of information (SEI) and information evaluation and consolidation service to separate quality information from the junk which is being made available via the Web many a time. In this context, the basic challenge is to convert the potential users into actual users of the Internet- based resources and services. Since the new environment is pregnant with many information technology (IT) related developments, information literacy (IL) and end-user training can go a long way to develop IT related competencies among the end-users as IL includes basic, computer, and network literacy. The aim of information literacy is to make information users conversant with the concept and empower them in locating, retrieving, and making efficient and effective use of networked and distributed information.

THE STRATEGY

Traditionally under the umbrella term user education, library and information professionals have been initiating and instructing the end-users in the use of print-based publications. But now-a-days, since we are heading towards 'hybrid libraries', balance between the print-based publications and digital documents will be a basic norm in the near future. In this context, training and retraining the end-users in the use of IT-based resources and services, such as, email, ftp, telnet, www, browsers, search engines, opacs, databases, system software, application software, electronic journals, electronic newsletters, computer conferences, scholarly discussion lists, mailing lists, Usenet newsgroups, websites, web pages, directories, guides, CDs and DVDs should become an integral part of a library's user-education and training programme. Because of the space constraints it is not possible here to work out the details of how it can be done. The best strategy will be to develop a comprehensive user-education and training programme at national level. The UGC, NASSDOC, DESIDOC, university libraries, library associations, library and information science departments can play a pivotal role in this direction. Such a user-education and training programmes developed at national level can

be customized at local level to suit institutional needs.

CONCLUSIONS & SUGGESTIONS

In the networked environment, the philosophy enshrined in Dr. Ranganathan's Five Laws has become more relevant. Today, a library is both growing as well as a developing organism. Moreover, the formats and mechanisms associated with libraries are becoming more complex and costly. The twin perils of the growing universe of the print-based publications and digital documents on the one hand, and the declining universe of library budgets and the use of available resources and services on the other can be handled confidently by adopting certain strategies, such as by developing critical thinking skills, as well as promoting information literacy at large. In the near future, users would expect timely access to quality information. This information must be accurate, relevant, comprehensive, and engaging. This can be done successfully by incorporating end-user training components in the LIS school curricula, developing continuing professional education and training programmes for the library and information professionals and user-education and training programmes for the end-users on regular basis. Library and information professionals, as well as the end-users will have to develop learning attitude and network related competencies to reap the benefits being made available to us by the information and communication technologies. Only information literacy and end-user training can save information seekers from a paradoxical situation, a situation where end-users have more information than they can manage and less information than they need. Real time access to relevant and engaging information is the heart of the matter, and only the end-user training on continuous basis can ensure this.

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EVALUATION OF LIBRARY AND INFORMATION CENTER WEB SITES: USER APPROACH

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Amruth Sherikar

ABSTRACT

Academic and Research libraries have harnessed the potential of the World Wide Web to the delivery of automated bibliographical and full text information on their web pages to reach the every nook and corner of the user community. The literature offers considerable guidance on creating and evaluating library Web sites. Development of new methods for evaluation of library Web sites on the World Wide Web' including a brief examination and discussion of quality applied to Web sites with criteria for the evaluation of the content and design of academic library Web sites. Further, paper attempts to review the relevant literature and concludes with future research.

INTRODUCTION

The World Wide Web reflects virtual real world containing web sites with accurate information, quality products to sell, and as whole human beings with real lives. The purpose of the Web page is to

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provide guidelines useful for evaluating and identifying Web sites that contain accurate information. World Wide Web sites in all the discipline have skyrocketed as quickly as the Web itself. As the Web provides a user- friendly interface for the multitudes, and with it an avenue of free publishing never before seen, the necessity of sifting through the pages has never been more important. People from all over the world are flocking to the Internet in record numbers. To meet the needs of this emerging population of World Wide Web users, a select number of helpful Web sites dedicated to the creation of personal Web pages are available.

It reminds in the Internet era about sayings of T. S Eliot (1934) endless cycle of ideas and action —

Where is the life we have lost in living?

Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in information?

And now it can be said that, Where is the information, we have lost in Internet?

The quality issues have been discussed at length in the information sector especially with the emergence of Internet world. Avalanche of information available on the World Wide Web (WWW) by means of hosting web sites, as a means to impart informative information to the users requires information quality, design, and search engines. Matylonek (2002) describes methods for the systematic redesign of a library web site through gathering baseline data and comparing that data to changes in use brought about by design changes and shows how complementary information, based on web users' log statistics and direct observation of users, can enhance a library web site. Further relates this information to practical web site decisions that library web developers can make to help them design, modify and evolve their web sites so that quality is maintained.

It becomes necessary to mention that, a home page and a Web site are not the same; a Web site consists of a home page and a number of other Web pages. Web sites may be categorized according to content. There are personal home pages, advocacy pages, business pages, news pages, and informational pages. Obviously, library and information centre home pages belong to the last-mentioned type.

Web sites should be developed keeping in view of user behavior; search engines to look for; browser compatibility; load time; dead links; Web site submission to search engines; link popularity; spelling; Hypertext Markup Language (HTML) design; and metadata. Although numerous guides and handbooks are available for testing the quality

of web sites, bit most of them deal with technical design and structure of Web pages. Effort has been made to provide criteria for evaluation of user based library web sites.

LIBRARY AND INFORMATION CENTER WEB SITES

For many students, the World Wide Web is their main access point for library research and, therefore, libraries need to find a venue for the virtual reference by hosting the library Web home page as a reference tool and its importance in the online reference process.

Nowadays, the academic, research and public library aims at having its own home page or Web site in order to present itself and its services to the users who increasingly prefer to interact electronically with the information resources available. This is a great boon to the users for accessing and exploring the information resources available, the structure, information and graphic design may facilitate or impede use. Well-arranged and logically constructed home pages with relevant, nascent and timely information in pleasant and inviting graphics provide a positive experience and possibly stimulate the user into future use.

The library extends its online service to users by providing access to commercial online databases and whether academic subscription databases are accessible remotely, from off campus, through the Web. Library is perceived as being very important by its parent institution; the link location of the library home page will be on the first level of its institution's home page. And the library home page link is on the first level of its parent institution's home page, the library home page is more likely to provide commercial online databases and off-campus remote access to commercial online databases. Higher education may be supported by a selection of subject databases, among these electronic encyclopedias and dictionaries, and finally, the general public may make use of the library's OPAC. Thus, designing and hosting of library web page occupies a significant role in disseminating the information conscious of the society at large.

To improve the design of the library home page and facilitate user access, a Web usage analysis was conducted at Texas A and M University libraries through examination of statistics generated by Web tracking software. The study examined the geographic distribution of users and usage patterns of the library Web page, the peak usage times, and the computer environment information, which includes type of Web browsers, operating systems, screen resolutions, and screen and colors. The study also compared usage statistics gathered before and after Web page promotion, to measure the effectiveness of these

library-marketing efforts. The findings concentrate on identifying Web page design problems, thus allowing the establishment of recommendations to modify standards of library Web page design and improve library home page promotion. (Li, 1999)

CRITERIA FOR EVALUATING WEB RESOURCES

The nature of content in print information sources hold true on the Web as well, although, because the Web encourages wider use of graphics, Web versions of printed works usually contain more graphics and more color than their print counterparts. There is a need to provide criteria for evaluating web resources on the net. King (1998) conducted a study designed to examine the World Wide Web Home pages of all 120 libraries in the Association of Research Libraries (ARL) in order to compare design similarities and differences with respect to areas: backgrounds; document headers; document footers; document body; page length; number of steps to the Home page from the parent institution Web site; and domain name servers.

An eight-point evaluation checklist from the UC Berkeley Library for evaluating web pages is to ask the following checklist

- What can the URL tell you?
- Who wrote the page? Is he, she, or the authoring institution a qualified authority?
- Is it dated? Current, timely?
- Is information cited authentic?
- Does the page have overall integrity and reliability as a source?
- What's the bias?
- Could the page or site be ironic, like a satire or a spoof?
- If you have questions or reservations, how can you satisfy them?

(http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Evaluate.html)

The criteria for evaluating library web pages are summarized below.

❑ Purpose

A web site should state its purpose in the introduction or the title gives you immediate information about the content. The purpose of the web site has to be clearly spelt as to commercial, informative, educational, entertaining, personal or institutional in nature. This helps to create the site's credibility for effective use by library users.

❑ Authority

As author for a book, so also a web builder or designer for a web page, who self-identifies acknowledges accountability for a site. One needs to check as to its credentials, sufficient authority to speak on the subject, authenticity of information and whether the site is accurate and permission sought to use photographs etc.

❑ Objectivity

The objectivity of the web sites should encompass the questions - does the content reflect a bias; bias explicit or hidden; identity of the author or sponsor suggest a bias and how does the bias impact the usefulness of the information.

❑ Appropriateness and Relevance

The Web site that dazzles the eye and ear, carefully evaluate its intent and the content for ease of use. The information professionals are known for their information content, organization, appropriateness, relevance and access. Hence, it is an obligatory to check the appropriateness and relevance of web site. The content should be appropriate for the age or developmental level of your students.

❑ Currency

The information on the web page should be up-to-date, state page last updated and the date the information was created and the date the page was last updated. URLs change all the time so an occasional broken link is forgivable; but many broken links show site neglect, and perhaps for its content too.

❑ Clarity

The information on the net must be clearly presented like a mirror reflecting its contents, neat text, legible and easy reading supported by graphics. It should be well organized free from errors.

❑ Accessibility

Time is money especially for users, who always looks to search information ion the site that loads fast. As a result, web site server load quickly with proper required graphics only along with linked tags.

LITERATURE REVIEW

All of the 150 library Web sites in four English speaking countries Australia, Canada, UK and USA, examined have provided access to

their own catalogue and some databases. Most also provided access to other library catalogues, a description of services and an update date. There was much less information provided on instructional material and remote access, and there were discrepancies in the availability of encyclopedias, request forms and pathfinders (Still, 2001). Lilly and Van (2000) reports results of a US public library Web page usability study, conducted using a sample of public libraries taken from Hennen's 100 great American public libraries in order to evaluate their accessibility by people with disabilities. Library selection was based on HAPLR (Hennen's American Public Library Rating) Index Scores. Of the 100 libraries, 74 maintained Web sites and 14 of those Web sites were categorized as accessible by the Bobby online evaluation service. Libraries with larger service populations and those with lower HAPLR scores were more likely to have accessible Web sites. Lists the common barriers to Web access to disabled users. Guidelines and resources for creating and evaluating accessible Web pages are included.

While the major findings from the project: 'Development of new methods for evaluation of library Web sites on the World Wide Web' including a brief examination and discussion of quality applied to Web sites in general and library Web sites in particular. A new list of quality criteria for the evaluation of academic libraries was compiled and tested on 3 Danish academic libraries. Finally, a revised list of criteria was applied to 12 major Danish academic libraries. It is concluded that the Web sites in question are above average compared with Web sites in general and they do not, however, come up to expectations as virtual expressions of the quality levels of the libraries. This situation can only be improved if the libraries allocate the necessary resources regarding updating and development of the Web sites (Clausen, 1999).

A study demonstrates how hospitals, healthcare providers and health insurance companies can gain a competitive advantage by harnessing the Internet's 'real time' power to survey consumers visiting their web sites. Users were asked to identify the site's shortcomings, such as slow downloads or unwieldy navigation; indicate whether they found the information they wanted and what additional content they would find useful; indicate how they arrived at the Web site; and note the types of healthcare-related sites they visit on a regular basis. The results indicated that; 55 per cent of the respondents reported finding the information they were seeking, while 45 per cent did not. 34 per cent located the sites using a search engine, 28 per cent found them on the recommendation of a family member or friend, and a health system employee directed 20 per cent. Others cited hospital promotions and links, and their doctor directed the smallest group,

just over 4 per cent. Top reasons for visiting the sites were to find information about hospital services (23 per cent), a specific medical condition (17 per cent), and medical education opportunities (16 per cent) (Data. 2002).

Prietto (2001) outlines criteria for good Web sites with respect to browser compatibility, stability, loading time, organization, legibility, use of plug-ins and multimedia applications, audience, and number and quality of digital surrogates. Further discusses selected legal studies sites in terms of their usefulness as public service tools. So also Urgo (1997) considers the criteria for evaluating World Wide Web (WWW) Web sites, including the use of specific elements as an easier way of discovering content. The quality and creativity Web developers use to integrate elements could be considered as seriously as how they use colour and design. Entire subsets could be scrutinized by evaluating the usefulness of their elements and concludes that an evaluation based on elements of a subset of Web sites, avoiding specific content, could provide an overall picture of the current quality or availability of information in that subset and enable a note to be appended to the site to the effect that a particular element is missing and recommending users to use another site.

RECOMMENDATION FOR FUTURE RESEARCH

The areas for future research on Web Sites are

- Evaluations and comparison of some automatic HTML validators;
- User-oriented evaluations of a number of public, academic, and special libraries;
- Identification of obstacles to the use of library Web sites; and
- Comparison for academic and research web sites
- Developing a model for specific aspects of form and contents of web pages
- Proposal of a new method of evaluating the quality of library and information center Web sites.
- ISO 9001 requirements viz. design control, inspection and testing, and product identification and trace-ability may also be applied to library Web pages

CONCLUSION

It is crucial for a library Web site that it reflects the high quality services and information resources that are being offered. The future of the virtual library hangs on the quality of the Web presence. For this

reason, it is of great importance to develop evaluation tools and apply them to particular Web sites relevant to the user community in order to facilitate the quality Web pages and particular requirements for library Web sites.

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INFORMATION EXPLORATION THROUGH WEB BASED SEARCH BY THE ACADEMICS: A CASE STUDY OF BUNDELKHAND UNIVERSITY

J.Sridevi

ABSTRACT

This study deals with the use and importance of the www /Internet by the Teachers of Bundelkhand University environment. Data was collected with the help of a detailed questionnaire, to assess the web -searching/ Internet searching behaviour. Findings are analyzed and Training for specific subject search, subject information gateways has been recommended. It concludes with the stress on quality, cost, improved networking facilities to provide more satisfaction.

Key Words: *Search Engines, Web based Searching/ Internet, Internet Searching.*

INTRODUCTION

Presently the emergence of world wide web/Internet is radically changing the generations, flow and utilization of scholarly information Globally. The internet has fallen victim to its own success. In few years it has gone from being the communications province of scientists and engineers to a primary route of information exchange for everyone from financial analysts to fashion designers. Putting the network for the rest of us will be the real challenge in the years ahead. The www/ Internet constitute a gigantic store house of raw information and analysis of various subjects, the database of all databases.

Along with the services of Libraries and information centers, the www /Internet is providing information services in full bloom. This paper

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studies the web search/ Internet searching behavior of the academics of Bundelkhand University and their opinion on its use.

OBJECTIVES

As all us know that it is not possible to acquire all the printed material in the Libraries because of shortage of budgets and various other limitations which hamper users' access to the information that lead to the increased utility of Internet.

The Objectives are:

1. To find out the importance of use of Internet.
2. To find out the importance of various search engines a'nd their capability.
3. To find out the problems faced by the users.
4. To find out the satisfaction derived by the users with Internet and Search Engines.
5. To find out the search pattern and kind of search.
6. To find out the significance of Internet resources.

METHODOLOGY AND SCOPE

The study on web based search/ Internet search is confined to Bundelkhand University and was exposed to the Teachers in all faculties and Departments. The total faculty on the campus is 200. The sample size was 50% combining all the disciplines. The period of study was July -Aug. 2003.

A detailed questionnaire was distributed among the sample of Teachers/ faculty to collect the data.

Table 1 -Response Rate

Sample	Soc. Science	Sciences	Total
Total Faculty	75	125	200
Questionnaires distribution	40	60	100
Response received	23	23	46
Response Rate	57.5%	38.3%	46%

ANALYSIS AND FINDINGS

About the users and Non Users of the Internet

To find out the real users and non-users of the Internet, a questionnaire was distributed among the selected sample of the teachers of various faculties. 4 respondents out of the total 46 are non-users ie. 8.69% which includes all disciplines and categories.

Rest of the 91.30% is users of the Internet ie. majority are the users.

All the 46 respondents are familiar with the computer 95.65% users expressed that though they do not have Internet access but they may be considered as potential users.

The findings revealed that the real users are 42 upon which the further study is based on.

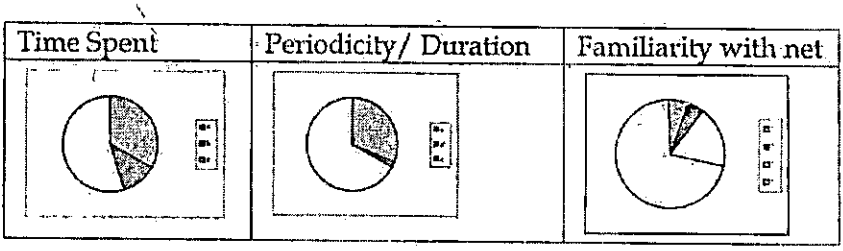
Internet Access

Only the teachers of the Departments Mathematics and computers, Information Technology have access to the Internet in the Bundelkhand University, which comprises of a limited number. Hence various queries have been put to the teachers as to how do they access Internet. The answers are:- 13(30.95%) users access Internet at flome an equal number ie. 13(30.95%) users access it through the facility at office or work place, 32(76.19%) access it at cyber cafe. Out of them20 (47.61 %) are from social sciences and 22(52.38%) are from sciences.

From the above it can be assumed that the teachers of Bundelkhand University are the serious users of the Internet inspite of limited facilities on the Campus.

Time & Money Spent:

Here the series of questions are to find out the time and money spent on internet, periodicity/Duration and length of use.



It is cleared from the analysis that 11(26.19%) teachers access it free of cost whereas 36(85.71 %) access it on payment. The time spent by the respondents varies 14 (33.33%) spend 30 min. to one hour per search 5(11.90%) spend one to two hours. Where as 23(54.76%) respondents have no boundation of time to use Internet. It is evident from the above analysis that inspite of the access to Internet is on payment more than 50% of the respondents are using it exhaustively.

Periodicity/ Duration of use

The duration of the use of Internet varies widely. About 28(66.66%) respondents use it once or twice a week, 1(2.38)

of them use it twice to one month 13 (30.95%) of them are irregular users, which is shown in the above chart.

It can be revealed that 16 (69.56%) social scientists are more regular users compared to 14(60.86%) of science faculty members/ Scientists.

Familiarity with Internet

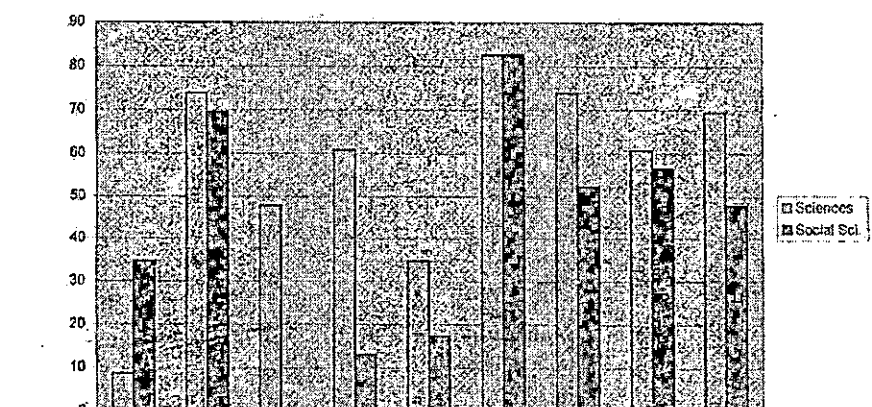
The study reveals that 30 (71.42%) teachers are using the Internet for more than a year. Hence we can assess the statistical difference between both the disciplines i.e. Sciences and Social Sciences that 20 (86.95%) of Science faculty users are using the Internet for more than a year, compared to 18 (78.26 %) of social Science faculty.

Informal Use of Internet:

Here the series of questions have been asked to the Teachers to find out about the informal usage of the Internet. 30.95% are using it for entertainment followed by 45.23% for greetings, 54.76% for news and 85.7 for informal E- Mail. Hence it can be assessed that the respondents use Internet not only for study / Research (academic) purpose but also for non- academic activities.

Specific Information requirement:

The main task in the present study is to fnd out the specific information requirement of the Teachers/Users, Their information requirement vary from each other.



	1	2	3	4	5	6	7	8	9
Sciences	8.7	73.9	47.82	60.86	34.78	82.6	73.9	60.86	69.56
Social Sci.	34.78	69.56	0	13.04	17.39	82.6	52.17	56.52	47.82

The above chart reveals that Information on Research is required by the maximum respondents 82.6% equally in & both the disciplines

i.e social Sciences, followed by information on Literature 73.9% and 69.56% respectively. It is found that an equal No 73.9% Social Scientists search information New Topics compared to 52.17% Science faculty.

It is observed that information on critical reviews is required by 69.56%; Social Science respondents compared to 47.82% Science faculty. However it was found that an equal no of Social Scientists i.e. 60.86% require information on current trends and statistical information., but 56.52%, 13.04% Science teachers require information on current trends and statistical information respectively.

There is a significant difference in the opinions of the teachers/ respondents with regard to the Historical and Retrospective information. 47.82%, 34.7% Social Science Teachers acess Internet for Historical and Retrospective information respectively, compared to 0% ,17.39% Science faculty. Laboratory information was preferred by only 8.7% Social Science faculty compared to 34.78 % Science teachers.

Form /Type of info required thro' Internet

The teachers require information in different forms and types. Information may be in the form of Book lists, Advertisements, Bibliographies, Full text, Indexes, Abstracts, Reference material etc. Here the teachers/ respondents were asked to indicate their required form of information. If it is arranged in increasing order the least preferred form is Book lists/ Bibliographies 21.42%, followed by 35.71 % teachers require Reference material. The next preferred form by 54.76% Teachers/ respondents is abstracts, the most preferred form is Full Text by 59.52%.

Purpose of Internet Services

The Teachers access Internet to obtain various services for Teaching, Research and publication works. The teachers have been asked to indicate their order of preference in obtaining these services in the below mentioned tabulated format.

Table 2: Internet Services: Their Ranking in %

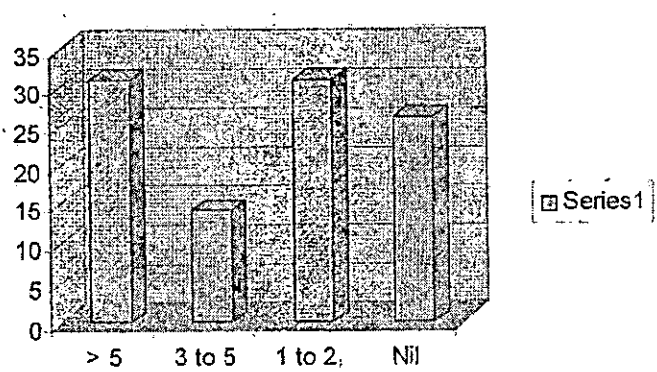
Services	Teaching			Research			Publishing		
	1	2	3	1	2	3	1	2	3
Research Work	45.23	26.19	2.38	59.52	11.90	7.14	33.33	21.42	2.38
Electronic Journal	40.47	9.52	14.28	54.76	19.04	7.14	40.47	21.42	7.14
To Down load software	28.57	26.19	9.52	26.19	21.42	9.52	16.66	23.80	11.90

To Download Text	57.14	14.28	4.76	52.38	16.66	2.38	28.57	23.80	4.76
Chatting	11.90	11.90	35.7	16.66	23.80	21.42	14.28	11.90	26.19
Discussion	28.57	28.57	11.90	28.57	28.57	7.14	26.19	11.90	19.04
E-Mail	40.47	23.80	16.66	47.61	33.33	2.38	42.85	23.80	9.52

1- Most Useful 2- Useful 3- Not Useful

It can be assessed from the above table that the teachers indicated the services provided by Internet are" Most Useful" for their research work as the figure indicated as 59.52% for research work, 54.76%, for E- Journals, 47.61 % for E- Mail, to download text is indicated by 52.38%, whereas it is "most useful" for teaching purposes by the percentage that ranges between 11.90% and 57.14% as mentioned above. It is observed from the above table that the Internet services are "most useful" moderately for publishing work. It's found that "Chatting" is not useful for any of the purposes.

3.8 Electronic Journals: Here the series of questions have been framed to assess the usage/Scan of E- Journals. The study reveals that 30.95% teachers access Internet for consulting more than 5 E - Journals. An Equal no. mentioned above consult 1 to 2 E- Journals but only 14.28%, scan 3 to 5 E- Journals. It is also found that 26.19% teachers do not access for E- Journal. There is a statistical difference between the two disciplines such as only 17.39%, social science teachers consult more that 5 E- Journals compared to 39.13%, science teachers. In the similar manner only26.08%, 8.69%, social science teachers scan 1t02, 3t05, E- Journals compared to 30.4%, 17.39%, Science teachers, the reason may be because of less availability of E- Journals in the field of Social Sciences.



Search Engines

Table3: Search Engines

Search Engine	Often %	Same Times %	Never %
Yahoo	69.04	21.42	4.76
Rediff	54.76	30.95	7.14
AOL Search	7.14	11.90	78.57
Khoj	7.14	26.19	76.19
Google	78.57	11.90	4.76
Hotbot	0	19.04	50
MSN	21.42	26.19	61.90
Altavista	19.04	35.71	19.04
Savvy	4.76	11.90	97.62
Any other	16.66	11.90	80.95

The above table gives the details about the usage of search Engines mostly used by the teachers. The findings reveal that google is the (most widely) used after by78.57%, followed by Yahoo, Rediff and MSN by 69.04%, 54.76% & 21.42% Alta vista, Rediff, MSN and Khoj are sometimes used by 35.71 %, 30.95% and 26.19% respectively.

Browsers used

Table 4:Browsers

Browser	Often %	Sometimes	Never%
MSN	16.66	28.57	61.90
Net Scape	16.66	21.42	69.04
Internet Expelorer	83.33	9.52	16.66

It is evident from the above table that Internet Explorer is the (most widely) often used browser by 83.33%.

Search Strategy

Here a series of questions were framed to find out about its usefulness. It is shown in the below mentioned tabulated format.

Table: 5 Search Strategy

Search Strategy thro' web	Agree %	Disagree %
Always finds useful information	92.85	7.14%
Always finds answers to queries	47.61	52.38%
Replaced the print media	30.95	69.04
Subject search easy	97.62	2.38
Subject search sometimes problematic	76.19	23.80
Best source of Information	95.23	4.76
Useless information	30.95	69.04

The analysis reveals that subject search is easy for 97.62% Teachers, 95.23% respondents agree that it is the best source of information, followed by 92.85% which agree that they always find useful information. The findings indicate that 69.4% teachers disagree for the statements that Internet replaced the print media and it gives useless information.

Another series of questions reveal that the time spent on searching is fully utilisedj Justified by 45.25% teachers compared to 59.52% answered" The time spent in searching is utilised up to some extent".

Another query was asked to know how the teachers did come to know about the particular search engine. 28.57% mentioned that by reading about them in books, 71.42% indicated that by discussion with friends and colleagues.

Problems with internet

The interpretation also reveals that the teachers also face problems with Internet, which are shown in the below mentioned table.

Table 6 : Problems faced by the users. %

Problems	1st Rank	IInd Rank	IIIrd Rank
Internet Charges	23.80	33.33	35.71
Too slow	38.09	35.71	26.19
Lack of Quality	4.76	30.95	50%
Too Much info.	42.85	28.57	16.66
Irrelevant info.	14.28	33.33	42.85
Lack of organised info	21.42	42.85	19.04
URL may change	7.14	28.57	40.47
Reliability	23.80	30.95	26.19

The above mentioned table reveals the problems faced by the users while using the internet which are interdependent and relative. The users experience that most of the time the server is down and so the problem too slow occurs. Here 42.85 % teachers stressed on the problems too much information and also on lack of organised information.

Internet- Influence on Personal Activities: To find out the influence of Internet on daily routine.

Table:7

Activity	Yes %	To Some Extent %	No.%
Less Concentration on print material	23.80	42.85	28.57
Less Contact with Colleagues	14.28	28.57	52.38
Less Library use	40.47	45.23	9.52
Improved Research Activity	73.80	21.42	2.38
Changes in daily routine	33.33	47.61	19.04

It is evident from the above that there is improvement in Research Activity/Output by 73.80% users. It can be noted that Library use is reduced to 45.23%. Except these two changes there is no much influence of Internet on personal activities of the users.

Satisfaction derived by Web Use :-

Here is a table to display the satisfaction derived by web use.

Table -9

Satisfaction Derived	50%	60%	70%	80%	Above 80%
Availability	33.33	21.42	16.66	7.14	21.42
Accessibility	19.04	28.57	26.19	4.76	19.04
Quality	19.04	26.19	21.42	14.28	19.04
Timeliness	26.19	14.28	14.28	9.52	16.66
Ease of Use	19.04	7.14	16.66	11.90	30.95
Cost of Use	35.71	11.90	16.66	7.14	23.80

The above table displays that for 30.95% users 1 Ease of Use' seems to be the most satisfied factor i.e. above 86% followed by the cost of use, Availability as 23.80%,21.42% users have above 80% satisfactory level. The satisfaction derived for the other factors quality, accessibility, timeliness is little low.

CONCLUSION & SUGGESTIONS

We can conclude that www. is the widely used tool by the academics for their Research, Teaching and Publishing/Scholarly activities. For searching information in general to specific subjects or fields Internet/www can play an important role. Though it plays an active role it has not replaced the print media. It is also found that use of Library is also reduced, as the users are more inclined towards the use of web. Web search with respect to specific subject search is not so easy that requires awareness and skill in the use of subject information gateways. Hence the most important aspect here is that proper training should be provided for creating awareness of knowledge of resources in the respective subject fields.

The use of Internet and www is becoming increasingly significant for the Teachers of Bundelkhand University and it occupied an important place among various sources of information.

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INFORMATION MINING

Rajesh K. Tripathi
R.K.Singh

INTRODUCTION

Today we are living in the digital age. So many developments are taking place in the field of Information Communication Technology (ICT). Internet is a world wide, non commercial freely accessible network of computer network. Internet has become a huge repository of information. Internet has provide large number of information sources and services in digital format like electronic journals, databases, World Wide Web (W3), listserv, communities information, government resources, library catalogue (Web OPAC) and commercial transaction etc. Internet has emerged as one of the most powerful tools for global communication and exchange of information. To get the right information at right time and from the right source has become very vital. As there is no centrally controlled authority in this case, lot of junk and useless information is also available on the Internet. One need a filtering technique to get the right information. Secondly, to dig out such vast source of information, one has to know what are all the resources available to him and the information is stored on the Internet. The art of finding a piece of information on the internet is called ***Information Mining***.

HOW INFORMATION STORED ON INTERNET

Information is stored on the Internet using most common and popular language- Hyper Text Markup Language (HTML) on WWW. HTML was first conceived in 1989 by researcher named Timothy

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Berners-Lee at CERN, a European research laboratory for particle physics in Geneva, Switzerland. CERN researchers developed the initial World Wide Web programs in 1990 and began releasing programs and specification to Internet users in 1991. Contrary to its name, HTML does not qualify as a language. It actually follows a script pattern where you may enter text, table links, images, graphics etc. and may be produced on the web browser in a desired format.

It is a platform independent meaning an HTML document created on a UNIX machine can read on a DOS/Mac machine. It is used to create HTML document. It follows all the standard of SGML. HTML document is a simply plain ASCII text. No formatting codes such as bold, underline etc. are used while creating the content of the document. All the popular Internet browsers can read the HTML document. HTML documents consist of the content and markup tags. A browser in its own way interprets the formatting tags. There are different HTML tags like HTML, HEAD, TITLE, BODY, PARAGRAPH, NUMBER LIST, BULLETED LIST, CHARACTER FORMATTING etc. further, HTML document establishes the link with other HTML documents, which is interpreted by the WWW.

HTML document has one limitation. These documents list only the static information available on the web site. It cannot be used an on-line environment. In this case the Web site send the information in the form of a static document. It does not have any mechanism to furnish the latest information as HTTP links only already created HTML documents. In case live information is to be supplied from a Web site to a remote user, Common Gateway Interface (CGI) is used.

SEARCH AND META SEARCH ENGINES

One of the biggest problems of the information age is sorting through all the available information to find what you need. The advent of the WWW has made on line information easier to access, but at the same time the amount of on-line information has increased dramatically. Navigating through all this information is still a difficult task.

Search engines are mechanisms that aid users to search the entire Internet for relevant information. The job of search engines is to index all the information floating around the net, categories it into various heads and present to users for searching. They are based on allowing users to enter keywords that are matched against a database. Unlike subject directories, which use human indexes to build their indexes, search engines use software programs, which create automatically their own database containing lists of web pages. All the web search

engines consist of two main components: one to retrieve information from database and another to build a database of information relevant to the subject of search. The database of relevant information is built by means of software programs that are often referred to as robots, crawlers, spiders, or worms. Different search engines use different types of spiders, whereas some visit every possible site, others are based on more selective principles and visit only the most popular sites. These search engines display the master index on their first pages and have a menu-driven, navigation facility. These are two ways to pick out the desired information:

1. The index has been arranged in a hierarchical manner. Users pick up the top-level entry and travel down to sub topic level by level till he reaches the desired place.
2. The second ways is to give search parameters in the search form presented by the search engines and the search engines conducts the search and display a screen full of list of brief titles. The users can scan these titles one by one and click on the most relevant titles to know its complete details. All types of Boolean operators can give while submitting the search query.

There are a whole lot of search engines available on the Internet. These are the free tools available. The major search engines available on the WWW is as follows:s

1. Google : (http://www.google.com/)
2. AllTheWeb.com: (http://www.alltheweb.com/)
3. Yahoo:(http://www.yahoo.com/)
4. MSN Search:(http://search.msn.com/)
5. HotBot: (http://www.hotbot.com/)
6. Lycos (http://www.lycos.com/)
7. Teoma: (http://www.teoma.com/)
8. AltaVista: (http://www.altavista.com/)
9. Netscape Search:(http://search.netscape.com/)
10. WiseNut: (http://www.wisenut.com/)
11. Excite: (http://www.excite.com)
12. Infoseek: (http://www.infoseek.com)
13. Mckinley: (http:// www.mckinley.com)
14. OpenText: (http:// www.opentext.com)

Meta search engines, which keeps the catalogue of all the search engines and allows the user, to supply the search parameters and fetch the information from popular search engines one by one and present back to the users the result of such search. The job of Meta search engines is to retrieve the user from searching search engines one by one. They represent the control center. The idea behind a Meta search engines is that an Internet users should be able to visit one site, conduct a search, and view the result from multiple search engines on a single result page. Meta search engines do not create or maintain their own index of web sites; they simply pass your search query on to other search engines and aggregate the results together for our convenience.. Some examples of multi- thread (meta) search engines are:-

1. DogPile: (http://www.dogpile.com)
2. Vivismo: (http://vivismo.com)
1. Kartoo: http://www.kartoo.com/en/kartoo.html
3. Ixquick: (www.ixquick.com/do/metasearch)
4. Ithaki: (http://www.ithaki.net)
5. Debriefing: http: // www.debrefing.com
6. Highway61 http:// www.highway61.com
7. Internet Sleuth: http:// www.isleuth.com
8. MetaCrawler:http://www.metacrowler.com
9. MetaFind: http:// www.metafind.com
10. Inferencefind: http://www.infind.com
11. Pofusion: http:// www.profusion.com
12. Ask Jeeves: http://www.askjeeves.com
13. Mamma http://www.mamma.com
14. Cyber411:// http://cyber411.com

WEB BROWSER

A Browser in an interface between the user and the Internet. The web pages can be viewed by using web browser. It contacts a web server and sends a request for information, receive the information and then display it on the users computers. Browser comes in various forms. The mostly available browsers can be classified into the following two types.

i. Text-based Browser

ii. Graphical Browser

Text based browsers permits the users see the actual information on the screen but the original page structure in which the information has been stored on the web is not shown on the screen. The users make use of navigator keys of the keyboard to go from one topic to another topic. No graphics / images can be seen while using a text based browsers. Text based browsers are used on those web-client computers that only have text displaying capabilities. As the downloading of graphics images takes lot of time, text based browsers are very faster than the graphical browser.

Graphical browser allows the user to view images, graphics, video and sound on their computer, " point-and-click " with a mouse to select hyperlinks, and uses drop-down menus and toolbars buttons to navigate access resources on the internal graphical browser are designed to take full advantage of the www's ability to handle all kinds of digital /multimedia data. The downloading of graphs images takes lot of time. The most popular graphical browser is Net scope and Internet Explorer. Both these type of browsers and many other like Mosaic, Cello, Viola, Macweb, etc... are freely available on the Internet and can be downloaded these are completely menu-driven. User can open am URL, add bookmark, print the page and save the file. Users can also send and Electronic mail by using GUI-based browsers.

WROLD WIDE WEB

WWW is the very popular and promising method of accessioning the Internet. The WWW, a set of Internet protocols and software that present information in a hypertext format. Hypertext is a new way of information storage and retrieval that enables authors to structure information in novel ways. An effectively designed hypertext document can help users rapidly locate the desired type of information from the vast amount of information on the Internet. The WWW is non-linear. There is no top, there is no bottom. Non-linear means you do not have to follow a hierarchical path to information resources. User jumps from one link to another link. These links are put on the screen in such a manner that they stand out and easily catch the eye. It is an ever - expanding collection of on-line documents, which have been put on the web sites using HTML. HTML document or web Page may contain many different forms of information such as text, graphics, picture, video and sound. These documents are available in various web pages and web sites and they are accessed through links provided by

hypertext document. Various software programs known as web Browser are used to seek these documents and display them on the user's local computer. These documents may reside on different computer located in widely distant geographical location.

HYPER TEXT TRANSPORT PROTOCOL (HTTP)

It is a protocol, which fetches the related documents from the Internet. It is transmission protocol and the HTML documents are fetches from various web sites using hyperlink. HTTP is the main method that web protocol uses to transfer data between a web server and a web client (web browser). An HTTP client, or user agent (web browser), connects to an HTTP servers by using a URL and request a resource, such as an HTML documents.

MINING STRATEGY

When a user goes for information mining/browsing, he makes use of one of the popular search engines. The home page of the search engine has the search forms in which the user inputs the search parameters. Search engines conduct the search and display the summary of the documents in the shape brief title, which can be expanded to a full-fledged HTML document. In this document there are various hyper links which links to the other HTML document and thus the user surf on Internet.

USES OF INTERNET ACCESS IN LICs

The use of the Internet as a teaching and learning tools is almost becoming part of the 'mainstream' in education (Cole.1998; Houlder, 1998). The purpose of Internet access in LICs is to rise educational standard and research programs, to support the professional work of staff and to enhance the library and information systems. The web is one of the most accessible tools available for educational use, it has a low learning curve, the majority of its Browser are graphical and user friendly (Lee...(et al.-1977). Uses of Internet access in LICs and Web sites, may be in position to offer some of the under mentioned services to their use-

i. Access to world wide educational resources including Museums, art galleries, catalogues, library resources and facilities.

ii. News and current events.

iii. Information exchange between individuals/institutional worldwide.

iv. Discussion with experts in different fields.

v. Connect to remote LICs and its resources around the world.

vi. Provide Internet Information Services such as a home page linked to a collection of electronic texts, databases and other Internet resources.

vii. Electronic document delivery.

viii. On-Line search service

CONCLUSION AND SUGGESSIONS

A library is a place where the "right information is provided at right time, at right place and in a right way" by Ranganathan still holds true with the coming of new technology. The resources are shifting from print to electronic/digital forms and the horizons of information age have expanded considerably than ever before, thanks to Internet and WWW making the whole global village, thereby leading to such huge information maze, which is beyond imagination. But, in order to make effective use of this mine of information, it becomes equally important to understand it and devise tools and techniques to utilize it effectively. Beside the analytical skills to identify the needs of users, knowledge of search tools has started becoming a specialty. Where search engines subject guides and Meta search engines help, identify and locate the information, search logic helps to conceptualize the search query.7

In the present digital era, it is essential on the part of the information users to familiarize themselves with the developments in the field of Information Communication and Technology (ICT) and improves their kills in using Internet for effective information management.

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INTERNET AND INTRANET BASED LIBRARY SERVICES

Neeraj Kumar Chaurasia
Ganesh Kumar

INTRODUCTION

Gone are days when the libraries were considered as a storehouse and the knowledge were kept in the lock and key. The services being provided that were not pin-pointed and exhaustive. By the due course of changing global scenario in the concept of libraries, it has become one of the ultimate objectives to provide effective service to the library users without lose of time. With the advancements in Information Technology, the users wish to have the information right at their own desk without having to go anywhere, which would save as lot of precious time. In the Internet and Information Technology era, the print on paper is slowly shifting to e-publishing. As a result libraries need to concentrate on developing e-documents, and get access to electronic information sources using Internet and network facilities to serve the library users.

There are three types of Academic Libraries, namely - School libraries, College libraries and University libraries. The users of them are basically teachers, research scholars and students. Academic libraries have a responsibility to support educational and research

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needs of its users. The Internet offers online access to information in which formatted textual, audio and visual form from any location globally. Basically this paper traces the users of academic libraries, users services through Internet and Intranet in academic libraries and benefits of Internet and Intranet to them.

WHAT IS INTERNET?

Internet is truly a global infrastructure for new millennium. It has become an indispensable and essential tool for research scholars, academicians, information professionals and the students. Internet is the network of networks, scattered all over the world. It was developed in 1969 as a project for US Department of Defence known as Advanced Research Project Agency Network (ARPANET). It provides access to communication services and information sources to millions of users round the globe. Internet serves as an encyclopaedia giving detailed information on a wide variety of subjects. The Internet has improved the users access not only to a wide variety of information sources but also to experts in the field. Further academic users can interact and collaborate jointly for a research project or publication with the global partners and experts.

WHAT IS INTRANET?

An Intranet is a localized Local Area Network (LAN) based communication system for providing all the services that the Internet provides, but only within the organization. Through Intranet, libraries can disseminate the stored information to its user in less time, with high effectiveness and allows to access to remote information.

USERS SERVICES THROUGH THE INTERNET AND INTRANET

The Internet offers tremendous opportunities and challenges for all kinds of Libraries in achieving their goals. It saves the time of users and provides economical and faster access. Information seekers are no longer satisfied merely with in-house conventional printed sources and they are becoming increasingly dependent on the Internet and Intranet based latest sources and services. Since the users are aware of the use of the Internet potential, their demands and expectations from libraries have grown tremendously. Internet provides the large volume of factual and bibliographic references to the users. The important information sources available on the Internet are : electronic journals, databases, full text documents, bulletins,

theses, dissertations; library catalogues, reference sources, patents standards, educational material etc. Most helps in various user services, most of the libraries of educational and research institutions are now connected to the Internet, which helps in various user services. With the help of the Internet and Intranet library can provide various user services to its users, some of those are as following :

REFERENCE AND INFORMATION SERVICE

Libraries can extend the scope of their service with the information available on the Internet. The online reference sources ensure the current facts and services to the users. The Internet is considered to be one of the reference tools. A large number of important reference sources like encyclopaedias, dictionaries, directories, indexes, abstracts, current contents, bibliographies, etc. are available on the Internet. Users can easily access these tools in electronic form. Through the Internet and Intranet technologies, the librarians may provide training to the users in the utilization of global electronic product and services.

ELECTRONIC CURRENT AWARENESS SERVICE

Current Awareness Service (CAS) has become very necessary for the users basically research scholars. They can search usenet news, reprints and the table of content of journals, etc. Through the Internet and Intranet research scholars catch up the latest development and technologies in their field of research.

ELECTRONIC SELECTIVE DISSEMINATION OF INFORMATION SERVICE

Library can provide personalized electronic SDI service by maintaining user profile and document profile. The latest addition to the library, journal articles of their interest can be scanned and send as attachment through e-mail or later on sent to the users or pasted on the bulletin board of the library page, saving the time required to surf the Internet.

ELECTRONIC DOCUMENT DELIVERY SERVICE (EDDS)

Through this service library provides journal articles using the Internet on demand under the terms decided with the Electronic Document Delivery provider. Some of the document delivery services are – CISTI's (Canadian Institute of Scientific and Technical Information, Swestscan), OCLC's Contact First and Article First, RLG's CitaDel, etc.

ONLINE PUBLIC ACCESS CATALOGUE (OPAC)

Many academic, research and other libraries have mounted their Online Public Access Catalogues (OPACs) on the Internet. With the help of the Internet, it is possible to access catalogues of libraries throughout the world. Some of the examples of OPACs are : OPACs of the Library of Congress, The British Council, OCLCs, etc.

INTER LIBRARY LOAN SERVICE (ILLS)

Using the Internet and Intranet user can easily access online catalogues of thousands of libraries and reserved the documents available in the other libraries. E-mail has become fast and cheap mode of communication for libraries to send or receive Inter-Library Loan. Libraries can now share the resources among themselves effectively with Inter-Library Loan management tools.

TABLE OF CONTENT SERVICE

Most of the publishers of e-journals provide table of content services to the users on the Internet. Through this service library can provide a list of relevant articles on a particular topic in the forthcoming issues of journals to its users using only the Internet and Intranet. e.g. ISI Philadelphia, provide table of content services to the users through the Current Content journals (URL : http://www.isinet.com)

ELECTRONIC-MAIL SERVICE

Electronic mail popularly known as 'e-mail' is the most common service on the Internet. It facilitates online sending interlibrary loan requested, exchange of data, etc. It is a very popular, cost effective, inexpensive mode of communication for library users. User can creates letters electronically and sends it over to the communication. E-mail is received within seconds, in most of the cases it reduces postal delays. The Important use of e-mail in the library environment is in document delivery.

ACCESSING E-JOURNALS AND OTHER E-PUBLICATIONS

Some of the current journals are very difficult to subscribe or sometimes not available in the form of hardcopy. A number of publishers have agreed to offer their journals electronically to the libraries through OCLC. The Internet play a crucial role in the access of these e-journals and other e-publications.

ELECTRONIC BULLETIN BOARD SERVICES (EBBS)

A Bulletin Board is a medium for posting and discussing announcements and messages of interest to a community of online users. The library can provide Electronic Bulletin Board service to its user by downloading headlines from daily newspapers.

CONCLUSION

It is essential for the academic libraries to change its services in accordance with the rapid changes in IT and keep pace with it. Then only the users can take utmost benefit of the services provided by the libraries. In the developing countries like India where paucity of budget does not help in coping with the latest developments, providing Services through the Internet and Intranet is one of the best ways in academic libraries, which can fulfill the needs of the large group of users.

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JOURNEY OF USER FROM TRADITIONAL LIBRARY TO DIGITAL LIBRARY

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ABSTRACT

Libraries are of no use if it has no users. Every section of the library works for the help of the users. Traditional librarian and traditional user's period is rapidly ending. Because of the advancement in information and telecommunication technology working of the libraries have greatly changed. Polymedia libraries are changing to Electronic/digital libraries. Electronic media has greatly changed the expectations and requirements of the user. Therefore, the library staff will also have to change themselves according to new scenario.

INTRODUCTION

Polymedia library or Electronic library is primarily meant for the students and researchers. With the development in computer technology and telecommunication, information technology has emerged as one of the force changing every sphere of life. Libraries and its users are no exception.

Traditional concept of academic libraries and user's orientation are undergoing an absolute change. Scholars and information scientists have started writing and working on projects of 'Electronic libraries and Virtual libraries'.

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INFORMATION SCENARIO

Undoubtedly, trillions of documents are being produced in the world every year; with U.S.A. leading the race of knowledge pursuit. The user is unable even to study the literature produced on a micro concept. Information management, information retrieval and information dissemination are major areas of considerations for the librarians and information scientists. Approximately 10 million books are being published yearly in the world. In 2001 A.D. about 70,000 books were published in India in different languages. However, English is still dominant. Approximately two lakh research journals are published in the world in addition to millions of newspapers, magazines etc.

Number of Web pages and sites on the internet are increasing at a very rapid speed. The full text journals, abstracts and electronic journals are also available on the internet. The user is bewildered because of explosion of knowledge.

Most of the Indian universities and colleges are facing financial constraint in procuring research journals and foreign books. Year by year the number of books and journals in academic institutions are decreasing. Online journals are also not cheap. Success of INFLIBNET'S plan to provide journals to universities on online, is yet to be seen.

INDIAN ACADEMIC SCENARIO

At present we have more than 291 universities and 12342 colleges which are providing higher education to about 80 lakh students. Generally these students are from middle class and upper class. About 25% of our population is still living below poverty line which can ill-afford to send their children for higher education.

In the ninth plan the centre government allocated about 24908.4 crore for education out of which only 2500 crores were meant for higher education. In the tenth plan 42850 crores have been earmarked for education, out of which only 3607 crores have been allocated for higher education.

Centre as well as state governments are making continuous efforts to eradicate illiteracy yet literacy rate is only 65.38% and female literacy rate is 54.16%.

INDIANS IN INFORMATION AGE

According to World Development Report 2003 position of Indians in this information age is as under :

Out of 1000 persons only 60 read newspapers; 120 have radios; 83 have televisions; 38.9 use cable network and 5.8 have computers. In Japan out of 1000; 578 read newspapers, 958 have radios, 731 have televisions; 147.4 have cable network; and 348.8 have computers.

In USA out of 1000 persons, 213 read newspapers; 217 have radios; 835 have televisions; 256.8 have cable subscriptions and 625 have computers.

Thus position of Indians so far as indicators of information society are concerned is unsatisfactory.

TRADITIONAL USER'S MOVE

The user is moving apart from the text oriented teaching in schools, colleges, and academic institutions which inhibit the students in their formative years from effective library use. Grossly inadequate book stock and information resources in the schools, and college libraries have not instilled good reading habits amongst the students.

Till the advent of latest information technology in the libraries, some users used to remain non-users throughout their course period because of their nature or the treatment meted out to them by the library officials. Sincere attempts to provide orientation were very rare in academic institutions. Time consuming process to consult even catalogue, was avoided by a number of users. Students of science faculty used to take a little more interest than the students of all other faculties.

USER'S ORIENTATION

Large enough literature exists on library programme known as 'user education'. The term appears to be generic in its denotation, for it includes all activities from the management of stack guides to provision of instruction in the use of bibliographic instruction and user education to indicate the various activities undertaken by librarians to ensure increased and effective use of library resources'. Guiding the users in exploiting library resources is an essential function of librarianship or information work.

LIBRARY ORIENTATION PROGRAMME

Human history is an endless relay race in which the baton of life is handed over from one generation to another. It is a continuous process to transmit knowledge from one generation to another.

Orientation should aim at basic research skills and strategies. Similarly teaching of the organisation of the literature in various disciplines as well as the basic reference tools in each discipline.

These objectives will assist the users to acquire skills for effective application of information retrieval through user education.

An orientation programme aims at acquainting the freshman with some of the basics concerning the library use. It aims at introducing the user to the general techniques of the available library usages and services and, in particular, to the organization, services and layout of the library. It is intended to familiarize users with the procedures of certain sections of the library. Similarly to make the user aware of the staff who is supposed to help the reader.

The modern user wants an awareness and understanding of the basic relevant library and information sources and services. The new entrants generally need some orientation and should be provided exhaustive information. The user should make use of the library, in order to be enlightened about his subject. Only the latest sources in any form in the library can be useful to the user.

Elimination of the paper sources is still a distant dream, therefore, the librarian should get such sources properly arranged and also provide information of the same on the computer network.

So far as information marketing or dissemination is concerned the user is just like a customer who has every right to know the goods to select, to order, to purchase, and to complain about the quality of goods, the library user, too has a right to know the library collection, to select, to order, and to evaluate and/or complain about the quality of library services.

INFORMATION REQUIREMENTS

Information requirements are affected by many factors like range and knowledge of information sources/facilities available, varieties of users to which information will be put, the background, motivation, professional orientation, discipline, type and area of work and other individual characteristics of the user, the social, political and economic system as well as the consequences of information use. Due to this contingency nature generalised one time conclusions about information needs of users is impracticable. Of all the factors influencing or determining the user needs two factors which may not always be congruent, are the corporate objectives of the organisation where the user is employed, and the needs of the individual user. Attention to user studies was started by scholars in the 1960's. Albeit there is a lot of literature on this subject yet user's views or perception have been rarely touched upon. The major aspects invited attention were 'what should be the user education, whom to be provided and how to be provided' etc.

Most of the literature available is concerned with when the librarian is supposed to guide the user. Surveys of user's requirements in academic libraries are very rare.

MODERN USER'S PERCEPTION

Fast changing picture of libraries has also modified the user's perception as well as requirements. True picture of perception evolves out of the atmosphere prevailing around the user.

The user in the present scenario, has a large number of requirements and expectations from the librarian. The traditional librarianship in dying a slow death. The students perceive that the library should have all the services ready as well as uptodate.

During their visit to the library they need orientation programme on CD, uptodate database of books, journals, back sets, dissertations, theses, rarebooks, manuscripts etc. They also want uninterrupted power supply, peaceful as well comfortable atmosphere in the library.

CONCLUSION

Because of latest developments in Information and telecommunication technology every sphere of life has greatly changed. The world has turned into a global village. Users of the libraries are also witnessing a great change. Their expectations as well as requirements from the library have also abruptly changed. The library staff will also have to update themselves in order to provide orientation to the users.

LIBRARIANSHIP: ON THE VERGE OF EXTINCTION OR RISE TO PRE-EMINENCE?

P. M. Rajalakshmi

ABSTRACT

The article discusses the status and role of librarians/ information professionals in the 21st Century. It explains how the professionals can equip themselves to overcome the challenges created by the new technology and information explosion. Experts' views on continuing education for professionals to get themselves prepared for the new millennium are also evaluated. The new job opportunities offered by the new environment is also explained. It concludes with the remarks that librarianship under any name will continue to be a relevant, exciting and in demand profession.

INTRODUCTION

Much of discussions and debates are going on regarding the status of librarians of the new millennium. Will the librarians get extinct or rise to preeminence? In the extensive literature on this, many are optimistic and see the information professionals playing a prominent role as "masters of information in a world which is increasingly being reliant on information". Some others feel threatened that the technology will render librarians practically 'obsolete'. While it is true that librarians face an uncertain future, this point is often overstated and misunderstood. Some argue that the rise of digital information is an

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opportunity that elevate the role and status of librarians. Hal Varian, a leading proponent of this view argues that "digital managers will play an invaluable role in the Information Age". According to him "there will be larger role for people who organise, filter and locate information" [3]. This will result in the evolution and emergence of a new species of librarians who are well versed in technology, efficient enough to analyse critically, organise and present information. Bewildering rate of proliferation of information and varieties of information channels seems only to increase the demand for navigational help. Most librarians welcome technological changes. At the same time they value their historical function of assisting people to locate information - both digitised and printed. The librarians of the millennium will be the "guardian of information and the vehicle to preserve the democratic access to information". With the newly acquired skills of the Age, librarians will play a "meaningful and leading role" in the networked society of this century. Probably, one of the most important positions in any organisation of the future will be that of librarian who manages licensing of electronic services.

PRESENT SCENARIO

We are in the Information Age. Our society is moving through a 'cyber culture'. Twenty first century has emerged as an exiting period of transition and change. IT has become a potent force in transforming social, economic and political environment globally. At present it is almost beyond one's imagination as to where the developments in IT will lead us to. Electronic banking, e-mail, information retrieval systems and e-commerce structure and define our lives. These changes, characteristic of global digital era affects our libraries also. There is a paradigm shift from printed publications to formless data, from ownership of documents to access to information, intermediary to end user model services, location specific libraries to virtual libraries. The new technology is becoming increasingly prevalent and pervasive in libraries and information centres. Technological skills become vital for the success of professionals in meeting the users' needs efficiently and effectively. IT provides opportunity to manage, manipulate, access and deliver information in new and improved ways. So consistently updating the knowledge structure and acquiring new and improved skills become the major concern among librarians. Also management of these changes warrents the development of new and improved strategies to introduce innovations in the profession. According to Matson and Bonski "Technology by itself, however marvelous or powerful, whatever be its potential, is cold or sterile, it will remain so, unless someone adds the ability to bring the right information to the

right user at the right time. If technology is a force multiplier, the librarian can be a great force" [10].

Most librarians see this period of change really exciting. However it creates a feeling of uncertainty for the future of the profession. There were predictions like the death of library, death of books and even the death of profession. Contrary to these librarians struggled hard to redefine themselves and their profession. They responded with the time-honoured traditions of librarianship by incorporating technologies of the 21st century with the skills of librarianship. The computers cannot conduct skillful reference interviews by themselves; databases can be compiled by anyone with no knowledge regarding the concept of public bibliographic access; anybody can create a web page and post information on the net. The information so posted on the internet are not undergoing any evaluation such as traditional editorial constraints or any other kind of fact checking. Brad Cox see the internet as a "stagnant lagoon, filled with advertising brochures, business cords, chit-chat and freeware.....unlike the thriving oceanic ecology of any good library" [3]. Surfing the Internet gives vast quantities of information difficult to distinguish between reliable and nonreliable ones. Highly trained intermediaries with appropriate technological skills, ability to analyse, critically evaluate, organise and present information are needed to provide guidance and service to the patrons of the new age.

HOW PROFESSIONAL ASSOCIATIONS RESPONDED?

In response to the issues and challenges that surfaced with the introduction of IT in libraries and information centres, various professional organisations, associations, institutions and Government bodies all over the world, came forward to support and work hard to prepare their library professionals to meet the challenges of the new century. American Library Association (ALA) and its various divisions contributed much in framing and developing guidelines regarding the competencies that can shape the future of its members. ALA called for librarians to begin embracing the new technologies while keeping hold of the traditional values of the profession. The Special Librarian's Associations took keen interest in preparing its members for the future. This may be because, the biggest changes/challenges might have greatly felt in special or corporate libraries than public or academic libraries. Many of these associations develop and conduct programmes such as video conferencing, distance education, seminars etc., by making use of the new technology. Medical Library Association (MLA.)

strongly asserts that the success of the profession in future involves

having the technical skills needed to perform the job and more importantly, the correct attitude to professionalism and theoretical grounding in Information Science. Technologies will keep on changing, but the theory behind the analysis, structure and management of information will remain the same. The professionals must make use of their education and ability to develop skills to remain ahead of technology. The Special Library Association (SLA) document " competencies for Special Librarians of 21st Century" provides similar statements. According to SLA document the two main areas of competencies for the future are professional and personal. The professional competency is concerned with the knowledge of information resources, their organisation and management. Personal skills according to the document are mainly the " excellence in service, effective communication skills, collaboration with departments and flexibility". Flexibility is considered to be one of the most essential qualities for the future. And in the new era librarians have to be forward thinking and be prepared to change with time. This involves a commitment to life long education and personal career.

CONTINUING EDUCATION - CONFLICTING VIEWS

According to Eric Hoffer " in a time of drastic changes, it is the learners who inherit the future". This statement has special reference to IT in Information Age. Many feel the ongoing challenge of the profession as a commitment to continuing education and they generally agree on the fact that continuing education is essential for professional development. Two views are prevailing among professionals, academicians and educators regarding the fields of study in which continuing education is to be undergone by the professionals. Majority of the experts, academicians and educational planners in library and information field view that continuing education, in principle and theory of the profession, will be very important in the future. " Leaders and educational planners in the field see a greater need to expand the knowledge base in the intellectual process involved information in management. They want the professional librarians to focus on continuing education on developing leadership skills in directing policy, library management, marketing and teaching" [2]. On the other hand studies conducted by Hafter and Wools (1998) reveal that majority of the professional librarians prefer continuing education in the field of IT. They identify IT as a very crucial deciding factor in their profession. Many senior professionals in higher positions are far behind in understanding and using the new technology and are worried of being replaced either by younger professionals or other staff who are well-versed in the latest technology. They feel that the easiest way for

"catching up with the technology" and keeping themselves update in the profession is to attend short term programmes in IT such as seminars, workshops, conferences. Experts view that education and training gained through the professional courses such as M.L.I.S. and B.L.I.S. is only the beginning of a profession in which rapid technological changes affect the "scope, methodologies and knowledge base" of the profession and continuing education is absolutely essential to keep up with technological innovations. However, many feel that in this new age the value of the knowledge and experience in the professional field is more valuable than the knowledge to run a few software programmes. Hafter and Wools (1998) state that the long term goals of librarians should not lie in just "growing a skill set but a concept" which would guide to better their career. According to them the continuing education should help to improve professional skills of communication and management, information theory and research.

VIEWS ON KEEPING UP WITH THE CHANGING TECHNOLOGY

The need for librarians to keep abreast of the current technological trends and how best to use them is absolutely clear. On daily basis there is need to develop creative ways to find and deliver information. Increasing popularity of accessing information electronically, necessitates librarians to be trained in using new information systems to successfully serve their patrons and to optimise the utility of the resources. Woodsworth (1998) views that people won't be able to cope with future technologies or use it intelligently for the purpose of attaining goals unless and until they update their skills in emerging technology. The continuing changes in information technology demands not only in what we learn but also how to learn. Success in the new environment depends on knowing how to access information and how to analyse and use it effectively and efficiently. Harris (1992) foresees the risk of non-library professionals taking the roles of manipulating information systems, if librarians do not take upon themselves to update their knowledge on IT. She views this as a threat to the traditional library service ethics of equal access to information for all, because these workers are not trained in the principles and values of library profession. Librarians owe special obligation to the society to ensure free flow of information and ideas to one and all without any discrimination. Consistently updating the skills and knowledge relating to information technology must be a priority among the present day librarians and information professionals so that they can fulfill this obligation satisfactorily. They must see technology as a tool to provide quality service and improved access to information.

BASIC SKILLS REQUIRED IN FUTURE

Specific skills are necessary to be fully functional in the technology-rich environment of the Information Age. Skills of research and ability in using various information systems are the core competencies for librarians to survive in this century. Networked information will have greater roles and network management expertise will be an essential quality for future professionals. Network navigation skills and a strong understanding of various electronic information sources are essential competencies of the Cyber Age. Familiarity of online services as well as fundamental internet skills including the ability to develop internet sites are arbitrary skills. Database design and development is another area of expertise for future. Patrons require interface designs that are intuitive, 'easy to navigate and intellectually engaging'.

The increasing introduction of IT in libraries created the need for educating the patrons in the use of information tools. Training the end user is and will be a major task for information professionals. Experts predict for the librarians larger role as information technologist who have to spread computer literacy as well as information literacy among users. Hafter and wools [1998] predict the increasing demand for academic librarians who are proficient enough to design instructional programmes that help users in understanding the methods of access to information in various formats from different locations. Harris (1992) identifies this as an abstraction from librarianship to a new teaching role which may possibly result in "a demise of the profession" as users are taught to be more self-reliant. In addition, marketing is also considered to be a key skill for working effectively in a technology-rich environment. In this age where reengineering and "rightsizing" are common, librarians must be good at selling the value of their services in order to prove that they are not just overhead, but they are value-added to the profitability and productivity of the organisation which they are serving. As a result of the availability of highly user -friendly information systems, users are becoming more and more self-sufficient in locating and accessing information for their own and there is a tendency to by pass the professionals. "Yet information professionals do more than just providing information and information services, they help people do what they do better" [9].

METHODS BY WHICH LIBRARIANS HAVE TO EQUIP THEMSELVES

Continuous learning is essential for renewing the expertise and skills needed to assist and teach the users in the Information Age. Since it is a costly affair one has to explore various methods with which education can be continued cost effectively. Reading

professional literature, signing up for professional and current awareness e-mail lists, attending select courses and seminars, specialising in specific areas of information technology and networking with professional colleges through professional associations are some effective methods. Reading professional literature is a very effective way to keep oneself current in any professional field. Professional publications often feature articles which discuss how specific technology has been incorporated in other organisations, methods of implementing it and experiences gaining out of it. Trade magazines provide product evaluations, product standards, trade announcements, demonstrations and cost comparisons. They provide the most current information on technology and perspectives from related fields/ professions. E-mail lists are also an affordable and practical way of keeping in touch with the technological changes. Professional e-mail lists provide awareness of new product versions, new technologies, on-line classes, self-study programmes etc. They also provide informal exchange of ideas, technical help tips, trouble shooting methods and real life examples of technologies. Current awareness e-mail services are also another excellent method to receive information of the latest trends. Though reading professional literature and trade magazines is good cost-effective and practical method to keep up with the fast changing technology, there are situations where formal courses and seminars are needed to complement the reading. Enrolling in quality courses that provide hands on experience and pragmatic skills is essential to learn a new technical skill. But before registering oneself to any such course, it must be checked very carefully, whether the specific subject can be understood by reading. Engaging classes on specific areas of technology which cannot be understood by reading alone is also a method that can be adopted by professionals. Stressing the importance of professional reading, Biggs(1995) declares " the single greatest continuing education service that one can provide and one is perfectly positioned to do is to write and publish articles that we can use" . Specialising in specific areas of technology is one way for librarians to excel in a particular area. This is suitable in organisations where there is team structure. A team of professionals specialising in diverse areas of technology complement each other and can bring balanced technical knowledge to manage the information system better. Solo librarians have to be generalites in various technical applications because they have to incorporate the different applications to manage the system better.

NEW JOB-OPPORTUNITIES FOR LIBRARIANS

The new environment offers a number of new opportunities to library

and information professionals. Librarians with appropriate research skills and technological expertise that focus on the needs of users/ organisations will have ample opportunities in future. Most of the opportunities are becoming available outside the traditional settings. These new roles include some such as cybrarians, web site coordinators, web masters, database consultants, metadata specialists, digital literacy managers, information literacy coach, corporate information officers, information brokers, knowledge mangers, etc.

CONCLUSION

The world is changing at a phenomenally fast pace and we are clearly in a transitional phase. Information is expanding at an unprecedented rate. Information Technology appears to be a fundamental reality of library and information services. For the present users, the new changes are stimulating, yet challenging and confusing. Information Age demand the librarian to be constantly involved in the process of active learning, direct intervention in the technology and progressive widening of the knowledge. Hanna and Harris believe 'Information Technology, if properly deployed, offers the potential to enhance the professional opportunities for librarians and the quality of service offered to clients' [5].

Neither the librarians nor the libraries will become obsolete; but the traditional operating methods will. Traditional methods neither guarantee success nor sustenance in the new era and are quite inadequate to meet the challenges of the new millennium. Highly trained intermediaries will be needed to navigate and validate information - not to store, catagorise and even not to retrieve. Librarians should catch hold of the new opportunities created by the new technology to redefine their roles as interpreters rather than storehouse mangers. As time progresses, the new skills and knowledge, will lead librarians to new directions and new employment potentials. "Librarianship under any name will continue to be a relevant, exciting and in demand profession" [15].

Difficulties of todays' technological challenges are short-lived. Libraries will continue to be one of the most popular social places which are accessible to individuals of all ages and communities all over the world. Role of libraries as an indispensable archieve of the fast publications must remain. One of the most comforting things about the traditional library is its very solidity. Much of the information available electronically today will never have such solid physical presence. The records of the efforts of civilisations must be preserved forever. It is our responsibility to capture the worthy ones and preserve

it in usable form for posterity. Librarian's role as arbiter of what is worthy to be preserved for posterity must remain, if libraries are to be able to continue to make available a creative and worthy archieve of the human civilization and culture. And, librarians owe a special obligation to the society to ensure the free flow of information and ideas of the past and present to the present generation and the generations to come.

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LIBRARY NETWORKS AND RESOURCE SHARING

Ram Rattan Sharma

ABSTRACT

Libraries in our country are required to serve efficiently. The resource sharing and networking of libraries is important to meet the changing needs of library users. Resource sharing in India is still in its infancy stage. The importance of networking and resource sharing is highlighted in the paper. The objectives of Resource sharing, need of resource sharing through net works, factors making resource sharing a necessity, possible areas for resource sharing and economics of resource sharing are also mentioned in this matter.

INTRODUCTION

The world is passing through a revolution in the field of information and its dissemination. The number of titles published in the world have been increasing day by day. As such no library can afford to buy every book and journal. No library can store all publications and no library can possibiliy provide efficient service with its age old manual operations, in this world of information explosion, the method of storage and providing information are changing fast, with the information explosion and the limited library resources. Librarians are facing many difficulties, such as :

a. Librarians have to provide sufficient reading material to the readers.

b. Librarians have to see that their collections which are less used or not used at all are made available to readers of their libraries through cooperation.

c. They have to anticipate the demands of their users Interdependence and sharing of resources is becoming more and more important day by day. The use of computers in libraries is very helpful in acquisition serial control, cataloging and circulation besides keeping tracks of stocks and users. When a number of libraries using computers decide to share information, a network is established.

LIBRARY NETWORKS

A network can be defined as a group of individuals or organisations which are interconnected. In the library world, institutions form networks primarily to achieve better sharing of resources. Resources consisting of Bibliographic information and of collections and excellent service to readers, it must have been seen that focus in this collection may be online networks. Those using computers and linking members to the computer resources by means of telecommuniction connections. When one library provides a service to another we have the rudiments of network behaviour. Inter library loan or bibliographic exchange in any form is the jurisdiction of a network. As costs of library services have increased many folds. So libraries have realized that in cooperative arrangements, there is possibility of providing new services to the users.

THE AIMS AND OBJECTIVES OF LIBRARY NETWORK

1. It is for coordinating with other regional, national and international networks for exchanging information and documents for the use of users.
2. To create a data base of projects for providing online information service.
3. To develop a specialist bibliographic data base of books serials and non book materials for search and access.
4. To evolve standards and uniform guide lines in techniques, methods, procedures and other services in order to facilitate providing sharing and exchanging resources and other facilities.
5. to help sharing of resources by inter library loan among the libraries through computerized networking.
6. To help member libraries in cataloguing of books, serials, non book materials and catalogue production.
7. To assist reduce unnecessary duplication.
8. To create referal centres to facilitate catalogue search and maintain a central on line union catalogue of books.

AREAS OF RESOURCE SHARING

Inter library loan

Inter library loan service is considered to be a means of borrowing a needed publication which is not available in the library's own stock. To make the service more efficient, the mode of document delivery needs to be expedited. Such services as speed post, courier, Fax, E-mail service etc needs to be introduced for the purpose of quick document delivery. Also for documents avalibility of tools like union lists is more critical.

Acquisition

The acquisition system can be easily possible with the help of online ordering facility. In developed countries on line facilities enable the publishers and booksellers to link through networks. The libraries thus have access to latest information and decide whether they should acquire a particular book, The sharing of cataloguing, when the proofs of a book are at printing stage. The serial control is also possible in integrated system.

Staff Training

Now a days as library Automation and networks are growing the need for trained and skilled man power also grows. It is essential that the expertise of the skilled personnel is shared.

Union Catalogue

Union catalogue of all participating libraries of network should be compiled and up dated regularly in science and technology.

Cooperative storage

It is achieved by arranging the deposit of publication at local and national levels, it reduces duplication of material and provides more space for new books to the particular library. Information about new books additions is given in catalogue.

Translation Services

Institutes like INSDOC provides transeation services to scientists. They should create translation banks in machine readable forms.

DEVELOPMENT OF SPECIAL COLLECTION

To make information available through resource sharing networks, each library in the network should develop collection specialising in the area of their interests.

LEVELS OF RESOURCE SHARING

Resource sharing net works are available at local, regional national or international levels. There are three levels of national resource sharing networks. These are

(a) Local information is stored in the form of union catalogue

(b) Regional information is stored and services are provided on broad subject area

(c) National : National Union catalogue of documents is prepared and services are provided to users.

ECONOMICS OF RESOURCE SHARING

1 No library can afford to acquire all published materials in the areas of its specialisation, due to high procurement cost and investments. Each library will have to depend on the resources of the other library through network.

2. The application of new technology to resource sharing will ensure that useful information is made available to users effectively, thus we can save valuable time of users.

3. Shared cataloging and classification through networking can reduce financial burden on all libraries.

ADVANTAGES OF RESOURCE SHARING OF NETWORKS

1. Inter-library loans are made easier by the availability of up-to-date union catalogue.

2. Reduction of cataloguing cost through co-operative.

3. Cost sharing

PROBLEMS OF RESOURCE SHARING BY ONLINE NETWORKS

1. Accessing information from international networks is a costly affair for libraries in India.

2. The computer networks that make resource sharing are not cheap.

3. Incompatibility between computing systems often limits cooperation between networks.

CONCLUSION

Networks systems form an inevitable necessity for the libraries. Sufficient progress has been made in computerised library net works

at National-International Level in the Western Countries. In our country so many satellites have been launched. Even then it is difficult to say when will the users get the whole information generated and available in our country. A great effort is required for communication networks technology implementation. Automation of libraries is must for efficient implementation of on line networks for resource sharing.

Inspite of the fact that there are certain problems of resource sharing by on line networks, but advantages of resource sharing by networks dominate problems.

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ONLINE INFORMATION RESOURCES ON SOLID STATE PHYSICS: A STUDY OF SSPL LIBRARY

Tanzeem Karimi
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ABSTRACT

This paper describes the online information resources available on the Internet in the field of solid state physics. It is a net survey based article, which includes a number of important e-databases, e-linking pages and other e-resources. Each resource provides valuable information to the scientists working in this field and also to the librarians or information provider.

INTRODUCTION

Over the last 50 years, the computer and communication revolution has changed radically the way many organizations do their business. We are now living in a wired world. With old style twisted pair telephone wiring, co-axial cable, and optical fiber there are physical communication network almost everywhere on the globe, and the places these do not reach can be covered by satellite.

The greatest recent advance in communications technology was initially an academic development: the world wide web was invented

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by Tim Berners Lee in the late 1980's in order to improve the storage and currency of electronic documents at CERN, the European Particle Physics Laboratory. With the digital revolution, data & information can now be transmitted to all corners of the world and that is significant for almost all humanity and it is significant for libraries.

The explosion in information, services and resources, whether appropriate to the user's need or not, consumes attention. There is a need to organize the information resources available on the Internet so that the users/scientists could find information for their research work.

SSPL LIBRARY

The Solid State Physics Laboratory started with the broad objective of Developing R & D base in the field of solid state materials, devices and sub-systems. It is the first institution in the country, which started work in this vital area. From a small beginning, the laboratory has grown into a premier research and development establishment in this field and is well known both within the country and abroad.

SSPL conducts R & D work in the following major areas:

- Infra-red (IR) materials and devices
- Materials and devices based on gallium arsenide (GaAs) and related compounds
- Silicon semiconductor devices
- Microwave ferrites
- Crystal growth

The SSPL Library is one of the special libraries of DRDO Labs. It has been functioning since 1964 and has a large collection of documents related to semiconductors and devices. All the databases and services of the library are available on the ***"SSPL Digital Library"*** web site, which is accessible within an Intranet environment.

WHY ONLINE INFORMATION RESOURCES?

- Global access to data that is in public domain, e.g. bibliographic, statistical, full text, image and multimedia databases.
- Downloading the text, images also.
- Links to local and remote indexes and databases.
- A no. of search engines are available which allows quick and easy access. They index full text of documents, allow Boolean search by term, keyword or phrase.

- Free software developed at various academic institutions and research organization is available.
- Newspapers, electronic shopping merchandise, product information catalogues of various institution is available.
- Bulletin board discussion forums for exchange of professional views.
- To keep abreast of current developments through many web sites.
- Access to no. of users simultaneously.

INFORMATION GATEWAYS

It is a virtual forum help users to discover high quality information on the Internet in a quick and effective way. It is also like a web catalogue that provides links to numerous other sites or documents on the Internet. A number of electronic gateways are available on the net as following,

Physical Science Information Gateway (PSI gate)
http://www.psigate.ac.uk/

It is the physical sciences hub of the Resource Discovery Network (RDN). It provides free access to high quality Internet resources for students, researchers and scientists in the physical sciences, specifically in: astronomy, chemistry, physics and science history and policy.

Each resource in the main PSI gate catalogue has been selected by information professionals and subject specialists to insure relevance and quality. A full description of each resource is provided, together with a range of other information and direct access to the resource itself.

Science Direct Information Gateway
http://www.sciencedirect.com

Science Direct is a web-based database of full text articles pertaining of Science, Technology and Medicine (STM). It offers a rich electronic environment for research journals, bibliographic databases and reference works. The database offers full text online access to more than 1500 scientific, technical and medical peer-reviewed journals from 1995 onwards and over 59 millions abstracts.

BUBL Link Gateway
http://www.link.bubl.ac.uk/physics

BUBL LINK is the name of a catalogue of selected and evaluated Internet resources covering all aspects of the physical sciences including physics catalogued according to DDC (Dewey Decimal Classification). All items are selected, evaluated, catalogued and described. Links are checked and fixed each month. LINK stands for Libraries of Networked Knowledge.

The BUBL LINK catalogue currently holds over 11,000 resources and it provides a effective route to information for many subjects, across all disciplines.

The E-Journal Gateway/J-Gate
http://j-gate.informindia.co.in

J-Gate is a unique e-journal portal that provides seamless access to journals available free online against print, free on Internet and at an additional cost over the print journals. This gateway also covers TOC (Table of Content) of more than 10,000 journals and Article Database of more than 3.5 lacks articles.

IEEE xplore
http://ieeexplore.ieee.org/

IEEE *Xplore* provides full-text access to IEEE transactions, journals, magazines and conference proceedings published since 1988 plus select content back to 1950, and all current IEEE Standards.

Free to all: Browse tables of contents and access Abstract records of IEEE transactions, journals, magazines, conference proceedings and standards.

IEEE/IEE Electronic Library (IEL)
http://www.ieee.org/products/onlinepubs/iel/iel.html

IEE
http://www.iee.org

The IEE is an innovative international organization for electronics, electrical, manufacturing and IT Professionals, with specifically tailored products, services and qualifications to meet the needs of today's technology industry.

INSPEC
http://www.iee.org/Publish/Inspec/index.cfm

The IEE supports knowledge and education that will underpin engineering in the 21st century. It operates a computer-assisted

information service, Inspec, which has the world's largest computerized database in the English language in physics, electro technology, computer science and control engineering.

ISI Web of Knowledge
http://www.isinet.com/isi

ISI Web of Knowledge is a dynamic, fully integrated environment. This platform provides one source for high quality content like multidisciplinary, specialized and the tools like evaluation and analysis tools, information management tools to access, analyze, and manage research information.

It provides simultaneous cross-content searching, accessing full-text Web content, accessing publishers' electronic full text and other valuable resources, alerting, single session management.

Dialog, a Thomson gateway
http://www.dialog.com

Dialog is the worldwide leader in providing online-based information services to organizations seeking competitive advantages in such fields as business, science, engineering, finance and law. Its products and services, including Dialog, Dialog Profound, Dialog DataStar, NewsEdge and Intelligence Data, offer organizations the ability to precisely retrieve data from more than 1.4 billion unique records of key information, accessible via the Internet or through delivery to enterprise intranets.

ELECTRONIC DATABASES

The best way to locate information on a specific topic is to use an index guide, which is available in both print and electronic formats. Indexes available electronically offer many advantages. It help user to search information available in e-database by keywords, subject descriptors, author, title, publication, etc. and can save and combine search sets to obtain tailored results. There are a number of databases available on the Internet, some of them can be accessed free of cost and the rest can be accessed through subscription.

ArXiv.org e-Print archive
http://arxiv.org/

ArXiv is an e-print service in the fields of physics, mathematics, non-linear science, computer science, and quantitative biology. The contents of arXiv conform to Cornell University academic standards. arXiv is owned, operated and funded by Cornell University, a private

not-for-profit educational institution. ArXiv is also partially funded by the National Science Foundation.

Axiom
http://axiom.iop.org/info/axiom.html

Axiom is Institute of Physics Publishing's innovative Web-based online research service. It currently features the following databases:

- Inspec
- Inspec Photonics
- Compendex
- Pageone
- Polymer Library
- Derwent World Patents Index.

Once a site is registered users can create an individual account. Powerful customization options then allow individuals to save searches, compile search histories, amend search and display settings, create e-mail alerts, e-mail search results...and much more.

Links to the full-text: Users can link from Axiom to the full-text of the Institute's online journals and enjoy the benefits of popular Electronic Journals service. In addition, full-text links to articles from other publishers are also available.

SPIRES HEP Literature Database
http://www.slac.stanford.edu/spires/hep/

Search more than 500,000 high-energy physics related articles, including journal papers, preprints, e-prints, technical reports, conference papers and theses, comprehensively indexed by the SLAC and DESY libraries since 1974.

Applied Science Full Text (1983 -)
http://vnweb.hwwilsonweb.com

Journal Index, some full text articles. More than 350 periodicals covering engineering, mathematics, physics, and computer technology. Updated monthly. Includes the full text of more than 98 periodicals beginning in January 1997.

ArticleFirst(OCLC)
http://firstsearch.oclc.org/

Nearly 12,500 journals in science, technology, medicine, social science, business, the humanities, and popular culture. 1990 to the

present. Updated daily. Incorporates the ContentsFirst database and searches tables of contents as well.

Ingenta
http://www.ingenta.com

Contains the tables of contents of more than 25,000 publications, for a total of more than 11 million articles. All disciplines are covered, though there is a heavier concentration in the sciences than in the social sciences and humanities.

Searchable physics Information Notices (SPIN)
http://ojps.aip.org/spinweb

Produced by American Institute of Physics, the database provides the most current indexing and abstracting of major American and Russian physics and astronomy journals. It is a fully searchable, continually updated database of over one million research records in the physical sciences from 1975 to the present.

PROLA (Physical Review Online Archive): all APS journals from v. 1- 1893-2000) http://prola.aps.org

CERN Document Server
http://weblib.cern.ch//index.php

Over 550,000 bibliographic records, including 220,000 fulltext documents, of interest to people working in particle physics and related areas. Covers preprints, articles, books, journals, photographs, and much more.

SLAC SPIRES: High Energy Physics Preprints
http://www.slac.stanford.edu/spires/

Searchable index to bibliographic citations on particle physics.

Astrophysics Data System (ADS)
http://adswww.harvard.edu/

Four abstract collections for astronomy and astrophysics, instrumentation, physics and geophysics with links to scanned images of more than 40,000 fulltext journal articles from all major astronomy and astrophysics journals and many others back to volume1. Also some conference proceedings, NASA reports, theses, books and the full text of ejournals to which we subscribe. Also provides access or pointers to astronomical data catalogs and archives from NASA.

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This paper is very useful to our scientists as well as other research users to get relevant information and can save time. SSPL Digital Library provides a service to our scientists efficiently.

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PRESERVATION, CONSERVATION AND RESTORATION IN DIGITAL ENVIRONMENT

Asha Narang

ABSTRACT

Books are the life line of any library whether they are current books, invaluable rare books or manuscripts. The libraries are obliged to preserve them for future generations for information, inspiration and reference. Electronic Technology promises innumerable innovative techniques for preserving the thought content enshrined in these documents.—This paper describes major electronic preservation techniques like reprography, microfilming, scanning, digitization and discusses at length digitization which is an emerging technology and appears to be the most tangible and feasible e–preservation technique. Its limitations have also been highlighted in this paper. Some proposals have been put forth for improving and streamlining the preservation, conservation and restoration in the University Libraries.

INTRODUCTION

Information Technology has heralded in a new era of information society, where the *mantra* is to harness Electronic Technology (ET) to design and provide innovative library services to quench the information thirst of its readers. Computer, the invaluable gift of ET has established deep inroads into every sphere of human activity. It has almost mesmerized people by its incredible capabilities.

A book is designed to serve as an instrument of communication. The brick books and palm leaf books of yesteryears have undergone sea changes. The books of antiquity have metamorphosed into trendy e–books and digital documents. In this "Electronic Age", everything is

going electronic as e–mail, e–cash, e–commerce, e–governance, e–publishing, e–greetings etc. The Internet has virtually brought about an information deluge. Knowledge thus produced is to be suitably preserved for posterity.

One of the fundamental duties of a librarian is conservation of the materials in his custody for the best and optimum use by the readers. Library materials like other forms of matter have a natural tendency towards decay. Although concern for the preservation of written records is apparently just as old as the written records themselves but with the arrival of e–documents and computers the existing preservation tools and techniques have to be revamped once again.

E–PRESERVATION TECHNIQUES

Rare books and manuscripts have always preserved the documentary and cultural heritage of nations. They provide rich, authentic and unbiased information, instruction, evidence and facts for research and for historical/legal references. It is thus the sacred duty of the librarians to preserve these national heritage documents.

With the swift pace of development in the field of ET, the future libraries and archives are going to be paperless possessing machine readable documents. Computers have facilitated the convenience of creating and storing large volumes of textual, visual and audio-visual data. ET is being harnessed to devise and improvise new preservation techniques so as to disseminate information contained in rare documents without damaging the original. Following are some of the existing e–preservation techniques:

Reprography

Reprography is major technology for producing multiple copies of the text. It is quick, useful and not very expensive but when compared with digitization and filming methods, it has the following disadvantages:

* copy so produced is made of paper which again deteriorates,
* at times, the photocopy is of poor quality and the contents are not legible,
* photographs fade with time,
* the original manuscript too gets damaged while photocopying as it is kept upside down while photocopying.

Microfilming

Microfilming involves miniaturization of images on photo film. It is considered to be the most reliable method for long term preservation but it too has its disadvantages :

* at times, complete text is not microfilmed due to reduction and there is loss of information,
* colours are not exactly filmed,
* minute details are not captured in the microfilms,
* brittle and fragile books run the risk of damage as the book is opened up to its seams while filming.

Scanning

Scanning is one of the most sophisticated imaging technology. It converts analog form (book contents) to digital form. Scanners have revolutionized the document management system. They have ushered in an era where new possibilities for storage, preservation, search, dissemination/access have been evolved.

Digitization

Digitization is the capturing and storing of images using a computer with the aid of digital cameras, scanners and CD writers. The electronic photograph of the image is taken and is converted into binary digital code comprising of strings of zeros and ones. Digitization facilitates consultation of text without any risk to the original. The reproduced text is more accurate than by any other process of duplication. Digitization facilitates availability of the content for a wide range of current and future network publishing scenarios.

Old manuscripts and rare photographs which have become discoloured and blurred and may face destruction unless given expensive chemical treatment, can now be restored to their original form and even preserved for posterity with the aid of e-publishing and digital solutions. Digital restoration gives a new lease of life to priceless old documents on palm leaf, parchment or paper. Restoring them digitally means converting them to software formats that can be exported to a new generation of electronic media.

The paper records available in archives and libraries are analogue media. Analogous information can be gathered, stored and reproduced but every time the analogous information is reproduced, it tends to become less precise. To overcome this problem, the analog data can be transferred to digital format and stored in multiple locations to increase accessibility. Scanners and cameras are required for

digitizing the analog data. Tape drives, CD Writers, Magnetic optical drives, server are other instruments for digitization.

Although digitization seems to be the most tangible and feasible solution for preserving the thought content of the rare books and manuscripts but it too has this own limitations such as:

* digitized records occupy very less space in contrast to paper records but the conditions required for keeping and storing digital records are comparatively stringent,
* the long term stability of digitized records is still questionable,
* the libraries and archives will have to acquire expensive technologies for digitizing the rare documents,
* digital storage requires continuous monitoring and periodic transferring because the drive system may become obsolete,
* the electronic technologies are continuously in a state of flux. The threat of technological obsolescence is of great concern for electronic record preservation programme,
* computer data is highly vulnerable to damage by vandalism.

Preserving the thought content of books, rare books and manuscripts is certainly an emerging and extremely useful technology. However libraries will have to keep complete paper back up copies of its computerized data. This may of course leave the libraries with heavy expenses to maintain and preserve paper as well as electronic records.

PROPOSALS, FOR IMPROVEMENT IN PRESERVATION TECHNIQUES

Electronic Technology is ever changing and there has been fast obsolescence in computer hardware and software. Librarians have to sharpen their tools and techniques to serve their users in the best possible manner. There is a wide variety in reading materials and so the problem of preserving the diverse variety of reading material has also aggravated to a great extent. Following are some of the suggestions for rejuvenating and strengthening the preservation techniques in the University Libraries:

* Teaching of Conservation Science should be recognized as a full fledged course both at professional and para professional levels with the following broad course contents:

Elementary study of paper, leather, birch bark, palm leaf etc.. Repair materials, adhesives and inks. Causes of deterioration. Deacidification. Adhesives for repair and binding. Treatment of insect infested materials, localized treatment, cleaning, stain removal.

Strengthening of weak fragile documents, lamination. Archival binding and care of leather binding. Treatment of charts, maps and drawings. Encapsulation. Repair and restoration. Digitization and related emerging technologies.

* To make conservation science more meaningful, less abstract and value based, library schools should set up conservation laboratories where experiments on various techniques of conservation can be performed.
* University libraries should have a preservation section on the pattern of the preservation wing of the National Library of India, which has three major divisions viz. Preservation division, Laboratory division and Reprography division. Preservation section in a university library should monitor the preservation activities like spraying, fumigation, restoration of the damaged volumes etc..
* The libraries should arrange for in-service training in preservation techniques for their personnel from "The National Archives of India" or from "The State Achieves".
* Library schools and professional bodies like ILA, IASLIC, IATLIS and State Library Associations should hold workshops/ symposia on various aspects of preservation to bring about awareness and expertise in handling the conservation and restoration of weak and fragile documents.
* Research in preservation, conservation and restoration should be encouraged and duly funded.
* The concept of cooperative and centralized preservation and restoration can also be tried on experimental basis among neighboring universities.
* A clearing house/center of information on conservation should be established.

These suggestions, if implemented may go a long way in bringing about improvements in the existing scenario in preservation, conservation and restoration.

CONCLUSION

Libraries owe a sacred duty towards mankind to preserve books to serve the readers well. Electronic technology has conceptualized and innovated major preservation techniques like photocopying, microfilming, scanning and digitization. Each having its own promises and perils. However digitization promises to be most tangible of all but perhaps it is not the ultimate solution for long term preservation.

Electronic technology is continuously in a state of flux and these technologies tend to be obsolete very fast. Librarians thus face a great challenge to innovate preservation and restoration techniques for long term preservation of reading material in this digital environment.

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SEARCH ENGINE : AN OVERVIEW

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ABSTRACT

The paper describes search engines, their different types, parts, and working. It explains the basic search tips, creation of search strategy and formulation of search strategy for retrieving maximum relenat hits. It further elaborates the use of keywords and the Boolean operators in a search statement. It offers tips for formulation of better search statement and trubleshooting of the error message. The paper also explains the search by fields and limitations of search.

INTRODUCTION

Internet is the beggest source of information with widest coverage and the fastest access. But to get the relevant information from the World Wide Web (www) is not so easy. An Internet Search Engine as the name suggests is a tool that searchs the information from the Internet. The amount of information that one gets quickly and efficiently using search engine has been increasing but potential search material with respect to the amount of search has been decreasing. Henece there is a need for more efficient ways of information retrieval on the

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Internet. Search of relevant resources on the Internet takes a fair amount of time, lot of which is wasted in rejecting the irrelevant information, once resources are found. Determining their relevance is often difficult. The Librarian/Information Scientist should be able to assist in getting right information with minimum wastage of users time. Therefore, it is important that one should understand the search engine and search process well.

SEARCH ENGINE

A 'World Wide Web (www) Search Engine's is defined as retrieval service, consisting of a database(s) describing mainly resources available on the www, search software and a user interface also available via www. (Pouter Alan).

In simple terms, search engine is a software tool on Internet that follows hyperlinks from one HTML on internet to another, to locate the documents that contains the key words that have been submitted to it as a search query.

Search engine offer keywords searching capability, based on the indexing of text contained within a document. And deliver a list of www link (URL's) that contain the keyword entered in the search statement.

TYPES

There are two types of search engines;

Individual Search Engines

Individual search engines are most common type of search engine and compile their own searchable databases onthe web. A few are:

www.google.com
www.infoseek.com
www.altavista.com

Meta Search Engines

Meta search engines submit the query to a number of search engines in one go. These can give a fair picture of what is a available on the Web and where it can be found. The retrieval from meta search engine is very fast. A few are:

www.metacrawler.com
www.search.com
www.Lxquick.com

Meta search engines present the result of searches in two ways:

i) **Single List :** Most Meta search engines display multiple-search

results in a single merged list, from which the duplicate entries are removed.

ii) **Multiple Lists:** Some meta search engine do not collate multiple-engine search and instead desplay them in separate lists as these are received from each of the engines. Here duplicate entries may appear.

PARTS OF SEARCH ENGINES

Search engines have three major parts. First is the Spider, also called Crawler. The spider visits a web page, reads it, and then follows links to other pages within the site. This is what it means when someone refers to a site being "Spidered" or "Crawled". The spider revisits the spidered sites on a regular basis, such as every month or two, to look for the changes.

Everything the spider finds goes to the second part of the search engine, the Index. The index is sometimes called the catalogue. It is like a giant book containing a copy of every web page that the spider finds. If a web page changes, then this book is updated with the new information. Sometimes, it can take a while for the new pages or changes that the spider finds, to be added to the index. Thus, at times a web page may have been "spidered" but not yet "indexed". Until it is indexed, it is not available to the search engine and therefore to the search and the users.

Search engines software is the third part of a search engine. This is the program that sifts through millions of web pages recorded in the index to find the matches to the keywords and rank them in order of what it believes is its relevance with respect to the search.

HOW DO SEARCH ENGINE WORK

Search engines compile their own database by employing "spider" or "robots" ("bots") to crawl through web space from link to link, identifying and perusing pages. Sites with no links to other pages may be missed by spider's altogether. Once the spider get to a web side, it typically indexes most of the words on the publically available pages at the site. Web page owners may submit their URLs to search engine for "crawling" and its eventual inclusion in its database.

Whenever one searchs the web using a search engine, the engine scan its index of sites and matches keywords and phrases with those in the texts of documents within the engine's database.

It is important to be aware of the fact that when one uses a search engine, he/she is NOT searching the entire web but actually searching

a portion of the web, captured in a fixed index of the search engine created at an earlier date.

ARE ALL SEARCH ENGINES SAME

Search engine use selected software programe to search their indexes for matching keywords and phrases and persent their findings in some kind of ranking by relevance of the documents with respect tc the search. Although software programs may be similar, no two search engine are exactly the same in terms of size, speed and content, no two-search engine use exactly the same ranking schemes, and not every search engine offers exactly same search options. Therefore, the search is going to be different on every search engine. The difference may not be a lot, but it could be significant.

RANKING OF WEB PAGES

In ranking web pages, search engine follows a certain set of rules. These may very from one engine to another. Their goal, of course, is to return the most relevant pages at the top of their lists. To do this, tehy look for the location and frequency of keywords and phrases in the web page document. They check out the title field and scan the headers and text near the top of the document. Some of them assess popularity to sites by the number of links that are pointing to sites; the more links, the greater the popularity ie the value of the page.

WHEN TO USE SEARCH ENGINE

Search engines are best at finding unique keywords, phrases, quotes, and information buried in the full-text of web pages. Because they index www documents word by word, search engines are also usefule in retrieving tons of documents. If one want a wide range of document with respect to a specific query, use of a search engine would be most useful.

CREATING A SEARCH STRATEGY

It is always better to plan seach strategy well ahead of the search. Creat search strategy in mind by asking following questions:

i) Browse? (to have an idea of what is available)

   i) Locate a specific piece of information?

   ii) Retrieve everything one can get on the subject?

The answer will determine how to conduct the search and what a tools is to be used.

i) If one is browsing and trying to determine what is a available on the subject, start by selecting a subject directory like *Yahoo.* Then enter the search keyword(s) into one of the mega-search engines, such as *fxquick*, just to see what is out there.

ii) If one is looking for a spacific piece of information, go to any popular search engine such as *All the Web, Google*, or to a specilasied database such as *Voice of the Shuttle* (for humanities reaserch) or the *Bureau of the Census* (for statistics).

iii) If one wants to retrieve everything he/she can get on the subject, try the same search on several search engines. Also, do not forget to check resources off the web, such as books, newspapers, journals, and other print reference sources.

To search on Internet one is required to submit a search statement to the search engine by entering the search keywords in the search box. So, it is very important to formulation of search statement.

FORMULATION OF A SEARCH STATEMENT

The search engine runs the search and returns a list of resources that matches the criteria. Frequently the result does not meet the searches need. Usually there are lots of irrelevant document. thus, while formulating a search statement, keep the following points in mind;

i) think of unique words that one expect to find in the body of the page, and use them as keywords;

ii) whenever possible, use nouns and objects as keywords;

iii) put most important terms first in keywords list;

iv) whenever possible combine keywords, into phrases; and

v) avoid common words.

Write down search statement and revise if before typing it into search engine query box to get the relevant information.

SEARCH TIPS

Quick Search Tips

The following tips work with most of the search engines in their quick search options:

i) Use plus (+) sing infront of the words to force their inclusion and minus (-) sign to force exclusion in the searches;

ii) use double quotation marks (" ") around phrases to ensure that these are search as phrase and not a individual keywords;

iii) put the most important keywords first in the search statement; and

iv) use wildcards (ie *) to look for variations in spellings and word form.

Example: Colo*r- returns color (American Spelling) and colour (British spelling).

Quick Tips for Boolean Search

i) Always enclose OR statement in parentheses;

ii) Always use CAPS when typing Boolean operator in the search statement. Most search engines require that the Boolean operator be capatilised while others will accept either CAPS or lower case, so one is on a safer ground if he/she stick to CAPS.

SEARCHING WITH BOOLEAN OPERATORS

Boolean Operators

Boolean operators took its name from British Mathemetician George Boole (1815-1864), who wrote about a system of logic designed to produce better search results. He called it the "calculus of thought". From his writings, Boolean operators were derived and its operators are: AND, OR, and NOT, which are used to link words and phrases to make the search statements more precise and specific.

"And" Operator

The "AND" operator narrows the search retrieving only those documents that contain every one of the keywords entered. The more the terms entered, the narrower search becomes.

"OR" Operator

The "OR" operator expands the search by retrieving those documents in which either of or both of the keywords appear. This operator is usually used for keywords that are similar or synoymous. More the keywords entered, more the documents will be retrieved.

"NOT" Operator

The "NOT" operator limits the search by retrieving only first keywords but not second, even if the first word appears in that document too.

Nesting- With Boolean Operator

Nesting ie using parentheses, is an effective way to combine several search statement. Use parentheses to separate keywords when using two or more operators and three or more keywords.

Boolean Logic Redux

Boolean logic is not a always simple or easy. Different search engine handle Boolean ooperators differently. For example, some accept NOT, while others accepts AND NOT as one word, and still others will treat AND NOT as two separate words. Some requires the operators to be typed in capital letters while others do not.

Some search engine use drop-down menu options to spell out the Boolean logic in short phrases. For example, "All of the words" or "must contain" equates to "AND"; "Any of the words" or "should contain" equates to "OR"; and "must not contain" equates to "NOT".

FIELD SEARCHING

Electronic records, like print records, are organized into separate fields. A typical web page is composed with of the following major fields: title, domain, host or site, URL, and link. When information is entered into a records field, some search engine allow retrieving it by using the correct field label in combination with search terms(s). Where available, field searching on the Web is a very powerful tool. It allows one to specify exactly where one wnats the search engine to look in the Web document.

Domain Searching

If one is seeking information from a particular kind of site, one may choose to limit the field searching to one of the current top level domains;

ac	-	academic site.
edu	-	educational organization site.
com	-	commercial business organization site.
gov	-	US government/non-military site.
mil	-	military site.
net	-	networks, internet service providers, organizations.
org	-	US non-profit organizations and others.

Example : domain.edu AND "on the origin of species" and Darwin

AND paleontology

Limits the search to educational sites dealing with Charles Darwin and his book on the theory of evolution.

Several search engines, in their advanced search option, allow one to limit the search to specific domain by the use of drop-down menus. One *Search Edu* does it by limiting its basic search option to the edu domain exclusively.

if one is seeking information from a particular international domain, he/she may choose to search the domain geographically using two-letter country code.

Host or Site Searching

If one is seeking information that resides on a specific computer or server, he/she can narrow his/her search with the host or site query.

Example: host.www.sc.edu

Returns pages hosted at the web site of the University of South Carolina.

TOURBLESHOOTING: WHAT TO DO IF...

search Returns Too Few Or No Documents

The most common reason is wrong spelling of some keywords especially those joined by the AND operator. So first of all check the spellings of the complete search carefully. If all the spellings are correct, one may probably by searching on the wrong site, search statement may be too narrow, the search statement has no been formulated correctly, or there is no search information available on the Web. Try omitting some of the search words. Try the search on another engine, meta search engine, directory, people search, or specify resources. Ask for help.

Search Returns A "404- File Not Found" Message

The message convey that the file one is seeking has been moved, removed, or renamed. Go back to the search engine and do a phrase search or a field search on the title. Try shorting the URL to see if the file might still be on the server. Try the search like *Google*, which maintain cached copies of page.

Search Returns A "Server Does Not Have A DNS Entry" Message

This message tells that the browser cannot locate the server (ie

the computer that hosts the Web page.) It could mean that the network is busy or that the server has been removed or taken down for maintenance. Check the spellings and try again later.

LIMITATIONS

Right information to the right person at the right time is the principle of the library services. It is true that there is flooded of information on the Internet. Getting relevant information from the Internet is like fatching pearls from the ocean. Surfing the ocean of information is time onsuming; sometimes searchers are completely lost and do not get any pertinent information. Reading a large amount of information on computer monitor is not practicable, and taking print of each page will be too costly.

CONCLUSION

Search engine is software that locates the documents on the Internet that contains the keywords that have been submitted to it as search keywords. It is very useful for quickly and easily search for the information on the Internet. It is important to formulate a relevant search statement using keywords, phrases and Boolean operators to make the search statement for specific. The more precise search statement the more relevant hits. Searching by different fields can further narrow down the search. The limitations of using search engine should be kept in mind while making a search.

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SERVICES USING INTERNET AND INTRANET TECHNOLOGY

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ABSTRACT

Library always being a social institution for the dissemination of knowledge. Centuries back, when the concept was simply a store house under the restricted families. The knowledge always being considered to be in the different form; the actual concept as storage of knowledge came after the origin of printing press, and printing media took place in the libraries till late nineties. In India, the electronic concept and the networking started from 1995, it modified the whole concept of education/ knowledge and brought digital preservation, online services and internet activities – for the academician and scholars etc.

INTRODUCTION

It is frequently said that we live in the 'information age', and nearly every day we learn of some new development in information technology (IT). The human need for information is growing, as our society grow to depend more and more on information, to survive and flourish. That is why we have moved towards information society, due to phenomenal growth of information and application of I.T. in the form of high degree of computerisation and transmission of electronic information.

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It is helpful, if we try to define some terms so that we can see their relevance to our daily lives, and to the work of the professional information worker. The following definitions are based on those in the concise oxford dictionary(1) and the Macquarie dictionary (2).

* knowledge is that *I* know
* information is what we know, i.e., shared knowledge
* communication is the imparting or interchange of.... Information by speech, writing or signs, i.e. transfer of information
* data is any fact(s) assumed to be matter of direct observation.

From these definitions, we can say that data consists of unprocessed facts, knowledge is what an individual possess after assimilating facts and putting them into context; information is knowledge shared by having been communicated. I.T. is equipment/ hardware and software that enables us to store and communicate large amounts of data at higher speed.

INFORMATION: USERS AND THEIR NEED

In the present day society, there is a great and urgent need for access and availability of information. Information is used in education, research, decision making, problem solving and policy making. Each and every member of the society is the user of information. Researchers, educationalists, policy makers, govt. officials, etc. are few example of information users

LIBRARIES: THEIR CHANGING NATURE AND FUNCTIONS

To ful fill the information need of their respective users, libraries perform various functions, such as acquisition, organization and dissemination of information. These functions have long been engaging the attention of libraries, perhaps as long as libraries themselves. But modern libraries are complex system that consists of many procedures and functions. These functions include acquisition of materials, cataloguing and classification, circulation and inter library loan, serial management, and reference services, etc. The most important function however, has been the provision of services to the users.

For centuries, librarians have managed warehouses of documents by acquiring, cataloguing and classifying books, journals, and other materials, and circulating them to their clients. Computer and telecommunication technologies have improved the new breed of information professionals to Select, Organize, Retrieve and Transfer

(SORT) the actual information effectively and efficiently to the users.

One of the significant achievement in the information and telecommunication technology is the introduction of advanced communication network, i.e. internet and intranet. These networks and network of networks have become one of the most important mode of communication and its services are being exploited by people of every profession, such as business, banking, education, defense, medicine, etc. In the field of Library and Information Science (LIS), these networks may be used in introducing innovative/non conventional services to library users. In fact library profession has been most intensively affected by these challenges and concept has shifted from collection management to information management, and from ownership to access. In this paper, efforts have been made to proposed some innovative or non-conventional services to library users using internet and intranet technology.

CONCEPT OF INTERNET

The Internet play a key role to support teaching and learning in academic atmosphere. Use of Internet to support learning and teaching is growing exponentially, as more as educational organizations are recognizing the potential that it offers. The Internet is a world wide network of computers, that are connected to each other – a network of networks. The Internet enables the individual user to reach to other people and institutions all over the world, and exchange or obtain information. Any one who has access to the internet can make use of this network to search for information or to communicate via electronic mail (E-mail) WAP, mailing list services, news groups, chat boxes and the world wide web[3].

APPLICATION OF INTERNET TO LIBRARY SERVICES

Libraries linked to the Internet can make use of the following Internet services.

* Listserves and discussion groups on a very wide variety of topics. Participants have the opportunity to exchange current information and conduct dialogue.
* Subject databases, particularly from academic institutions. Increasing number of institutions, especially academic and research institutions are making databases in their subject specialties available.
* Community information. Often rough their public libraries, committees are providing access, either dial-up or via Internet, to local data base, such as the catalogue of public library, a

tour of the art gallery, tourist information, weather reports and other demographic.

* Government Resources. Both national and local governments are providing information to various Ministry and Departments.
* Library catalogue. Increasing numbers of libraries are making their catalogues available over the Internet which may extend the use of library resources.
* Commercial Resources. Commercial information databases are available on the Internet include: DIALOG, Lexis-Nexis, Dow Jones News/Retrieval and many others, DIALOG offers the users more than 400 databases on every possible subject.
* Document Delivery. Document delivery services may effectively provided by using Internet technology.
* Electronic mail (e-mail)- allowing users to send messages or files to each others.
* Telnet or remote login-allowing users to log in to remote sites.
* FTP (File Transfer Protocol)- allowing users to access and retrieve files at remote sites.
* News–to inform users of available information.
* HTTP-Hyper Text Transport Protocol.
* STMP-Short Mail Protocol, these are generally used in E-mail services.
* Gopher- a text only, non-graphic method to receive Internet documents, which have largely been intergenerated into the world wide web.
* Video Conferencing (open area)-involves linking more than two parties, so that participants can see each others and view presentations.
* The World Wide Web-allows users to jump form one resource to another with the click of mouse or a key stroke, without tunneling through gopher style menus.
* **INDEST-** for engineering IT and regional colleges; that provides the materials in the text form at your destination on payment basis.
* **INFONET**- (Under INFLIBNET) INFONET will provide the same services as INDEST, will perform the services for all academician, research scholar and students in their respective field of knowledge. Just to economise the services of universities and institution, to provide better services from single platform, to avoid duplication of subscription and to strengthen the services of networking etc.

CONCEPT OF INTRANET

An intranet is an organisation's internal communication system using internet technology. G. Bhojaraju[4] defines intranet as network connecting an affiliated set of clients using standard internet protocols, esp. TCP/IP and HTTP or as an IP based network of nodes behind a firewall, or behind several firewalls connected by a secure, possibly virtual, networks.

Intranet use two of the key application of internet: the web browsers with their graphical user interface (GUI), and electronic mail (e-mail). They are being used to support a wide range of information services, including, for example, access to document collection in the management system and e-mail.

BENEFITS OF INTRANET

Intranet technology is attractive to libraries because:

(i) The interface is easy to use; it also encompasses access to multimedia formats such as text, video, sound and graphical images.

(ii) A single interface to all formats of information using the internet open standard removes the requirements for library's network to provide several dedicated interfaces traditionally needed to interrogate proprietary systems such as a databanks, bibliographic information retrieval system, and management of information system. Also, the user only need to be familiar with one interface.

(iii) They provide improved access in a number of respects

  (a) documents may be shared across all major networking platforms.

  (b) information is accessible regardless of the user's location.

  (c) a workstation configured for use an intranet is also ready for intranet use if the necessary gateways are incorporated into the network.

  (d) access and use of groups using the intranet may be monitored, making it possible to access the value of services and resources offered on intranet.

  (e) user authentication system can be incorporated into browsers, so that access to information can be controlled.

(iv) They allow for maintenance of current documents, by offering

access to electronic documents that will always the latest version. This eliminates significant reprography, and time spent trying to locate lost paper based documents.

APPLICATIONS OF INTRANET TO LIBRARY SERVICES

In libraries, Intranet can facilitate, so many services. It helps in dissemination of stored information as well as allows to access to remote information. Through Intranet, libraries can discharge the required information to its users in less time, with high effectiveness.

The application of Intranet to library services depend upon the type of intranet. There are two main type of intranet: Flat content intranet, and interactive Intranets[5].

In flat-file Intranets, files are simply requested from a storage location or server, received by the desktop computer and viewed through the web browser. Some application of such Intranets are:

* Travel aids, maps
* Telephone directories
* Newsletter
* Calendars
* Policy manuals
* Quality systems
* Requirement pointers to information available on internet
* Document distribution and updating
* Current awareness bulletins
* Electronic journal delivery
* Internet subject resource listing
* Library opening times, collection and service, and other contact information
* Information skill support material

Interactive Intranets offer many opportunities for two way communication within an organisation. However, the configuration is highly more complex when a user wishes to send, change, respond to or forward any kind of information to another location or person, a specific program or script is needed to process this information. These scripts need to be help on an internal web server which uses TCP/IP. If an organisation's network does not run under TCP/IP, then gateway or firewall software may be used as an interface between the organization's network protocol and TCP/IP protocol. Application with such a configuration include:

* E-mail including messages and attached documents
* Computer based training and learning (packages can be authored and delivered in- house).
* Interactive services such as reservations systems, order/ purchase documents, reports and surveys, facilitated by 'form processing' and 'mailto' HTML commands.
* Web boards or online conferencing
* Support desk.
* Online desk
* Online enquiry services
* Loan renewals
* Access to library catalogue from the world wide web.

CONCLUSION

We are moving fast in the elecironic age, every one getting full advantages of it own, whether academician, sports personalities, economists or agriculturist etc. All are well connected with each other by internet or Intranet. The services which provided by them, have also brought the society closer to every one in their respective field of knowledge. Now the knowledge is not restricted to a particular society, institution or class room, but open for all and every where, in the present century; and hope the coming generation will get full advantage of it.

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TOTAL QUALITY MANAGEMENT IN UNIVERSITY LIBRARIES IN INDIA

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ABSTRACT

Total quality management (TQM) has been defined. Stress has been given to achieve TQM. Problems of university libraries have been identified in relation to Staff, Resources, Readers & Services. Solutions have been suggested; change and challenges faced by the Libraries of today and tomorrow have been discussed. TQM needs cooperation and coordination among different sections and the achievement of TQM is a lengthy process. Which has been high lighted in the paper.

INTRODUCTION

Total quality Management is a people focused management system that aims at continual increase of Customer satisfaction at continually lower real cost. This is a total system approach and an integral part of high level strategy. It works horizontally across functions and departments involves all employees top to bottom and extends backward and forward include the supply chain and Customer chain. Total Quality management has been defined as management Philosophy and Company practices that aim to harness the human and material resources of any organization. TQM is a systematic and holistic approach to the management of organization. TQM cannot he achieved in a short term. Commitment to TQM must he long term

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and organization wide. It will show here benefits only after months and years of sustained efforts.

In India TQM is now a part of the executive vocabulary and it has become a Key management issue in the context of library and information sciences. The TQM has its beginning from the date of publishing the book "Five laws of Library Science" in the year 1931. The implication of five laws of Library Science of S.R. Ranganathan has similar emphasis on total quality in library operations and services.

However, the TQM approach to the modern library management is quite meaningful and desireable.

In General TQM is management which provides for continuous satisfaction of needs of the users/ Readers at the lowest possible Cost/ limited budgets through the involvement of all professionals/ Semi-professionals/ Non-professionals in any library system. Involvement of library staff in primary requisite in TQM. Further it demands commitment and professionals discipline.

IMPORTANCE OF QUALITY

Quality is based on the action of people. TQM cannot exist unless and untill all people in an organization understanding and practicing the principles of quality at personal level. TQM is a style of management in which the best principles and practices of Scientific Management and participative management work together to achieve success for the institution.

TQM & LIBRARIES

Bernard suggests four methods for starting TQM in Libraries.

1. **Exploration and decision taking: -** In the Ist Step libraries should collect information about Quality management, after obtaining the information, library should move towards other step, for implementing TQM and involving management Committee for Commitment.
2. **Quality organization :-** The first step in the 2nd phase is planning which will provide the ground work on which the implementation of TQM can be done. Ultimately guide lines are prepared which will help the library to go forward from what is to, what it wants to be.
3. **Initiating: -** Steps taken in this phase are;
    1. The Libraries should identify the needs and expectation of readers.
    2. Measures should be taken to critical processes, which

are being used by the library.

3. Set up teams to solve critical processes and provide appropriate training to members of the team.

4. **Implementation** :-This is the final phase in this phase there is an emphasis on the spreading the expertise of the Ist project team and thus involvement in problem solving activities.

TQM IN UNIVERSITY LIBRARIES

The university libraries provide reading material to Students and research Scholars of the University. Therefore, quality should be maintained in collection development and library services. TQM may be applied simultaneously to the Staff, collection and services. TQM should be customer focused. Therefore, libraries should know the needs of the academic community.

PROBLEMS IN UNIVERSITY LIBRARIES

University Libraries in India have many problems which stand in the way of Quality assurance, for providing TQM to readers we have to find out solutions to the problems, which are related to the Staff, resource, readers & services.

PROBLEMS RELATED TO STAFF

(i) Supportive Structure (ii) Communications
(iii) Rewards and recognition (iv) Education and training
(v) Leadership

SUPPORTIVE STRUCTURE

University Libraries though financed by the U.G.C & State Govts. Still there is imbalance in the fund allocation. Developed universities always get more fund and less developed universities get less fund. This situation has to be changed. Now a days universities are starting self financed courses, it will help in increasing their sources of income and help in over all development of the universities. University Libraries can start short term courses in computer retrieval, internet etc. to raise fund if it has enough expertise for that. It may also be kept in mind that starting new course should not bring down the Quality.

COMMUNICATION

Communication is another way which is linked with TQM. Internet and E-mail facilities are being provided by U.G.C to various universities

on a priority basis. Communication technology can strengthen only the external communication. Internal communication is more important. The chief librarian should also visit the sections to understand the problems, Staff manual will help in solving many problems, which are common to more than one section.

REWARD AND RECOGNITION

Reward and recognition are very important in the system. These aspects may not be neglected. Equal opportunities should be given to staff members to attend seminars, conferences and refresher courses etc. The university librarian should be given recognition.

MEASUREMENT

Performance of the Staff should be measured. Information in this regard can be collected through Diarees and registers etc.

EDUCATION AND TRAINING

Education and Training are necessary to keep the librarian up to date in their field. Professional Staff should be sent for Refresher courses. Since attending refresher courses is compulsory for promotion of library staff to higher grade. U.G.C should provide more opportunities to start refresher / training to the library staff in computer and communication technology. Staff should be sent for such training courses in rotation..

LEADERSHIP

Lack of leadership is a problem faced by most of the university libraries. The problem can be solved only by appointing the right person, who can give leadership. University Grants Commission should provide strict guide lines in this regard.

PROBLEMS RELATED TO RESOURCES

Due to the increase in exchange rate of foreign currency now. It has become difficult to acquire foreign books and journals. Centralized acquisition and journal subscription are practical solutions to increase the resources. Department libraries should not subscribe same journals. A centralized union catalogue is most desirable to know the total collection in the university library system.

PROBLEMS RELATED TO READERS AND SERVICES

Problems concerning to readers and library services can be

discussed together, most of the students find it difficult to locate the required books because of the reasons.

1. because of lack of Knowledge about the arrangement (b) Misplacement of books (c) Delayed replacement of returned books.
2. Text books collection is not used properly because of the reasons
   (a) The books in the collection are mostly old books.
   (b) Pages are missing
   (c) Old editions are not replaced by latest editions
   (d) latest books as per syllabus are not added
   (e) Only text books and encyclopedias are frequently used.

SOLUTIONS

I. All Students should be given orientation enrolling themselves as members of the library. Readers should be told about the facilities available.

II. User assistance should be provided when ever required.

III. Current awareness service should be provided on topics of interest to teachers and research Scholars.

IV. Text book section should be periodically revised and up dated.

V. Delay in shelving books should be avoided and misplacement of books should be rectified by regular shelf rectification.

TECHNICAL PROCESSING AND TQM

Mistakes are possible in classification and cataloguing, there should be constant review and correction on these aspects. Technical processing should conform to standard schemes of classification and cataloguing codes, local variations can be there due to necessity, but these should be noted in a section manual.

COMPUTER AND TQM

Introduction of computer has become important in libraries for providing quality service to readers and computer simplifies many complex procedures in book order, journal subscription and cataloguing, which is step towards quality.

CONCLUSION

All university libraries in India are facing similar problems. The

suggestions made in this paper will help the libraries to take steps towards TQM. It is further suggested that TQM needs an integrated approach rather than a piece meal approach. TQM needs cooperation and coordination among different sections and the achievement of TQM is a lengthy process. In this connection it is suggested that a Committee of the Senior and competent professionals may be constituted to supervise and suggest measures to provide quality services to the users in the concerned institutions.

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