INDIAN JOURNAL OF LIBRARY AND INFORMATION SCIENCE

The Indian journal of Library and Information Science (Print ISSN 0973-9548, Online ISSN 0973-9556, Registered with Registrar of Newspapers for India: DELENG/2007/22242) provides comprehensive international science and technology. IJLIS is published 3 times in a year by the **Red Flower Publication Pvt. Ltd.**

It presents peer-reviewed survey and original research articles on specific areas are: new information technology, education and training, human resource management, the changing role of the library, future developments, opportunities, bibliographic databases, cataloging issues, electronic publishing, acquisitions, collection development, administration, management, archives, preservation, and special collections, automation and cataloging. Its papers include letter to the editor, book reviews, calendar of events, conference reports, interviews, and much more.

Subscription Information

	One Year
Institutional	
India	Rs.2500
All Other Countries	$200
Individual	
India	Rs.1000
All Other Countries	$50

Discount for agents 10%. Orders and subscriptions send to the following address of **Red Flower Publication Pvt. Ltd, Delhi**

Printed at

R.V. Printing Press
C-97, Okhla Industrial Area
Phase-1, New Delhi

Corresponding address
Red Flower Publication Pvt. Ltd.
41/48, Box 9108, Delhi 110091 (India)
Phone: 91-11-65270068/48042168, Fax: 91-11-48042168
E-mail: reflowerppl@vsnl.net, Web:www.rfppl.com

Indian Journal of
Library and Information Science

January - April 2010; Volume 4 Number 1

Contents

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

A case study on the use of internet resources by research scholars and students of Annamalai University

V. Ramesh Babu*
M. Nagarajan**

ABSTRACT

This paper aims at analysing the use of internet resources by research scholar and student. The quality online content useful to academics in international studies teaching and research at the university and college level, including how and where to locate such materials through guides, directories, gateway sites, repositories, and various types of search engines; considerations about internet use in universities and college classes; and research scholars pg and ug graduate assignments that use sources of information from the internet. There is also consideration of characteristics and trends of university student use of the internet for research purposes, the ''invisible'' or deep web, electronic information literacy for academics, and maintaining current awareness on the fast-changing web.

INTRODUCTION

The internet is a global network of computers and software that is interconnected by cables. It is appropriate to define the *world wide web* www or web as an interactive and collaborative information environment that is mainly composed of hypermedia and hypertext documents linked to one another, and distributed over the internet. What is more, the internet can be pictured as a dynamic process, because it transforms perpetually. That information network is evidently also becoming an integral part of peoples everyday life. It is not surprising, then, that internet research is often argued for by referring to the fast technological advancement and the changing mediascape.

Be that as it may, information science somehow tends to presume that *man* the originator of cultural progress is not inclined to really develop. This is betrayed by the bare fact that no major information theory or model accommodates human development. It also shows in how seldom longitudinal studies are conducted. Most directly, however, the bias is evidenced by the astonishing scarcity of published research analysing informational activities in conjunction with personal development.

We prefer pages by public institutions to those by private persons. One may detect a distinct polarity of actors here: development is mostly a private affair. In this study, an attempt is made to analyse the internet use and information such behaviour among the research scholars and students of annamalai university.

OBJECTIVES

i. To analyse the respondent's duration and quantum of time utilization in search of information through internet
ii. To analyse the e-resources search behaviour of research scholars and students of annamalai university

Author's Affiliations: *Librarian, Dr. Pauls Engineering College, Pauls Nagar, Vanur, Villupuram Dist - 605 109, T.N. E-Mail: veerameshbabu@gmail.com; **Professor and Head, Department of Library and Information science Annamalai University Chidambaram (T.N.)

Reprints Request: Dr. V. Ramesh Babu, Librarian Dr. Pauls Engineering College, Pauls Nagar, Vanur, Villupuram Dist - 605 109, T.N. E-mail: veerameshbabu@gmail.com

(Received on 10.4.09, accepted on 14.9.09)

iii. To analyse the respondents' rating on utility of internet resources

HYPOTHESES

i. The respondents do differ significantly in their e-resources search behaviour.

ii. There is a significant faculty wise variation with respect to respondents' rating on utility of internet resources.

METHODOLOGY

This study attempts to examine the internet use behaviour among the research scholars and students of annamalai university. It is primarily a fact-finding venture. The identified facts are cross tabulated with the faculty background, and occupational background of the respondents. Thus it gives an analytical orientation to this study and the design of this study is partly exploratory in nature and partly analytical in nature.

SAMPLING

The researcher has selected six faculties in annamalai university, viz., arts, science, engineering, agriculture, education and medicine and from each faculty 50 respondents are selected

Table 1: Faculty wise respondents' extent of using various internet resources

Faculty	E-Journals			E-Books			Online data bases			E- Articles			E-publishing		
	Most Frequently	Frequently	Occasionally	Most Frequently	Frequently	Occasionally	Most Frequently	Frequently	Occasionally	Most Frequently	Frequently	Occasionally	Most Frequently	Frequently	Occasionally
Art	11 22.00	10 20.00	29 58.00	23 46.00	15 30.00	12 24.00	18 36.00	16 32.00	16 32.00	15 30.00	18 36.00	17 34.00	11 22.00	18 36.00	21 42.00
Science	22 44.00	18 36.00	10 20.00	28 56.00	11 22.00	11 22.00	10 20.00	15 30.00	25 50.00	23 46.00	17 34.00	10 20.00	16 32.00	21 42.00	13 26.00
Engineering	25 50.00	14 28.00	11 22.00	13 26.00	10 20.00	27 54.00	20 40.00	20 40.00	10 20.00	17 34.00	20 40.00	13 26.00	11 22.00	28 56.00	11 22.00
Agriculture	10 20.00	12 24.00	28 56.00	14 28.00	10 20.00	26 52.00	16 32.00	12 24.00	22 44.00	18 36.00	22 44.00	10 20.00	12 24.00	15 30.00	23 46.00
Education	15 30.00	22 44.00	13 26.00	15 30.00	12 24.00	23 46.00	21 42.00	15 30.00	14 28.00	27 54.00	13 26.00	10 20.00	10 20.00	15 30.00	25 50.00
Medicine	20 40.00	12 24.00	18 36.00	20 40.00	8 16.00	22 44.00	13 26.00	17 34.00	20 40.00	19 38.00	12 24.00	19 38.00	14 28.00	14 28.00	22 44.00
Total	103 34.33	88 29.33	109 36.33	113 37.67	66 22.00	121 40.33	80 32.67	79 31.67	91 35.67	119 39.67	102 34.00	79 26.33	74 24.67	111 37.00	115 38.33

ANOVA						
Source of Variation	*SS*	*df*	MS	F	*P-value*	*F crit*
Rows	320.0926	5	64.01852	3.675314	0.007876	2.449468
Columns	264.1481	8	33.01852	1.895599	0.087748	2.180172
Error	696.7407	40	17.41852			
Total	1280.981	53				

Table 2 : Category wise respondents' extent of using internet resources

	E-Journals			E-Books			Online data bases			E- Articles			E-publishing		
Category	**Most Frequently**	**Frequently**	**Occasionally**	**Most Frequently**	**Frequently**	**Occasionally**	**Most Frequently**	**Frequently**	**Occasionally**	**Most Frequently**	**Frequently**	**Occasionally**	**Most Frequently**	**Frequently**	**Occasionally**
Ph.D Scholar	19	15	21	20	18	17	13	19	23	12	28	15	9	30	16
	34.55	27.27	38.18	36.36	32.73	30.91	23.64	34.55	41.82	21.82	50.91	27.27	16.36	54.55	29.09
M.Phil Scholar	22	15	29	22	12	32	22	16	28	32	16	18	22	16	28
	33.33	22.73	43.94	33.33	18.18	48.48	33.33	24.24	42.42	48.48	24.24	27.27	33.33	24.24	42.42
PG Student	30	24	21	39	14	22	36	18	21	33	22	20	18	33	24
	40.00	32.00	28.00	52.00	18.67	29.33	48.00	24.00	28.00	44.00	29.33	26.67	24.00	44.00	32.00
Integrated Student	32	34	38	32	22	50	27	42	35	42	36	26	25	32	47
	30.77	32.69	36.54	30.77	21.15	48.08	25.96	40.38	33.65	40.38	34.62	25.00	24.04	30.77	45.19
Total	103	88	109	113	66	121	98	95	107	119	102	79	74	111	115
	34.33	29.33	36.33	37.67	22.00	40.33	32.67	31.67	35.67	39.67	34.00	26.33	24.67	37.00	38.33

Category **n**	Reference works dictionaries /Encyclopedias			Online book shop			Modal Exam Papers			Maps			**Total**
	Most frequently	**frequently**	**Occasionally**	**Most frequently**	**frequently**	**Occasionally**	**Most frequently**	**frequently**	**Occasionally**	**Most frequently**	**frequently**	**Occasionally**	
Ph.D Scholar	23	12	20	13	32	10	29	11	15	15	18	22	55
	41.82	21.82	36.36	23.64	58.18	18.18	52.73	20.00	27.27	27.27	32.73	40.00	
M.Phil Scholar	16	22	28	32	16	18	16	35	15	25	15	26	66
	24.24	33.33	42.42	48.48	24.24	27.27	24.24	53.03	22.73	37.88	22.73	39.39	
M.Phil Scholar	25	32	18	32	27	16	25	36	14	18	40	17	75
	33.33	42.67	24.00	42.67	36.00	21.33	33.33	48.00	18.67	24.00	53.33	22.67	
Integrated Student	39	35	30	40	30	34	30	28	46	32	45	27	104
	37.50	33.65	28.85	38.46	28.85	32.69	28.85	26.92	44.23	30.77	43.27	25.96	
Total	103	101	96	117	105	78	100	110	90	90	118	92	300
	34.33	33.67	32.00	39.00	35.00	26.00	33.33	36.67	30.00	30.00	39.33	30.67	

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	1311.639	3	437.213	11.4916	7.26E-05	3.008786
Columns	396.2222	8	49.52778	1.301777	0.289306	2.35508
Error	913.1111	24	38.0463			
Total	2620.972	35				

as samples. While selecting samples a stratification method is applied with a view to give relative weightage to the research scholars and students of different designations. Thus, the sampling of the study comes under stratified random sampling.

DATA COLLECTION

The researcher has employed a well structured questionnaire for collecting the data from the respondents of the six faculties of annamalai university. The researcher has sent questionnaires to all the selected staff members who work at different faculties of annamalai university. The questionnaires have been designed to elicit background information of the staff members, duration and quantum of library use, nature and type of information required, information sharing behaviour and achievements, database use and so on.

DATA ANALYSIS

The collected data are classified and tabulated according to the objectives and hypotheses stated. First, the data are recorded on data sheets and then fed to the computer personally.

A study of data in Table 1 indicates the faculty wise respondents' frequency of access to e-resources. It is noted that out of the total 300 respondents 34. 33 percent of them most frequently access to e-journals, 29.33 percent of them frequently access to e-journals and the rest 36.33 percent of them occasionally access to e-journals. It is observed that out of the total 300 respondents 37.67 percent of them most frequently access to e-books, 22.00 percent of them frequently access to e-books and the rest 40.33 percent of them occasionally access to e-books.

It is observed that out of the total 300 respondents 32.67 percent of them most frequently access to online data bases, 31.67 percent of them frequently access to online data bases and the rest 35.67 percent of them occasionally access to online data bases. It is significant that out of the total 300 respondents 39.67 percent of them most frequently access to e-articles, 34.00 percent of them frequently access to e-articles and the rest 26.33 percent of them occasionally access to e-articles.

It is noted that out of the total 300 respondents 24.67 percent of them most frequently access to e-publishing, 37.00 percent of them frequently access to e- publishing and the rest 38.33 percent of them occasionally access to e-publishing. It is observed that out of the total 300 respondents 34.33 percent of them most frequently access to reference works such as dictionaries and Encyclopedias, 33.67 percent of them frequently access to reference works and dictionaries/Encyclopedias and the rest 32.00 percent of them occasionally access reference works dictionaries/Encyclopedias. It is noted that out of the total 300 respondents 39.00 percent of them most frequently access to online book shop, 35.00 percent of them frequently access to online book shop and the rest 26.00 percent of them occasionally access online book shop.

It is significant that out of the total 300 respondents 33.33 percent of them most frequently access to model exam papers, 36.67 percent of them frequently access to model exam papers and the rest 30.00 percent of them occasionally access model exam papers. It is noted that out of the total 300 respondents 30.00 percent of them most frequently access to maps , 39.33 percent of them

frequently access to maps and the rest 30.67 percent of them occasionally access to maps.

The faculty wise analysis reveals the following facts. Majority of the respondent of science faculty most frequently access to e-books (56.00%), e-articles (46.00%), online book shop (44.00%) and model exam papers (44.00%). Majority of the respondents of faculty of agriculture occasional access to e-journals (56.00%), e-books(52.00%) and e-publications (46.00%).

Majority of the respondents of faculty of engineering frequently access to online data bases (40.00%), and e-publications (56.00%). A considerable number of respondents of faculty of medicine most frequently access to reference works dictionaries/Encyclopedias (44.00%), online books shop (44.00%) , model exam papers (44.00%) and maps (40.00%).

The anova to a model is applied for further discussion. At one point the computed ANOVA value 3.67 which is greater than its tabulated value at 5 per cent level of significant. Hence, variation with respect to most frequent access to various internet resources is statistically identified as significant. In another point the computed anova value 1.89 which is lesser than its tabulated value at 5 per cent level of significant. Hence, variation among chosen faculties of Annamalai University is statistically identified as insignificant with respect to respondents' most frequent access to various internet resources.

It is seen clearly from the above discussion that respondents mainly most frequently access to e-articles online book shop and e-books. They are occasional access to online data bases and e-publications.

A study of the data in Table 2 designation wise respondents' extent of using various internet resources. Majority of the M.Phil Scholar respondents most frequently use e-articles (48.48%), on-line book shop(48.48%) and maps (37.88%). A considerable number of M.Phil Scholar respondents most frequently use e-journals (40%), e-books (52%) and on-line data bases (48%). Majority of the Integrated Student respondents occasionally use e-journals (36.54%) , e-books (48.08%), e-publications (45.19%) and model exam papers(44.23%).

The anova to a model is applied for further discussion. At one point the computed ANOVA value 11.49 which is greater than its tabulated value at 5 per cent level of significants. Hence, variation with respect to most frequent access to various internet resources is statistically identified as significant. In another point the computed anova value 1.30 which is lesser than its tabulated value at 5 per cent level of significant. Hence, variation among chosen designation of respondents of Annamalai university is statistically identified as insignificant with respect to respondents' most frequent access to various internet resources.

It is clear from the above discussion that Ph.D Scholar respondents most frequently use reference works , dictionaries /Encyclopedias and model exam papers.

FINDINGS AND CONCLUSION

The findings of frequency of using library reveals the following facts. The Ph.D Scholar respondents considerably use the library daily.

It is found that knowledge about internet resources indicates the followings facts. Majority of the respondents have above average knowledge about internet. The Ph.D Scholar respondents have average knowledge about internet.

From the observations, it is perceived that the main problem in search of internet resources indicates the following facts. The respondents have problems of using internet in terms of lack of time to acquire computer skills to use internet resources, lack of high quality information available from internet resources and access to suitable software.

Rating of Internet Resources indicate the followings facts. A considerable number of respondents state that average level of performance of authority and availability of internet resources. The Ph.D Scholar respondents rate it as excellent performance of timeline internet resources.

REFERENCES

1. Cohen, G. E. & Kerr, B. A. (1998). Computer mediated counseling: an empirical study of a new mental health treatment. Computers in Human Services, 15 (4), 13-26.
2. Finn, J. & Lavitt, M. (1995). A survey of information technology-related curriculum in undergraduate social work programs. The Journal of Baccalaureate Social Work, 1 (1), 39-53.
3. Grishman, M.H. (1995). Development of a computer information management system. Social Work in Health Care, 22 (2), 73-86.
4. Hile, M. G. (1998). The history and function of the target cities management information systems: an introduction to the special issue. Computers in Human Services, 14 (3/4), 1-8.
5. Howard, M.D. (1995). From oral tradition to computerization: A case study of a social work department. Computers in Human Services, 12 (3-4), 203-219.
6. Linn, N. A., Schneider, S. J., McCreery, R. & Kasab, D. S. (1998). Expert system for utilization of alcohol and drug abuse cases. Computers in Human Services, 15 (4), 1-12.
7. Marlowe-Carr, L. C. (1997). Social workers on-line: a profile. Computers in Human Services, 14 (1), 59-70.
8. Pardeck, J.T. (1997). Computer technology in clinical practice: a critical analysis. Social Work & Social Sciences Review, 7 (2), 101-111.
9. Pardeck, J. (1998). Rationalizing decision-making through computer technology: a critical appraisal. Journal of Health and Social Policy, 9 (4), 19-29.

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Dependency on e-resources social science faculty Universities in Iran

Mohamad Bagher Negahbari*
V.G. Talawar**

ABSTRACT

The present study is aimed at assessment of e-resources dependency by Iranian social science faculty members. A total of 232 faculty members from various universities from Iran was randomly selected. A questionnaire measuring dependency on various e-resources: e-books, e-journals, e-tutorials, online databases, CD-ROM databases and e-reports was prepared by the investigator and administered to the sample selected. Statistical methods like descriptive statistics and chi-square tests were employed to verify the hypotheses. Results revealed that Iranian faculty members were more dependent on all the e-resources except for e books selected for the study. It was also observed that Iranian faculty members were more dependent on e-journals, followed by Online data bases, e tutorials and least on e-reports. The reasons for dependency on various e-resources have been discussed.

Keywords: Electronic resources, e-books, e-journals, e-tutorials, CD-Rom databases, Online databases, e-report.

INTRODUCTION

Electronic information resources, in reality have become the backbone of many academic organizations. The awareness and use of electronic information sources by faculty members depends mainly on skills of each individual to locate discrete knowledge elements. Information explosion has increased in the amount of electronic information sources available on the web. Electronic information resources help to expand access, increase usability and effectiveness and establish new ways for individuals to use information to be more productive in their endeavors. Awareness of electronic resources may aid the users in keeping abreast with current developments in their respective subject fields, in contrast with print media. The use of electronic information resources is necessary for users mainly because the electronic resources provide better, faster and easy access to information than information accessed through print media. Electronic information resources can be relied upon for timely information which upholds the quote: right information to right user at right time.

Numerous studies have been undertaken to explore the Electronic Information sources: Lee (2002) presents a handbook on building electronic resource collections, beginning with a definition of electronic databases and the general principles of collection development and discusses the purchase and use of e-books and e-journals, as well as methods of user access. The author highlights the collection development activities of assessing, acquiring, and delivering electronic databases from initial appraisal through acquisition, budgeting, installation, marketing, and evaluation. Linda Ashcroft and Chris Watts (2004) state that there are similar issues in the take-up of

Author's Affiliations: *Research Scholar, Department of Library & Information science, University of Mysore, Mysore, India., E-mail:negahban2003@yahoo.com; **Professor, Department of Library & Information science, University of Mysore, Mysore, India., e- mail:muvgt@yahoo.co.in

Reprints Request: Mohamad Bagher Negahban, Research Scholar, Department of Library & Information science, University of Mysore, Mysore, India., e-mail:negahban2003@yahoo.com

(Received on 26.8.09, accepted on 10.10.09)

e-books to those regarding the take-up of other electronic resources, such as e-journals. These include changes in professional and management skills, such as collection development, marketing and evaluation, user education, technological skills and communication skills. Bayugo and Agbeko (2007) report on a survey of convenient access to, and use of, electronic databases (CD-ROM and online) including full text journals and their effect on information seeking behavior of health sciences faculty at the College of Health Sciences of the University of Ghana Medical School. The survey documented preferences between print and electronic resource use, and the specific databases and full text journals that faculty have particularly found useful. The results showed faculty lack of awareness and use of the two most resourceful full text journal databases available at the library (HINARI and PERI), hence they resorted to PUBMED as their source of access to full text articles. They conclude that most faculties now prefer using electronic access to information (CD-ROM/online) than traditional print indexes and abstracts which include recommendations for more functional and effective use of these electronic databases and full text journals that are available at the library.

Dugdale (2001) emphasizes the Internet contradiction facing these in higher education who are attempting to create equality of access to information, where nevertheless new aspects of inequality may be created. This may occur even where all members theoretically possess equal access to the same material. Fisher (1998), briefly reviews information's chequered history and critically analyzes electronic information sources with particular reference to social science CD-ROMs and the Internet. The content of such databases is nothing like as geographically and culturally diverse as we are led to believe. This unequal and discriminatory supply of information, aided and abetted by increasing commoditization, is both the product of, and an influence on, the quality of academic research and teaching, information professionals can take steps to mitigate information inequality. Stabler (1991), explains end users of CD-ROM often need assistance in data base content, search protocols, and use of microcomputers. There is a necessity for a good training program which will develop a positive attitude, competency of staff, and consistency of service. He describes a model training program developed by New Mexico State University Library. By using a team approach of a subject specialist and the CD-ROM Coordinator, the staff can be trained quickly and efficiently. The training emphasizes data base content, software comparison and application, and basic knowledge of microcomputers.

From the preceding studies it is clear that the information on dependency on e-resources was scanty and the researcher planned to conduct a survey to understand the level of dependency on various e-resources by social science faculty members in Iran. Hence the study attempts to find answer to the question about the specific dependency on electronic information sources among the Social science faculty members in Iran.

OBJECTIVES

1. To study the use/dependency of different types of Electronic sources by Iranian social science faculty members.
2. To understand the preferences of e-resources by Iranian social science faculty members.

HYPOTHESIS

Iranian social science faculty members differ significantly in their dependency of e-resources: e-books, e-journals, e-tutorials, CD-Rom databases, Online databases, e-report.

PROCEDURE

The study covered a total of 232 social science faculty members from various universities (6) of Iran. The universities selected were Ran University, Shiraz University, Ahvaz University, Karman University Esfahan University, Tehran University and Mashhad University. The questionnaire method was used to elicit data on the dependency on various e-resources by the faculty

members in Iran. A set of questions were formulated keeping in view, the need and objectives of the study. The questionnaires were personally distributed to 232 members who were selected randomly. Further, statistical methods like chi-square tests and descriptive statistics were employed using SPSS for Windows (version 16.0).Table.1

Frequency and percent values for dependency on various e-resources by Iranian social science faculty members and results of chi-square tests.

Responses		E-resources					
		E-books	E-journals	E-tutorials	Online database	CD ROM database	E-reports
No dependency	F	72	4	19	10	22	51
	%	31.0	1.7	8.2	4.3	9.5	22.0
Depend rarely	F	71	25	39	55	62	48
	%	30.6	10.8	16.8	23.7	26.7	20.7
Depend occasionally	F	54	38	56	43	46	62
	%	23.3	16.4	24.1	18.5	19.8	26.7
Depend frequently	F	4	88	85	74	68	59
	%	1.7	37.9	36.6	31.9	29.3	25.4
Depend highly	F	31	77	33	50	34	12
	%	13.4	33.2	14.2	21.6	14.7	5.2
Total	F	232	232	232	232	232	232
	%	100.0	100.0	100.0	100.0	100.0	100.0
Chi-square		72.27	107.61	55.33	47.10	31.45	34.68
P value		.000	.000	.000	.000	.000	.000
Mean dependency		2.40	3.90	3.32	3.43	3.13	2.71

F-Frequency; %-Percent

RESULTS

Table 1 presents frequency and percent values for dependency on various e-resources by Iranian social science faculty members. The table also presents results of chi-square tests and descriptive statistics. Following paragraphs highlight the analysis of results in brief.

a. E-books: In the case of dependency on e-books it was found that 13.4% of the sample depended highly, 1.7% depended frequently, 23.3% depended occasionally, 30.6% depended rarely and remaining 31.0% did not depend on e-resources. Chi-square test revealed a significant difference between groups of responses (X^2=72.27; P=.000). The mean dependency score was found to be 2.40.

b. E-journals: 33.2% of the sample depended highly on e-journals, 37.9% depended frequently, 16.4% depended occasionally, 10.8% depended rarely and remaining 1.7% did not depend on e-journals. Between these

responses a significant difference was observed, where Chi-square value of 107.61 was found to be significant (P=.000). The mean dependency score was found to be 3.90.

c. **E-tutorials:** When dependency in the case of e-tutorials was verified, it was found that 14.2% of the sample depended highly, 36.6% depended frequently, 24.1% depended occasionally, 16.8% depended rarely and remaining 8.2% did not depend on e resources. Chi-square test revealed a significant difference between groups of responses (X^2=55.33; P=.000). The mean dependency score for e-tutorials was found to be 3.32.

d. Online databases: 21.6% of the sample depended highly on online databases, 31.9% depended frequently, 18.5% depended occasionally, 23.7% depended rarely and remaining 4.3% did not depend. Between these responses a significant difference was observed, where Chi-square value of 47.10 was found to be significant (P=.000). The mean dependency score was found to be 3.43.

e. CD-Rom databases: When dependency in the case of CD-ROM databases was verified, it was found that 14.7% of the sample depended highly on online databases, 29.3% depended frequently, 19.8% depended occasionally, 26.7% depended rarely and remaining 9.5% did not depend. Between these responses a significant difference was observed, where Chi-square value of 31.45 was found to be significant (P=.000). The mean dependency score was found to be 3.13.

f. **E-reports:** 5.2% of the sample depended highly on online databases, 25.4% depended frequently, 26.7% depended occasionally, 20.7% depended rarely and remaining 22.0% did not depend. Between these responses a significant difference was observed, where Chi-square value of 34.68 was found to be significant (P=.000). The mean dependency score was found to be 2.71.

On the whole, we see that Iranian faculty members were dependent high on all the e resources selected except for e-reports. It was found that Iranian faculty members were more dependent on e-journals, followed by e-books, and Online databases and less dependent on e reports.

DISCUSSION

Main findings of the present study are:

a. Iranian faculty members were more dependent on all the e-resources selected for the study except for e-books.

b. It was observed that Iranian faculty members were more dependent on e-journals, followed by online databases, e-tutorials and least on e-reports.

All the faculty members in the Iranian universities have been provided computers and net facilities. Further, the faculty members have been given net connections freely to their residences too through the universities. Some of the campuses are WI-FI enabled. So the access to e-resources is quite easy, hence there could be more dependency.

It was found that Iranian social science faculty members were highly dependent on e-journals and e-books. The reason could be that most of the faculty in Iran in higher education is trying to get their doctoral and post doctoral degrees. Some of them are trying to pursue their doctoral and post doctoral degrees in other countries. This brings more dependency on e-journals and e-books. The Iranian universities have special reward systems for those who publish articles/books on International level. This factor also motivates the faculty members to be more dependent on e-resources like journals and books.

REFERENCES

1. Davis, Philip M. 2002. Patterns in Electronic Journal Usage: Challeng ing the Composition of Geographic Consortia. College and Research Libraries 63(6): 484-497.

2. DeGroote, Sandra L. and Josephine L. Dorsch. 2003. Measuring Use Patterns of Online Journals and Databases. Journal of the Medical Library Association 91(2): 231-240.

3. Dugdale, C. 2001. Equality in an electronic environment. ELVIRA 4: Proceedings of E-book technology on academic libraries. Information technology and libraries 20(2):104-113.
4. EPIC: Online Use & Cost Evaluation Program. 2001. The Use of Elec tronic Resources Among Undergraduate and Graduate Students. Available at *http://www.epic.columbia.edu/eval/find03.html.*
5. Fisher, D.1998. Information technology and inequality in higher education. Education libraries journal. 37(3): 21-32.
6. Guthrie, Kevin M. 2001. What Do Faculty Think of Electronic Re sources? ALA Annual Conference Participants' Meeting Available at http://www.jstor.org/about/faculty.survey.ppt
7. MacDonald, Brad and Robert Dunkelberger. 2000. Full-test Database Dependency: An Emerging Trend Among Undergraduate Library Users? Research Strategies 16(4): 301-307.
8. Majid, Shaheen and Alfia Fanilievna Abazova. 1999. Computer Liter acy and Use of Electronic Information Sources by Academics: A Case Study of International Islamic University Malaysia. Asian Libraries (4): 100-111.
9. Mercer, Linda S. 2000. Measuring the Use and Value of Electronic Journals and Books. Issues in Science and Technology Librarianship 25(Winter). Available at *http://www.library.ucsb.edu/istl/00-winter/article1.html.*
10. Park, Soyeon. 2000. Usability, User Preferences, Effectiveness, and User Behaviors When Searching Individual and Integrated Full-Text Databases: Implications for Digital Libraries. Journal of the American Society for Information Science 51(4): 456-468.
11. Tenopir, Carol and Eleanor Read. 2000. Patterns of Database Use in Academic Libraries. College & Research Libraries 61(3): 234-246.
12. Worlock, Kate. 2002. Electronic Journals: User Realities—The Truth About Content Usage Among the STM Community. Learned Publishing 15(3): 223-226.

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Knowledge management for future perceptions of library and information professionals

P. Ravichandaran*
N.O. Natarajan**

ABSTRACT

Working with knowledge implies understanding the organization as a system. Effective work demands creation, sharing and distribution of information as the new material that individuals and organizations process into knowledge. Using knowledge requires individual and organizational learning and interaction. As actor in a system, human participants enable an organization to learn. Individuals share and improve, effectively recycle the existing knowledge. Knowledge management is seen as offering a substantial enhancement of the role of the information professional and an opportunity to rejuvenate the profession. Librarians and information professional have also responded to the knowledge management movement. This paper describe overview of knowledge management: definition, objective, trends in knowledge management, understanding of knowledge management and changes involved in knowledge management.

INTRODUCTION

The term knowledge management was first introduced in a 1986 keynote address to a european management conference. Knowledge management is emerging as a key concern of all organizations. Knowledge has always been the prime mover of prosperity. A knowledge society is one of the basic foundations of the development of any nation. In today's competitive environment, organizations realize that it is necessary to engage in a systematic approach to capture, store and share organization knowledge to become more competitive.

Author's Affiliations: *Reader, Library and Information Science wing, Directorate of Distance Education, Annamalai University, Annamalainagar–608 002; **Lecturer, Library and Information Science wing, Directorate of Distance Education, Annamalai University, Annamalainagar – 608 002. E-mail: natarajanno@ymail.com

Reprints Request: Dr. P. Ravichandran Reader, Library and Information Science wing, Directorate of Distance Education, Annamalai University, Annamalainagar – 608 002.

(Received on 5.3.09, accepted on 11.6.09)

DEFINITION OF KNOWLEDGE MANAGEMENT

Knowledge management is defined as a set of processes directed at "creating – capturing storing – sharing – applying – reusing" knowledge.

NEED

The purpose of knowledge management is to improve the performance of organizations, institutions and professionals. In the case of documentation and information professionals, its purpose is to help researchers obtain their information needs in their field of interest.

OBJECTIVES

1. Ensure an effective and efficient development of new knowledge.
2. Ensure an effective securing of knowledge which is also easily accessible to the whole organization.
3. Distribution of new knowledge to new employees of the organization.

4. Adapt the availability of knowledge to the time when knowledge is needed and apply knowledge when required.

TRENDS IN KNOWLEDGE MANAGEMENT

The educational training requirements in knowledge management for library and information professionals is prompted by three emerging trends.

Firstly, the substantive claims put forward by the knowledge management literature seem to indicate that the practical application of the concept of knowledge management is a powerful force in organisations which contribute to organisational performance, competitive advantage and positioning, economic success in the market place and economic sustainability (stewart, 1997).

There is a pervasive and emotive rhetoric by knowledge management experts that signals the positive outcomes of effective knowledge management practices, and the deleterious consequences of ignoring it. Prusak (1997), for instance, asserts that "the firm that leaves knowledge to its own devices puts itself in severe jeopardy", and in order to avoid that fate, he states the importance of "working to build better environments for knowledge to be created and better methods of measuring and managing its outputs" (nonaka, 1995). He links knowledge management to organisational success. He claims that companies are successful because of their skills and expertise at "organizational knowledge creation", that is, "the capability of a company as a whole to create new knowledge, disseminate it throughout the organization and embody it in products, services, and systems".

Secondly, in the published literature, there is a sense that knowledge management is not the same as information management, and while there are understandings and skills that appear to overlap, the implication is that the formal education and training programs for knowledge management need to be responsive to this. This variation in perception suggests the need to develop a strong, shared understanding of the nature of knowledge management, its underpinning assumptions and values, and its multi-faceted relationship to existing information work.

Thirdly, there is an increasing number of job opportunities focusing on knowledge management. Job titles such as chief knowledge officer, knowledge manager, knowledge and training co-ordinator, knowledge analyst, knowledge operations manager and director of knowledge systems are emerging, as evident by the work of abell and oxbrow (2001:102,3). These positions in the main focus on information and knowledge use in the corporate sector, the tend to specify responsibilities associated with information management as well as an understanding of human dimensions of how people generate and use knowledge, and how this might be effectively managed.

UNDER SANDING TRENDS IN KNOWLEDGE MANAGEMENT

"Understanding" is defined as the "knowing about", "knowing what", that is, the broader theoretical and conceptual foundations and underpinning ideas central to knowledge management. Skills are defined as "knowing how", the procedural and technical competencies required for the practice of knowledge management.

The table below summaries the range of understandings perceived to be central for effective knowledge management. Five categories of understandings are identified, clearly emphasising people and organisational factors over technology. However, also identified are other dimensions such as user needs and uses, knowledge dynamics and critical thinking and analysis.

Knowledge about knowledge	*People*
Nature of knowledge Creation of human knowing How people acquire knowledge Typologies of knowledge Knowledge dissemination Knowledge utilisation Knowledge trends: globalisation, convergence	Needs analysis Group and organisational dynamics Psychology of people in groups Strategies for creating a knowledge sharing culture Ways people learn, think, absorb ideas Learning styles Cognitive science understanding Understanding how people share information
Organisation	*Information*
Understanding of organisational culture Structure, politics and needs of organisation Business products and services Role of knowledge in the organisation The external market and competitive advantage Understanding how organisations work: purpose, function, vision and mission Cost benefits of knowledge management Value of knowledge to the organisation Understanding customer requirements	Information management principles Information management systems Indexes and catalogues Understanding how information is utilised Synthesis of information Holistic view of information theory How to integrate knowledge and information into management systems
Technology	
System specifications and applications Understanding the internet as a global, networked information infrastructure Search engine algorithms Understanding impact of technology on the organisation Data mining	

As shown in the table emphasis is given to understanding the nature of human knowing: how our knowing grows, is constructed, is structured, and is integrated into the already existing knowing as well as to understanding how it can be acquired, documented and integrated with the other existing knowing. Complementing this emphasis is also an emphasis on understanding the knowledge dynamics of people how people learn, think, and share ideas, how they consume information and impart their knowing and understanding group dynamics that foster or limit the sharing of personal knowing. Also perceived to be important is an understanding the organisation as a knowledge generating and using entity organisational structures, cultures, dynamics, politics and values, and how knowledge creation and flow shape and are shaped by the organisation and its stakeholders.

Understanding of the different perspectives of knowledge management, together with their underpinning assumptions and epistemological stances and implications for professional practice would seem essential. While knowledge management consultants, trainers and educators might each choose to take different perspectives, situating a

preferred perspective within an understanding of multiple perspectives (southon g and todd, 1999), may alleviate the uncertainty about the nature of the field and its practices, and the confusion surrounding its status as a fad or legitimate area of practice and inquiry, and may contribute to more effective implementation strategies within an organisation.

CHANGES INVOLVED IN KNOWLEDGE MANAGEMENT

It is important that information professionals understand the complexities of change processes involved in knowledge management initiatives. While there are many pressures promoting relatively short-term technology-based knowledge management "solutions", these have poor records of effectiveness, and there is a need for longer term, culturally based initiatives (malholtra, 2000). These, are much more difficult to conceptualise and develop, especially when short-term fixes are expected. It is important for the information professional to recognise the breadth of factors involved, and to work with others within the organisation to develop a common understanding of what might be involved (nadler and shaw, 1995). This will require a long-term commitment and considerable education effort. They will also need to appreciate that knowledge management is probably much greater than any of them, and it is necessary to establish and recognise the relative contributions. (davenport and prusak, 1998)

CONCLUSION

Knowledge management has become a powerful tool for promoting innovation and realizing re-engineering the various walks of life. It occupies very outstanding position in the creation of knowledge innovation the systems of a country. Information professionals should understand the importance of knowledge management environment and apply it effectively to the fast development of their organization.

REFERENCES

1. Stewart ya, (1997), intellectual capital: the new wealth of organizations, London: currency doubleday.
2. Prusak l, (ed), (1997), knowledge in organisations, butterworth-heinemann.
3. Nonaka i and takeuchi h, (1995) the knowledge creating company, New york: oxford university press.
4. Abell a and oxbrow n, (2001) competing with knowledge: the information profession in the knowledge management age, london: library association publishing.
5. Southon g and todd r [1999], knowledge management: a social perspective, know '99, Sydney.
6. Malhotra y, (2000), "from information management to knowledge management: beyond the hi-tech hidebound systems". Information today pp 37-62.
7. Davenport t and prusak l, (1998), working knowledge: how organisations manage what they know. Cambridge, m.a.: harvard business school press.

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Open source and open access licenses: A comparative study

Tridib Tripathi*
Partha Sarathi Mandal**

ABSTRACT

This paper discusses the different categories of Open source and Open access Licencesing and makes a comparative study of them. It also exposes four Open source and open access Licenses and make their comparative study.

Keywords: Open Content, Categorization of Licensing, and Comparative study of licensing.

INTRODUCTION

Within free and open source software communities today, licenses have proliferated at the time of writing; there were nearly sixty licenses approved by the Open Source Initiative as open source licenses. From Sun's perspective, the large number of licenses can be streamlined into three main categories based on the attributes of the licenses. Sun's categorization makes it possible to more easily describe the differences among license types. Sun is an active participant in the OSI License Proliferation Committee's work. In this paper, I try to find out the different features of the mentioned categories and make a comparative study of them.

OBJECTIVES

The main objectives of this study are:

1. To define the three major categorizations of free and open source licensing today.
2. To describe some of the types of licenses that are included in these categories.
3. To detail the distinguishing attributes of these licenses and categories.
4. To find out the various features and facilities of selected Open Source and Open Access licenses.
5. To compare their facilities which are available among these licenses.

SCOPE

I think, this study would be good if I were compared all open Source and Open Access licences. But limited time does not permit me to do that. I compare only four Open source and Open access Licenses in details.

METHODOLOGY

For this study, I *take some open source and open access licenses which are commonly available like* BSD License, The GNU logo, Apache License, Creative Commons Licenses etc.The data are collected and gathered from searching Internet Web Site. Then I collect data for analyzing, compiling and for comparing various Licenses

Author's Affiliations: *The Deptt. of Library and Information Science, The University of Urdwan., Golapbag. Burdwan-713104(W.B), e-mail: tridibtripathi@yahoo.co.in; **M.Phil Student, The Dept t. of Library and Information Science., The University of Burdwan. Golapbag. Burdwan-713104(W.B), e-mail: mandalpsm@gmail.com

Reprints Request: Tridib Tripathi, The Deptt. of Library and Information Science, The University of Urdwan., Golapbag. Burdwan-713104 W.B. e-mail: tridibtripathi@yahoo.co.in

(Received on 28.4.09, accepted on 9.6.09)

CATEGORIES OF FREE AND OPEN SOURCE LISTENING

1. The characteristics of category A licenses in items of licencesing requirements impose on derivative works:

i. Unrestricted development of derivative works

ii. Wholly unrestricted scope of license use

iii. Any conditions of use are outside of any license mandate

2. The characteristics of category B licenses in terms of licensing requirements imposed on derivative works.

i. Unrestricted development of derivative works

ii. File-based licensing

iii. Files derived from category B-licensed commons must use the same license for source files

iv. Files not derived from category B-license commons may use any license

3. The characteristics of Category C licenses in terms of licensing requirements imposed on derivative works:

i. Unrestricted development of derivative works

ii. Project-based licensing

iii. Files derived from category C-licensed commons must use same category C license

iv. Under certain circumstances even files not derived from **Types of Licenses Representing the Three Major Categories**

3. Category A: Non-Copy left Licenses

Category A licenses generally represents the academic style of licensing of which the archetype is the revised Berkeley Software Distribution (BSD) license. The original BSD license was developed by the University of California to distribute its software. Today, probably the best-known license within this category is the Apache License version.

Category B: Copy left Licenses

Category B licenses include the vast majority of the many free and open source licenses in existence today. These licenses have been created based on the Mozilla Public License (MPL) that emerged from the development of the original Mozilla browser in the late 1990s.

Category C: Strong Copy left Licenses

The best known of the Category C licenses, (GNU-style) licenses, is the GNU General Public License, or GPL.The GPL has been the basis for much freely available software in the world today, which has made it the object of praise and concern, depending on your perspective.

Comparative Study among three categories in details

Category A	Category B	Category C
Unrestricted, non-copy left	File-based copy left	Project-based copy left
Create any work	Files derived from commons must use same license	All files in project must use the same license as the commons if any one file from the commons is used in the project
No restriction on licensing	Files added may use any license	Code added to the project must also use the same license as the commons
Marketplace-creating	Community-fostering	Commons-protecting

Identity of selected open source and open access licenses

	GNU	BSD	CC	Apache License
Author	Free Software Foundation	RTI University	The University of California	A group of cyber law and intellectual property experts	Apache Software Foundation
Version	3	N/A		2.0
Publisher	Free software Foundation	Public Domain	Lawrence Lessig	Apache Software Foundation
Published	29 June 2007	1990	2001	January 2004

Comparative study among licenses in details

	GNU	BSD	CC	Apache License
DFSG **compatible**	Yes	Yes	Yes	Yes
GPL compatible	Yes	Yes	Yes	Yes
OSI approved	Yes	Yes	Yes	Yes
Free software	Yes	Yes	Yes	Yes -
Copy left	Yes	No	Yes	No
Linking different license	No	Yes	Yes	Yes
Proprietary Software linking	Not allowed	Allowed	Reasonable and flexible	Allowed
Distribution of "the Work	Not allowed	Allowed	Allowed	Allowed
Redistributing of the code with changes	Only if the derivative is GNU	Allowed	Allowed	Allowed

FINDINGS

From this study, I conclude these following results:

- GNU, BSD,CC,Apache Licenses are DFSG and GPL compatible
- GNU does not link different licenses and does accept proprietary software linking
- GNU also doesn't allow distribution of the work
- GNU allows redistributing of the code with changes only if the derivative is GNU.
- BSD, CC, Apache Licenses allow Proprietary software linking, Distribution of the work and Redistributing of the code with changes.

CONCLUSIONS

Open content licensing is a way for the author or rights holder of a copyright work to grant a wide range of permission for use and re-use of their work via a non-transactional copyright license, while retaining a relatively small set of rights. Open Content licensing frameworks are a significant development and have valuable potential application in fulfilling the need for wide and unobstructed access to electronic materials as well as a flexible and enabling approach to use and re-use of outputs and materials.

REFERENCES

1. Creative Common: http://en.wikipedia.org/wiki/Creative_Commons_licenses (November 23, 2008).
2. GNU Licenses: http://en.wikipedia.org/wiki/GNU_Free_Documentation_License (November 25, 2008)

3. Open Content Licences:http://en.wikipedia.org/wiki/Open_Content_License (November 29, 2008)
4. Open Publication Licences:http://en.wikipedia.org/wiki/Open_Publication_License (December 03, 2008)
5. License Policy::http://www.opensource.org/docs/policy/licenseproliferations.php(December 03, 2008)
6. Apache Licences:h ttp://www.apache.org/ (December 11,2008)
7. Http://developer.kde.org/documentation/licensing/licenses_summary.html(January 21, 2009)
8. www.sun.com/opensource (December 10, 2008)
9. Frequently Asked Questions (FAQ) about the GPL Explains many issues relating to the GPL, and includes a detailed compatibility matrix for various versions of the GPL and LGPL (including some details about how they can be combined). Http://www.gnu.org/licenses/gpl-faq.html(November 23, 2008).
10. http://unix.derkeiler.com/Mailing-Lists/FreeBSD/stable/2004-01/0373.html (December 03, 2008)
11. http://www.opensource.org/licenses/category (December 03, 2008)
12. http://www.opensource.org/licenses (November 23, 2008).

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Usage of electronic information resources and services at IIT, Kharagpur Library: A survey

Bulu Maharana*
Bipin Bihari Sethi**
Pankaj Kumar Mallick***

ABSTRACT

Beginning with the recent trends of e-resources and services, the article describes electronic information resources, systems and services offered by the central library of IIT, Kharagpur, which has developed a new mission and vision to support a new strategy of library collection and services through electronic media. It has also created varied access routes of information for its potential users to widen the usage of e-resources. The present survey aims to disclose the trend and usage of e-resources of IIT Kharagpur library by the students. The investigation finds that 93.18% of students use e-journals and 90.90% of students use other career or job related e-resources.

Keywords: Electronic Information Resources, Electronic Information Literacy, Information Technology, Multimedia Resources, Digital Library Resources, OPAC, Internet.

INTRODUCTION

We are living in the era of knowledge economy and the present universe is in the midst of information explosion and revolution. Due to developments information and communication technology, knowledge spreads expeditiously. Advances in information technology and speed of communication have made the world a global village with having no space and geographical barriers. This phenomenon has affected all sections of the society and in almost all aspects of life in the present era. The libraries of the contemporary world have also been equally affected by the emergence of information and communication technology. On the one hand the size of e-information resources in the form of e-books, e-journals, e-databases, e-articles etc. are increasing in the libraries, and on the other hand the information seeking behavior of the users have also been shifted from print sources to electronic sources. With this background, the present survey is aimed to explore the usage of e-resources and services at IIT Kharagpur library by the students.

2. IIT, KHARAGPUR LIBRARY A BRIEF SKETCH

IIT, Kharagpur is one of the premier institutes of national importance in the field of engineering, science and technology. It was the first of the IITs established in the year 1951. The central library of IIT Kharagpur is enriched with a large collection and poses an iconic presence and significance in Asia. The following table gives an over view of the size of collection of learning resources at IIT Kharagpur library.

Author's Affiliations: *Lecturer, P. G. Department of Library & Information Science, Sambalpur University, Jyoti Vihar-768019, Orissa, e-mail: bulu_maharana@yahoo.com; **Professional Assistant, Prof. B. Behera Central Library, Sambalpur University, Jyoti Vihar-768019, Orissa; ***Librarian, Delhi Public School, Surat, http://www.library.iitkgp.ernet.in/usr/elib/digital.htm/

Reprints Requests: Bulu Maharana Lecturer, P. G. Department of Library & Information Science, Sambalpur University, Jyoti Vihar-768019, Orissa, e-mail: bulu_maharana@yahoo.com

(Received on 28.4.09, accepted on 15.6.09)

Table 1: Collection of print and electronic resources of IIT Kharagpur library (Source: http://www.library.iitkgp.ernet.in)

Books, micro forms, video forms, theses, patents and standards	3.5 lakh
Current Periodicals	1178
Gifted Periodicals	50
Bound Journal volumes	1, 00, 000
Open access E-Journals	12
E-databases (Full Text)	11
E-databases (Abstract)	05
E-Journals	21

AIMS AND OBJECTIVES OF THE STUDY

The present investigation aims to accomplish a survey in order to find out the trend of use of electronic resources of IIT Kharagpur library by the students.

The other objectives of the study are enumerated as follows:

i. To trace electronic information resources which are better used by the students at IIT, Kharagpur;
ii. To measure the level of computer skills and competencies of the students;
iii. To find out how information technology & electronic information resources has immensely affected the educational & research activities.

METHODOLOGY

The present study is based on a survey undertaken among the students community of IIT, Kharagpur. The sample of the study constitutes 250 students identified as the potential users of the library included in this survey. Out of 250 questionnaires distributed, 220 (88%) responded to the questionnaire survey in due time.

E-RESOURCES @IIT, KGP LIBRARY

The central library of IIT Kharagpur got its shape in 1951 as the life-line for the academic activities of the institute. IIT Kharagpur caters to the academic needs of about 5500 under graduate, post graduate students and research scholars, 450 faculty members and about 1500 technical administrative and medical staff[9]. IIT Kharagpur library is a fully automated library equipped with high-speed servers and multimedia computers interconnected through a campus wide ATM backbone. The library uses LIBSYS library automation system which takes care of all the routine works. The following e-resources are subscribed and made available to the users:

Table 2: E-Resources @ IIT Kharagpur Library

Electronic Library	CD-ROMs, Floppies, and AV collection
Digital library	EiTch index, Compendex, IEEE/IEE journals, INSPEC, Current contents, Chemical Abstracts, Biological Abstracts, Agricultural Abstracts, Library & Information science Abstracts, ASTM standards, and ABI (on-line access of 150 journals)
Institutional Repository	E-prints of research out puts of faculty, and researchers of IIT kharagpur
INDEST Consortium	E-resources on Engineering sciences and Technology
Full Text Databases	ABI, ACM digital library, ASCE journals, ASME journals, Capitaline, EBSCO databases, Elsevier's science direct, Emerald, IEEE/IEE electronic library, Indian standards, Nature, Proquest, Science, Springer verlag's link, INSIGHT, NATURE, ASTM standards, ASTM journals
Bibliographic Databases & Internet facilities	NUCSSI, IEL electronic library, ITU-T standards, LISA, CAB, Chemical Abstracts in CD, Internet service through ERNET, Ethernet LAN connection over campus.

ANALYSIS OF DATA AND DISCUSSION

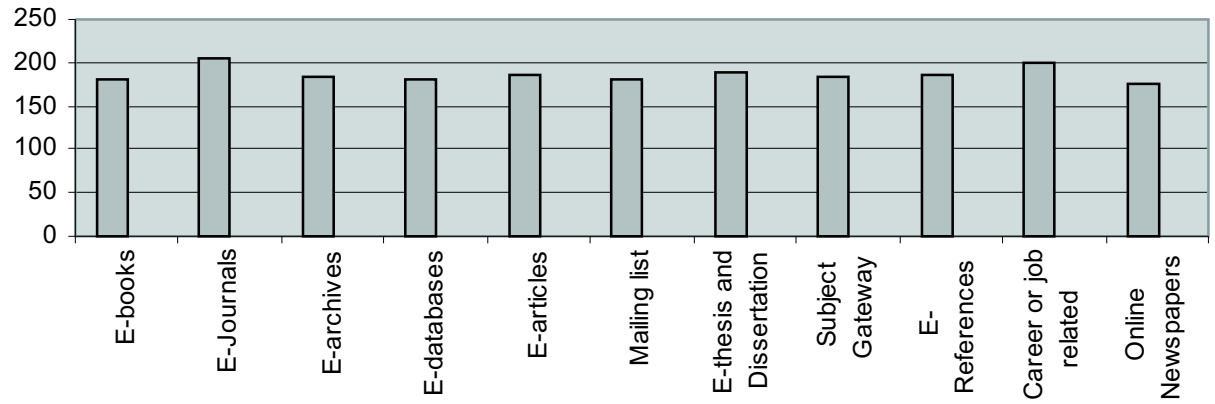
In the present investigation, the investigators have made an attempt to present the collected data in tables and charts to make the study more clear and understandable. Emphasizing on the respondents view and vision, efforts has been intensified for drawing a successful research on usage of electronic information resources and services at IIT Kharagpur.

Use of E-Resources by IITKGP Students

Table 3: E-resources used by the students

Types of E-Resources	Responses	Percentage
E-books	180	81.81%
E-Journals	205	93.18%
E-archives	183	83.18%
E-databases	181	82.27%
E-articles	186	84.54%
Mailing list	182	82.72%
E-thesis and Dissertation	190	86.36%
Subject Gateway	183	83.18%
E-References	185	84.09%
Career or job related	200	90.90%
Online Newspapers	176	80%

Graph 3: Use of E-resources by the students



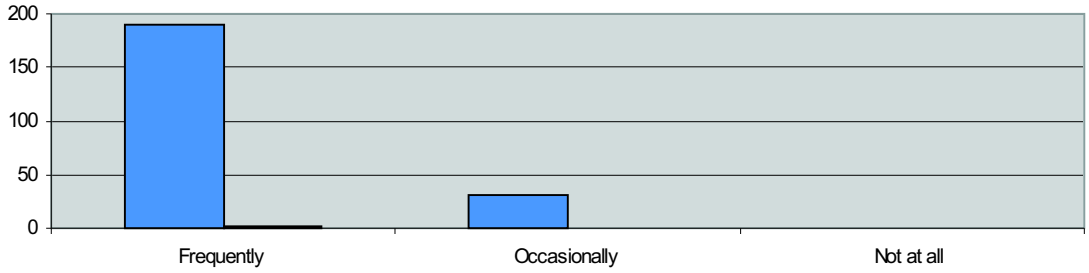
The present table and its graphical representation denote that, the students of IIT Kharagpur often use several e-resources for their academic and research work. The data in the above tab le depicts that 93.18% of the respondents have indicated that they use electronic journals and 90.90% emphasized on career and job related e-resources. Similarly, 81.81% students like to use e-books, 83.18% use e-archives, 82.27% e-databases, 84.54% e-articles, 82.72% mailing lists and 86.36% students use e-theses and e-dissertations as well as 83.18% use subject gateway, 84.09% use e-references, and 80% of students use online newspapers respectively.

Frequency of use of E-Resources

Table 4: Frequency of using e-resources

Frequency of use of e-resources	Responses	
Frequently	190	86.36%
Occasionally	30	13.63%
Not at all	0	0

Graph 4: Frequency of using e-resources



In the above table, it is clear that 190 (86.36%) respondents have been using e-resources frequently. However, only 30 (13.69%) respondents indicated that they are occasional users of e-resources and there is not a single student who does not use e-resources at all.

7 Places of Access to E-Resources

Table-5: Place to access e-resources

Place for accessing e-resources	Responses	
Library	120	54.55%
Department	160	72.73%
Hostel	60	27.27%
Other Places	20	9.09%

Graph 5: Place to access e-resources

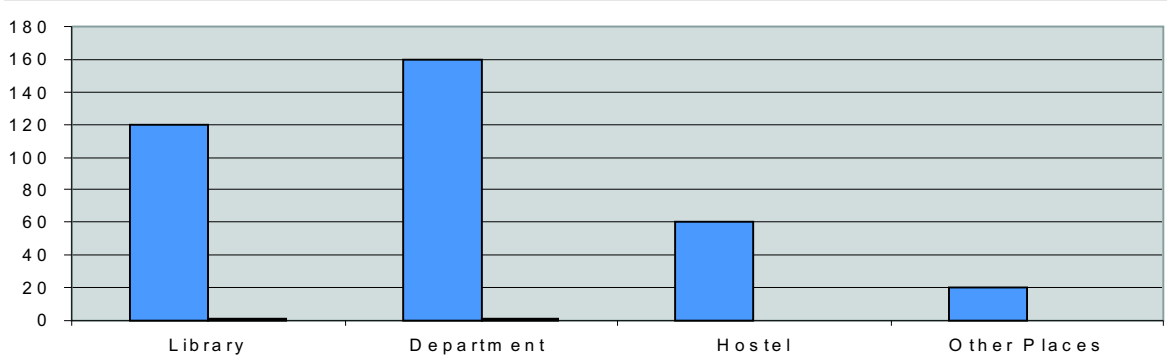


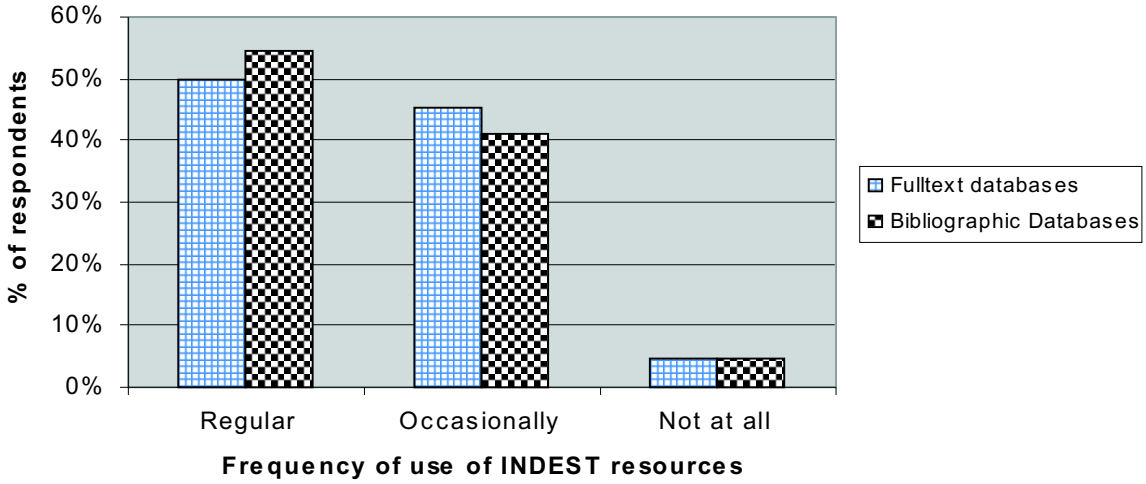
Table-6 reveals that more than 72.73% of the students access the e-resources from their respective departments followed by 120 (72.73%) from the library. There are a few students who access e-resources in hostels (27.27%) and other places (9.09%).

Use of E-Resources through INDEST

Table 6: Using of INDEST consortia e-resources

Frequency of use	Type of e-consortia resources used			
	Full text databases		Bibliographic databases	
Regular	110	50%	120	54.55%
Occasionally	100	45.45%	90	40.90%
Not at all	10	4.54%	10	4.54%

Graph 6: Using of INDEST consortia e-resources



It is evident from table-7 and its graphical representation that 50% or more students have been regularly using both full text databases (50%) and bibliographic databases (54.55%). However, 100 (45.45%) and 90 (40.90%) students are occasional users of full text and bibliographic databases respectively.

Frequency of use of Digital Library Services

Table 7: Frequency of using digital library Services

Frequency of using digital library	Responses	
Regularly used	193	87.70%
Occasionally used	20	9.09%
Not at all used	7	3.18%

Graph 7: Frequency of using digital library Services

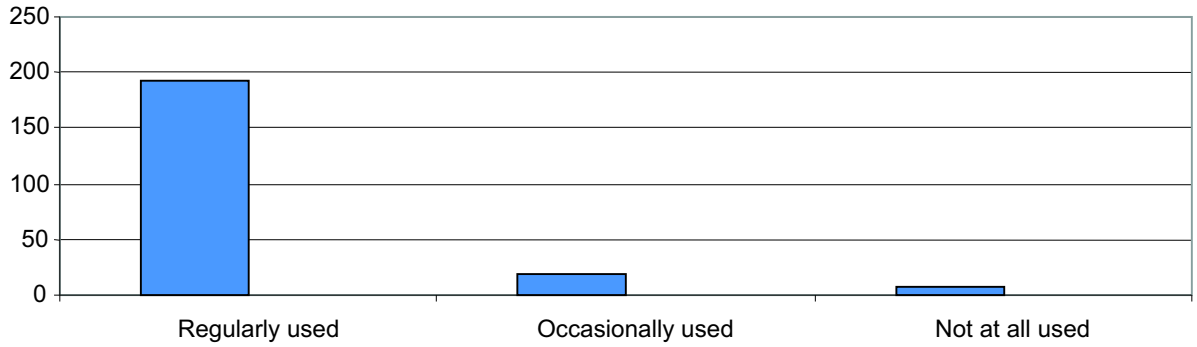


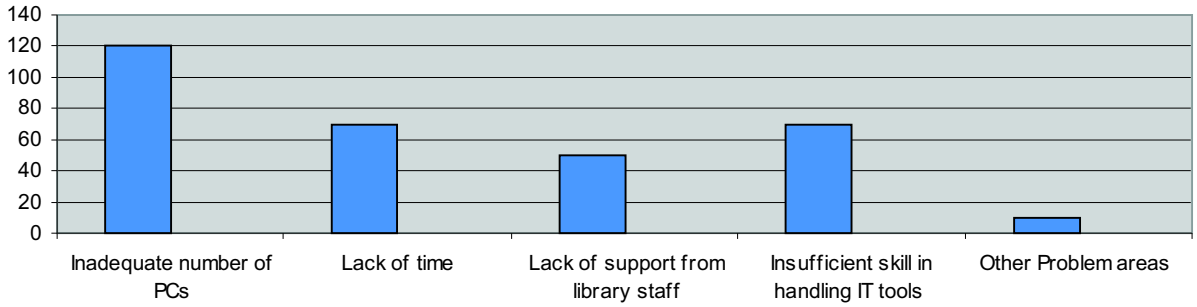
Table-8 discloses that the digital library service of IIT Kharagpur library is very popularly used by the students and found that 193 (87.70%) students are regularly using digital library service followed by 20 (9.09%) who are occasionally using the service. A mere 7 (3.18%) students indicated that they are not using digital library service.

Problem of Accessing E-Resources

Table 8: Problems in access to e-resources

Problems of E-resources	Responses	
Inadequate number of PCs	120	54.55%
Lack of time	70	31.81%
Lack of support from library staff	50	22.72%
Insufficient skill in handling IT tools	70	31.81%
Other Problem areas	10	4.54%

Graph 8: Problems in access to e-resources



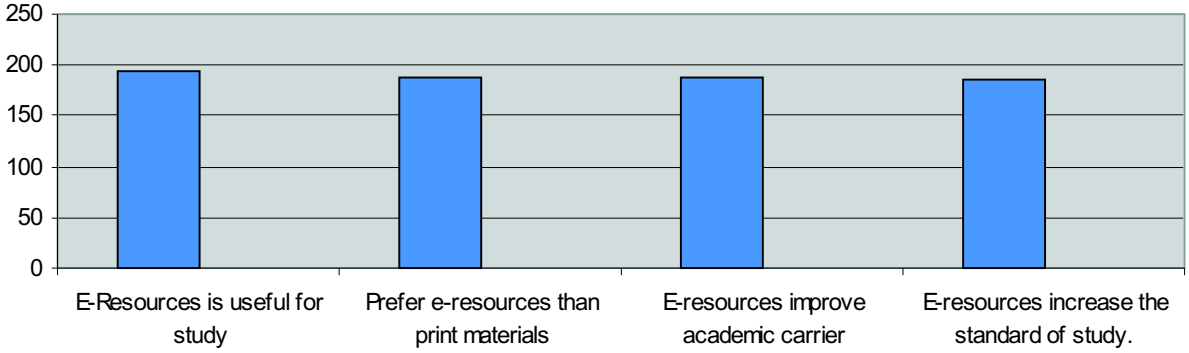
The present table elucidates that 54.55% of students found inadequacy in number of Pcs, 31.81% felt lack of time, and 22.72% claimed lack of support from library staff, 31.81% experienced insufficiency in skill of handling IT tools and 45.4% indicated other problems in accessing e-resources. This non-availability of sufficient number of PC is one of the main hindrances fro the use of e-resources.

Students opinion on e-resources

Table 9: Students view on e-resources

Students view on e-resources	Responses	
E-Resources is useful for study	193	87.72%
Prefer e-resources than print materials	188	84.45%
E-resources improve academic carrier	187	85%
E-resources increase the standard of study.	186	84.54%

Graph-9: Students view on e-resources



This table discloses that, 87.72% of respondents opined that e-resources are useful for their study, 84.45% prefer e-resources to printed materials, 85% felt e-resources improve academic career and 84.54% affirmed e-resources develop their standard of study. Hence, it can be concluded that the students have very strong opinions towards usage and efficiency of electronic resources.

RESEARCH FINDINGS

As a result of keen investigation, study and analysis of data collected and discussed in depth and extent the investigator came to withstand following facts on the use of e-resources by the student community of IIT Kharagpur. Some notable observations are as follows:

- It is found that, most of the students at IITKGP use several IT tools and they possess required competency in accessing e-resources.
- E-journals are found to be most popular and highly used among all the e-resources.
- Maximum number of respondents viewed accessing e-resources in their respective departments is better than other places.
- Most of the students are efficient in using electronic library catalogue and OPAC.
- A majority of students prefer to use both full text and bibliographic databases of INDEST consortia e-resources regularly.
- It is encouraging to note that digital library services are highly used by the majority of students.
- Maximum numbers of students pointed out that, they lack adequate number of PCs in their institute.

CONCLUSION

Information Literacy is a challenging and crucial issue in library & information profession in 21st century, so library professional should be always up to date to cope up with this steadily increasing information resources & services. It is also equally essential for the library users to transform themselves with adequate skill and efficiency to case e-resources for their academic and research purposes. To this end, it will be fact to say that the libraries and library professionals can play a vital role in providing the necessary skills to make self sufficient and inventing them as a smart user.

ACKNOWLEDGEMENT

The authors thankfully acknowledge to the Library staff, Students, and Faculty members of IIT Kharagpur for their worthy views, cooperation towards this piece of research work.

REFERENCE

1. Ghosh (BN). Scientific method and social Research. 1992. Sterling Publisher pvt. Ltd; New Delhi. P 51-53.
2. Kothari (CR). Research Methodology: Method & Technique. 1985. 2nd edition. Wishwa Prakashan New Delhi. P300-330.

3. Young (PV). Scientific Social Surveys and Research. 1996. Prentice Hall of India pvt. Ltd; New Delhi. P 340-343.
4. Verma (RK). Research Methodology. 2004. Common wealth publisher; New Delhi. P 1-15 and 34-42.
5. E-learning in India. Available on-line at http://www.apnic.net
6. H.E. (Prananna Kumar). Multimedia: Its application in library and information science. 2002. Ess Ess publication; New Delhi.
7. How libraries are training users on E-Resources: Best Practices. 2005. Elsevier; USA. Available at www.libraryconnect@elsevier.com

NOTES

1. http://www.columbia.edu/cu/web/eresoursees
2. http://www.epapersorg/main
3. http://www.infolibrarian.com
4. Http://www.lib.us.edu/libraries/gorgas/glossary.htm
5. http://www.iitkgp.ac.in
6. http://www.iitkgp.ernet.in
7. Http://www.wikipedia.org
8. Http://www.library.iitkgp.ernet.in

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Use of internet in Karnataka State Universities

Syed Shah Ahmed Sarmast

ABSTRACT

An attempt has been made to understand & awareness about internet services and ugc infonet e-journals in karnataka state university by the faculty & research scholars of science discipline. In order to bring the authenticity a questionnaire & interview used to collect the relevant information. All the karnataka state university libraries provides internet facility to its users. Analysis showed that users of the karnataka state universities use the internet as a prime information sources for their research & development activities. Few users opinion that accessing e-journals slow access and few internet machines.

INTRODUCTION

Today people are living in the age of information explosion. A lager amount of information is being generated every movement. The ability to collect, store and disseminate this large amount of information needs application of new technologies. Thanks to the advance technology. Electronic information sources which could even rearrange select, marshal, and transform enormous qualities of information at phenomenal speed are at the human disposal.

The invention of internet the world wide web (www) has almost brought the world very closer and shorter. The recent development or an invention made in any part of the world is available to the user almost immediately. This has increased the responsibilities of the library to provide up-to-date and latest information to the users. Now the development of electronic information sources has changed the library from information consumers to owners of electronic information resources.

Dr. S.r. Ranganathan, father of indian library science, a man of great vision and inexhaustible energy is an international authority on library and information science movement. He defined the very purpose of technology and mapped out a philosophy and a practical science long back in the 1930s. In the 1950s, he had foreseen the likely impact of new technological tools to store and distribute information.

The internet is viewed as an extension of older technologies - its potential for libraries in using internet for traditional purpose in information seeking, organizing and knowing user behavior, should become clear. Internet has brought a new academic and research culture of understanding and co-operation providing a great boon to the library and information centers in meeting the timely information by click of a mouse.

OBJECTIVES

The objectives of the present study are as under:

1. To understand the awareness about internet services & ugc infonet e-journals, particularly to teaching faculty and research scholars of karnataka state universities.
2. To know the use of internet service, ugc infonet e-journals, & e-databases.
3. To study the problems faced by teaching faculty and research scholars in using internet services & ugc infonet e-journals.

Author's Affiliations: *Head Dept. of Library & information science., N.v. Degree college, Gulbarga, Karnataka

Reprints requests: Dr. Syed Shah Ahmed sarmast Head dept. Of library & information science., N.v. Degree college, **G**ulbarga, **K**arnataka

(Received on 28.4.09, accepted on 16.5.09)

4. To provide the suggestions for optimizing the use of internet services & ugc infonet e-journals.

SCOPE OF THE STUDY

The present study intends to cover only teaching faculty and research scholars of science disciplines in karnataka state universities, particularly general universities. These are bangalore university, bangalore, gulbarga university, gulbarga, karnataka university, dharwad, kuvempu university, shankarghatta, mangalore university, mangalore and university of mysore, mysore and internet services & ugc infonet e-journals.

METHODOLOGY

Since the study is related to the users and their use of electronic resources. In order to bring the authenticity of the research a detailed questionnaire was developed which has four parts. The questions were framed in such a way that all the possible inquire can be asked in one goal. Beside questionnaire, the interview method with proper schedule was applied in the reader's case. Especially the research scholars were contacted and the interviews were conducted and counter question of the readers were solved, right at the time of interview. In all 2023 questionnaire were distributed & 1578 i.e. 78 % of the total were collected due to advantages awareness and free access to internet facility, all users are using internet. Hence the table 1 shows 100% response regarding use of internet facility by the users of karnataka state universities.

Table 1 use of internet facility (n=1578)

Respondents	Yes	No	Percentage
1578	1578	Nil	100%

Table 2: Location of accessing internet facility (n= 1578)

Location	Number	Percentage
Home	10	0.63%
Computer center	301	19.07%
Department	700	44.35%
Library	1060	67.17%
Private browsing center/internet café	367	23.25%

Table 2 summaries that most of the users (1060) i.e 67.17% use internet facility at library. Because, location of library is such that it is easily reachable to all users of all department as library is at the center of university. And library staff are co-operative in nature.

From the table 2 (700) 44.35% users access internet facility in their department because all universities of karnataka state university are not providing internet facility at their department. Some users (367) 23.25% are accessing internet facility at private browsing center / internet café, because for research purpose users are off campus, and internet facility is not available on holiday and odd time hence users browse the internet at private browsing center (301) 19.07% users access internet at computer centers. Due to personal interest and financial support, few users access the internet facility at their home i.e (10) 0.63%.

Table 3: Purpose of using internet. (n=1578)

Purpose	Number	Percentage
Research work	1578	100%
Teaching purpose	418	26.48%
Online journals	1326	84.03%
Online database	1578	100%
Communication	1413	89.54%
Chatting	778	49.30%
Entertainment	208	13.18%

Due to the new advancement in information technology, internet has become one of the main sources of information exchange, information collections and search. Due to its easy access and easy storage it has become one of the important tools for teaching faculty and research scholars. All

the karnataka state university provides internet facility to the teaching faculty and research scholars. Due to the advantages, awareness and free access of internet facility, all the users are accessing it. Hence table 3 indicates that in karnataka state universities (1578) 100% of teaching faculty and research scholars are using internet.

Internet is one of the important tool for research, hence all users of karnataka state universities were using internet for research work. (1578) 100%, of users use internet because it helps in searching latest information for research work such as review of literature, latest articles, specific and generic information related to research work, information regarding latest thesis, patents and reports. It is observed that internet is used for teaching purpose i.e., (418) 26.48%. The total teaching faculty is 421 among which 418 teaching faculty have responded that internet is used for teaching purpose i,e, the percentage of teaching faculty who are using internet for teaching purpose is 99.28%.

About (1326) 84.03% of users are using internet as it support for online journals, research work, writing articles, teaching related data and to update their knowledge. It is clear that all the respondents are using internet for online data base searching i,e., (1578) 100%. It is because internet access for database searching is very easy and users get their specific and exhaustive information concerned with topic, internet is used for communication by most of the users i.e., (1413) 89.54%. The reason for this is, university provides free internet service, direct online communication, mailing facility, communication with more than one person at a time, like group discussion, forwarding a message to many at a time. (778) 49.30% users use internet for chatting because through chatting users exchange their knowledge required for research purpose. Few users use internet for entertainment i.e, (208) 13.18 users. It is to refresh themselves from restless work.

Table 4: Use of internet based services (N=1578)

Service	Number	Percentage
E-mail	1578	100%
News group	150	9.50%
Discussion forums	35	2.21%
Ftp	1123	71.79%
Telnet	38	2.40%
Chatting	778	49.30%
Blogs	34	2.15%

It is clear from table 4 that all users (1578) 100% are frequently using internet for e-mail services, because users exchange their knowledge through e-mail. The next frequently used internet service is ftp (1123) 71.79% because it helps in downloading large data in less time.

While (778) i.e 49.30% users are using chatting services of internet. It is because through chatting they exchange their views which help them in improving their knowledge and be more interactive. (150) i.e 9.50% users use news group service. The university users get the latest update of new through news group, which helps them in their research work. Few users (38) i.e 2.40% are using telnet service for their research and teaching activities. Similarly (35) i.e 2.21% users use discussion forum on internet for exchanging their views and very few users (34) i.e 2.15% use internet for blogs creating.

Table 5: Use of search engines (N=1578)

Search engine	Number	Percentage
Google	1432	90.74
Yahoo	1002	63.49
Altavista	502	31.81
Rediff	602	38.14
Khoj	301	19.07
123 india	270	17.11
Lycos	100	6.33
Webcrawler	78	4.94

It is clear form table 5 that most of the users (1432) 90.74% are using google for searching the information because its broad coverage easy searching procedure similarly followed by other search engines yahoo (1002) 63.49% rediff (602) 38.14, altavista (502), 31.81%, khoj (301),

19.07%,123 india (270) 17.11%, lycos (100) 6.33% and webcrawler (78) 4.94%.

Table 6: Use of ugc info net facility

Response	Number	Percentage
Yes	1578	100%
No	--	--
Total	1578	100%

Table 6 shows that all users are using ugc infonet facility. All the e-journal and data bases on internet are not available at free of cost, but ugc infonet provides many free international scientific e-journals and data bases to all users of karnataka state universities.

Table 7: Accessing important publisher sites (N=1578)

Web sites	Response	Percentage
Http://www.elsevier.nl.in	570	36.12
Http://www.aps.org	562	35.61
Http://www.journals.cambridge.org	432	27.37
Http://www.kluweronline.com	266	16.85
Http://www.springerlink.com	201	12.73
Http://www.emeraldinsight.com	170	10.77
Http://www.jstor.org	70	4.43

Among the various e-resources available under ugc infonet table 7 shows the popular web sites under ugc infonet accessed by faculty and research scholars in karnataka state university. The most popular publisher web site used by faculty and research scholar is http://www.elsvier.nl.in (570) 36.12% and followed by www.aps.org (562) 35.61% http://www.journals. Cambridge (432) 27.37%, www.kluveronline.com (266)16.85%, http://www.springerlink.com(201)12.73%, http://www.emerraldinsight.com (170)10.77%, http://www.jstor.org (70) 4.43 % . It indicates that the ugc infonet e-resources are used by science discipline as most of the e-resources available under ugc infonet are science discipline followed by social science.

Table 8: Ranking of top three important publishers sites (N=1578)

Web site	Number	Percentage
www.elsevier.nl.in	512	32.44%
www.aps.org	502	31.81%
www.journalscambrisdge.org	382	24.21%

It is clear for the table 8 among the various publisher's sites under ugc infonet, the widely ranked publishers site by the faculty and research scholars www.elsvier.nl.in hence (512) 32.44% followed by www.aps.org (502)31.81%and www.journalscambridge.org (382) 24.21%.

The coverage of science journals by www.elsevier.nl.in is more in number, quality and coverage of subject is good. This is followed by the other publishers i.e www.aps.organd www.journalscambrisdge.org journals.

Table 9: Problems faced in accessing e-journals, (n=1578)

Problem	Number	Percentage
Only few machines are available	1003	63.56%
Slow access	1560	98.85%
Computer network is not established	112	7.09%

The problems faced by faculty and research scholar in accessing e-journals is showed in table 9. The major problems in accessing e-journals are slow access (1560) 98.85%, and only few machine (1003) 63.56%. It is also clear from table 4.38 that (112) i.e. 7.09% users don't access e-journals due to non availability of computer networks in there campus. The bandwidth of internet facility plays important role is speedy access to e-resources. As most of the universities in karnataka has been provided width of 512 kbps, due to campus network of rear computers, it is slow access of internet. The computer systems with internet facility has to be increased for maximum use of e-journals under ugc infonet.

Thus there is a need for training and orientation at a regular intervals to the users for optimize utilization of internet resources.

FINDING OF THE STUDY

An attempt has been made to give summary form of the study. The findings of the study and suggestions to improve the use of internet services & ugc infonet e-journals by the users of karnataka state universities.

1. All the users of karnataka state university (1578) 100% using internet facility.
2. Most of the respondents (1060) i.e 67.17% accessing internet facility at library, followed (700) i.e 44.35% at department, (367) i.e 23.25% at private browsing centre/ internet café
3. All the respondents using internet (1578) i.e 100% for research works and searching online database followed by (1413) i.e 89.54% communication, (1326) i.e 84.03% for online journals, (778) i.e 49.30% for chatting and very few users (208) i.e 13.18% using for entertainment.
4. All the respondents (1578) i.e 100% were frequently use e-mail www. Service followed ftp service (1123) i.e 71.79% on internet.
5. All the respondents (1578) i.e 100% use ugc infonet e-journal facility in karnataka state university.
6. Majority of respondents (1432) i.e 90.74% were using google search in engine for their work followed by (1002) i.e 63.49% yahoo, (602) i.e 38.14%, rediff (502) i.e 31.81% altavista.
7. Under ugc infonet popular web site used by respondents (570) i.e 36.12% was www.elsevier.nl.in, followed by (562) i.e 35.61% www.aps.org, (432) i.e 27.37% www.journals.cambridge.
8. Under the ugc infonet the widely ranked publishers site responded (512) i.e 32.44% was www.elsevier and followed by 502 i.e 31.81% www.aps.org (382) i.e 24.21% www.journals.cambridge.org.
9. Most of the respondent (1560) i.e 98.85% faced the problem in accessing e-journals due to slow access followed by (1003) i.e 63.56% opined that only few internet machine were available.

SUGGESTIONS

An attempt has been made to address several sets of overall recommendations based on the findings and users suggestions of the study, that may help further to illuminate the better use of internet services & ugc infonet e-journals. The suggestions are given below,

1. Provision of separate section of internet facility at hostels, departments, computer center and library.
2. Provision of use of electronic information sources, particularly internet in curriculum at p.g level.
3. Training program for use of internet.
4. Appointment of computer science engineers for maintenance of internet service.
5. Awareness about internet services mainly ftp, telnet, discussion forums, news groups, online databases and chatting
6. Awareness about different web sites of internet.
7. Adoption of broad band technology to internet
8. Awareness about information search access from internet and storing in computer, cd and pen drive.

CONCLUSION

Internet is one of the important electronic information sources, which has been growing at an exponential rate. The fact that one can publish any thing on the net is its strength as well as its weakness. The number of hosts in the internet has reached more than 450 million. All though the internet has all information under the sun, for research and development activities internet provides many services like. Email, ftp, news group, telnet, chatting etc and these services play's an important role in research. All universities of karnataka state provide free internet services to its users, hence all users are using internet services.

All the karnataka state universities are members of ugc info net consortium and provide

access to e-journals to the user. All the respondents are using ugc info net service for their research work and almost all users are satisfied with this service, but for the maximum utilization of internet services & ugc infonet e-journals, provide latest technological terminals, equipments. Libraries will have to be flexible enough to continue changing, adopting to change, as they have done over past decades. The universities should provide proper training programmer to respondents regarding use of electronic information sources.

REFERENCE

1. Adika, gifty (2003). Internet use among faculty members of universities in ghana. 0.Library review, 52 (1), p. 29-37.
2. Ali, naushad p.m (2000). Internet and its use in Muslim Aligarh University: a survey. Caliber–2000, 16-18, February 2000, Chennai, p.37-44.
3. Applebee, a and others (2000). Australian academic use of the internet: implications for university administrators. Library computing, 19 (3/4), p.198-206.
4. Chandran, d (2000). Use of internet resources and services in s.v university (tirupathi) environment. Caliber 2000, 16-18 February, 2000, Chennai, p.37 44.
5. Kubey, r.w and others (2001). Internet use and collegiate academic performance decrements: early findings. Journal of communication, 51 (2), p.366-82.
6. Kaur, amritpal (2002). Use of internet by the scientists in guru nanak dev university: a survey. Papers presented at xx iaslic conference, kolkata, pp.193-200.
7. Jagboro, k.o (2003). A study of internet usage in nigerian universities: a case study of obafemi awolowo university, ile-ife, nigeria. First Monday, 8 (2)p, 5-1.
8. Mishra, j. And satyanarayana, n.r (2001). Use of internet in a university library: a case study. Ila bulletin, 37(4), p.132-134
9. Nasscom (2000). Net use likely to zoom in future: nasscom. Business line, July 25, 2000. Available at http:www.nasscom.org/it_industry domestic_sw_services.asp #statistics (accessed on 24th Oct. 2005)
10. Prasad, h.n and singh, s (2002). Internet based communication among scientists. Caliber 2002, jaipur, February 14-16, pp.325 330
11. Ucla internet report (2003). Surveying the digital future: year three, ucla center for communication policy, Usa, www.ccp.ucla.edu (accessed on 8th Sept. 2005)

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Creation of PG thesis abstract database of MPKV, Rahuri: Practical experience

P.A. Shinde*

R.N. Ingale**

ABSTRACT

Revolutionary changes in library services are taking place with the advent of Information Technology. It is now easier and faster to search required information through modern IT Tools like CD ROM Databases Internet, etc. This paper discusses the importance of Databases and how the University Library has created their own Electronic Theses Abstracts Database for M.Sc. (Agri), and Doctoral Dissertations available with flexible/user friendly retrieval system.

Keywords : Databases: types, advantages, ETAD (E-theses abstracts database) : Data feeding sheet, Data storage, Data retrieval system.

INTRODUCTION

Today Information is power and providing right information to the right user at the right time is an integral part of the library services. Information plays an important role in agricultural research and development. Agricultural Libraries are performing tripartite functions for disseminating information mainly for education, research and extension. In the IT environment the information handling and searching through network or computer system is more flexible, more comprehensive, more convenient and economical. A computer based system for storing and retrieving information through databases, portals, OPAC is a need of time for every libraries. The user can now find thousands of references on a particular terms in just one click. With the advent of information technology, revolutionary changes are taking place. Electronic media like CD-ROM databases are the modern IT tools for retrieval of information. Conversion of print media into digital form (digitization) with retrieval tools is difficult task and challenging job. But it is the need of time.

Author's Affiliations: *University Librarian; **Chief Cataloguer, Mahatma Phule Krishi Vidyapeeth, Rahuri-413722 (MS)., E-mail: mpkvlibrarian@gmail.com

Reprints requests: R.N. Ingale, Chief Cataloguer, Mahatma Phule Krishi Vidyapeeth, Rahuri-413722 (MS)., e-mail: mpkvlibrarian@gmail.com

(Received on 14.9.09, accepted on 18.12.09)

DATABASES DEFINITION

In computing, a database can be defined as a structured collection of records or data that is stored in a computer so that a program can consult it to answer queries. The records retrieved in answer to queries become information that can be used to make decisions....A collection of related data stored in one or more computerized files in a manner that can be accessed by users or computer programs via a database management system. Data stored in a computer in such a way that a computer program can easily retrieve and manipulate the data. A database in an organized collection of computer records. The most common type of database consists of records describing articles in periodicals otherwise known as a periodical index. ... A database is an electronic filing collection of information that is organized so that it can easily be accessed, managed, and updated. A structured collection of information in computerized format, searchable by various types of queries; in libraries, often refers to electronic catalogs and indexes. The database is structured to facilitate the search and retrieval of information contained in the database. ...Relational data structure used to store, query, and retrieve information.

Types : There are number of types of databases.

Text, graphics and audio information grouped by what they have in common databases provide various formats of information. Different databases provide different kinds of information.

Library Catalogues: Catalogues covering the holdings (books, journals, reports, theses etc) of one or more libraries.

Bibliographic Databases: Bibliographic databases provide a descriptive record of an item, but the item itself is not provided in the database. Information about the item is provided, including such things as author, title, subject, publisher, etc. The information provided is called a citation. Sometimes a short summary or abstract of the item is provided as well. Examples of bibliographic databases include the GALILEO database Social Sciences Abstracts, or the Internet Movie Database on the World Wide Web**.**

Full-text Databases: A full-text database provides the full-text of a publication. For instance, Research Library in GALILEO provides not only the citation to a journal article, but often the entire text of the article as well. "College Source Online" offers full-text of 20,000 college catalogs, so rather than having to request a catalog from several colleges to make comparisons, you can gather information from all colleges you're interested in at one time.

Factual Databases: Some databases provide **numeric** information, such as statistics or demographic information. Examples of these are (link will open in a pop-up window) Census Bureau databases and databases containing stock market information.

Image/audio visual Databases: There are some databases that collect only **image** information (EBSCOhost image collection), **audio** information (MP3 or wav files), or a **combination** of any of the above types (CNN). CNN's site has a search option that provides access to news articles and the original video and audio files that accompanied them. Try the link below for a look at the combination of information types in CNN's database.

Meta-databases: Meta-databases are databases that allow one to search for content that is indexed by other databases. Jake and GOLD are examples of this kind of database. If you find a citation for an article in one of the bibliographic databases and want to determine if the article is available in full-text in another database, you could do a search for the journal in jake to get a list of all the databases that index that specific publication and whether those databases include it in full-text.

ADVANTAGES

Advantages of a database include the sharing of information to reduce redundancy. This reduction in redundancy improves the quality and integrity of the database allowing for easy maintenance.

A database comprises one or more files that are structured in a particular way by a Database Management System (DBMS), and accessed through it.

The advantages of databases and Database Management Systems compared to sequential or indexed files are that:

1. data are stored in one place
2. data are structured and standardized
3. data from dissimilar sources may be interconnected and used jointly
4. data are amenable to verification
5. data may be accessed rapidly
6. data are available to many users
7. data may be used directly in many different application programs, including programs whose purpose differ from those for which the original data were compiled. The database can be stored in one location and consist of specific information. The display of the data to a particular user can take many forms depending on the needs of the user. Therefore, the internal representation of the data may be quite different from the external representation to the user.

Databases can included information in various forms:

1. integers
2. real (decimal)

3. character
4. dates
5. images and sound

Databases may be small or large limited in accessibility or widely accessible. Databases may be classified into four types:

a. individual

b. company (shared)

c. distributed

d. proprietary.

The individual database is also called a microcomputer database. It is a collection of integrated files primarily used by just one person. Typically, the data and the DBMS are under the direct control of the user. They are stored either on the user's hard-disk or on a LAN file server.

The company database may be stored on a mainframe and managed by a computer professional known as a database administrator. Users throughout the company have access to the database through their microcomputers linked to local area networks or wide area networks. Company database are of two types:

1. the common operational database contains details about the operations of the company, such as sales or production information;
2. the common user database contains selected information both from the common operational database and from outside private (proprietary) database. Managers can tap into this information on their microcomputers or terminals and use it for decision making.

Many times the data in a company is stored not in just one location but in several locations. It is made accessible through a variety of communications networks. The database, then is a distributed database. That is, it is located in a place or places other than where users are located. Typically, database servers on a client/server network provide the link between users and distant data.

A proprietary database is generally an enormous database that an organization develops to cover certain particular subjects. It offers access to this database to the public or seleted outside individuals for a fee. Sometimes proprietary databases are also called information utilities or data banks.

ETAD (ELECTRONIC THESES ABSTRACTS DATABASE) OF MPKV LIBRARY

Thesis or dissertation submitted by the students to the university content valuable findings. The MPKV Library has 5634 theses and dissertations of M.Sc. (Agri), Ph.D. B.Tech. (Agril. Engg), M.Tech. (Agril.Engg) in its collection. To create database of the same a software was developed from local professional with eighteen fields. The scanning of abstracts was done by HP Scanjet by using PrecisionScan Pro 3.02 program. The booleen operator such as 'and', ' or' 'not' are used in search module. The database created is presently available at http://mpkv.mah.nic.in. One can now retrieve this database from any corner of the globe free of cost.

View of Menu Bar

View of Author/Title/Guide search bar

Keyword(s) :	
Search the Keyword In :	Title Author Guide
Match All Words	Match Any/Few Words
From Year (eg.1990):	1950
Submit	Reset

Author Search Result

Department of Agricultural Economics	-	General

Thesis Title: An Economic Analysis of Fertilizer Use in Western Maharashtra

Author Name: Desale P.G. Guide Name: Dr.D.V.Kasar

Research Area: Economics

Degree Awarded: Ph.D.(Agriculture)

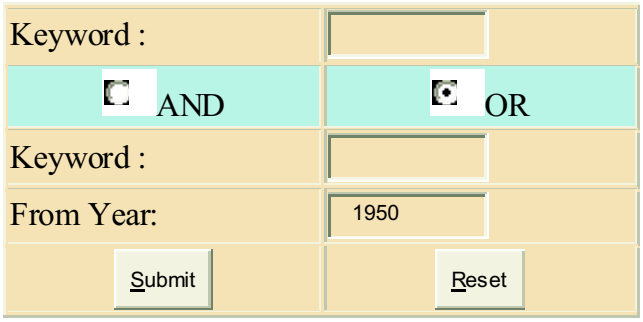
Submission Year: 1996 Pages: 205 Research Place: Western Maharashtra

Accession No.: 3616 Call No. : 338.1/DES Location ID: 0

Keywords : Economic Fertilizer Use Western Maharashtra

Abstract: The present investigation has been undertaken to study the fertilizer consumption pattern and factors influencing it at the istrict level and fertilizer use pattern, determinants of fertilizer use and fertilizer use efficiency at the farm level in Western Maharashtra. The study is based on both macro and micro level data. The macro level data were obtained from published sources for the last 31 years period from 1960-61 to 1991-92. The micro level data were obtained from the Government of Maharashtra sponsored scheme for studying the Cost of Cultivation of crops in Maharashtra for the year 1991-92. A sample of 200 cultivators was drawn from 5he seven districts coming under the scarcity area of Western Maharashtra. The data on fertilizer use in major crops viz; bajra, kharif jowar, rabi jowar, wheat onion and sugarcane were obtained. The study concluded that by and large, the fertilizer consumption has een increased significantly in all the districts of Western Maharashtra. However, the growth rates in the consumption of total fertilizers NPK) were observed to be the hi3hest in Solapur district followed by Jalgaon, Nasik and Sangli districts during the period of last 31 years (1960-61 to 1991-92). The factors viz., percentage irrigated area, cropping intensity, area under commercial crops, area under HYVs f crops and average annual rainfall were observed to be quite important in influencing the fertilizer consumption at the district level. The per hectare fertilizer use for all the selected crops was relatively higher in Ahmednagar, Pune and Solapur districts as compared to ther districts in the scarcity area of Western Maharashtra. For all the food grain crops, the average per hectare use of NPK fertilizers was below the recommended doses. The farmers use K fertilizers for bajra and kharif jowar even though, it is not recommended. In the case of onion and sugarcane crop, the average use of fertilizers was more than the recommended doses. The sugarcane crop alone consumed 61.77 per cent of total fertilizers while onion, wheat and irrigated bajra consumed 16.29, 6.05 and 3.19 per cent of total ertilizers respectively. The study revealed that the irrigated area, area under HYVs of crops and average annual rainfall for food grain crops and irrigated area and gross family income for cash crops were the major determinants of fertilizer use at the farmers level. The arginal Value Productivity analysis indicated that the allocation of N and P in food grain crops was efficient while in the case of onion and sugarcane, it was inefficient. The study further revealed that there existed a scope for increasing the existing levels of N and P fertilizers for selected food grain crops and K fertilizers for sugarcane and onion crops upto the estimated optimum levels.

Please select page number to display from following table



View of Keyword search module

REFERENCES

1. Prem Singh (2004) - Library Databases: Development and Management. Annals of Lib. & Info. Studies, Vol. 51 (1):72-81p
2. Everest Gordon G.(2001) -Databases Management: Objectives System functions and administration. Tata McGraw-Hill , New Delhi
3. Selvi G. Thamarai & MohanV (2001) – Creation and Management of Digital Resources and Services at REC, Trichy Library. In CALIBER 2001. 8th Naqtional Convention 15-16th March, Pune organized by INFLIBNET centre, Ahmedabad, pp. 64-68.
4. E. Horowitz and Sahni (1983) - Fundamentals of Data structures. Computer Science Press
5. D. Rajyalakshmi (2004) - Computerised information systems, Paper presented in UGC sponsored symposium on modern trends in library and information science, 24-25 Sept., 2004 at Rajarshi Shahu Mahavidalaya, Latur pp.77-91.

en.wikipedia.org/wiki/Database
sparc.airtime.co.uk/users/wysywig/gloss.htm
www.eggheaddesign.co.uk/glossary.aspx
www.terrebonne.lib.la.us/glossary.htm
www.salvagedata.com/hard-drive-recovery-terms/
www.lib.fsu.edu/glossary
www.msimafwie.fw.vt.edu/tws-gis/glossary.htm
Ging.com/definitions.asp

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Dr. A. Subbiah: A Biobibliometric Study

S. Nattar*

ABSTRACT

Dr. A. Subbiah has worked in various fields namely banking, financial management and accountancy. In his 12 years of productive life, he has collaborated with 12 colleagues and students and has published 70 papers during 1996-2008 July. The collaboration co -efficient is 0.53%. Highest collaborations were with dr. M. Selvakumar (10) and Dr. K. Navaneethan (9). The core journals publishing his paper were: journal of southern economists (10), facts for you (10), rural India (9) and tamilnadu journal of co-operation (8) etc.

Keywords: scientrometrics, publication productivity, collaboration co-efficient, bradford distribution.

INTRODUCTION

Bibliometric studies deal with biographical study of the individual careers of scientists and researchers and correlates bibliographical analysis of publications or academic and scientific achievements. In this paper we would like to look into the scientific work done by dr. A. Subbiah and his role in the advancement of social science in general particular in india and elsewhere.

Dr. A. Subbiah was born on 2nd June 1954. His post graduation is at Madurai kamarj university. In 1993 -1996 he has done his ph. D in madurai kamarj university, Madurai. He joined as a lecturer at sri srnm college, sattur in 1977 and promoted as reader in December, 1996.

HYPOTHESES

The research has formulated the following hypotheses with a view to analyse the empirical validity of the framed objectives of the present study.

1. There is a significant difference in the rate of growth in productivity regarding the number of journals in commerce.
2. There is a significant difference in the authorship pattern among the publications of the incumbent;
3. The publication productivity of Dr. A. Subbiah conforms to the bibliometric laws.

DATA COLLECTION: SOURCES

The data for this analysis are the total, periodical publications by a particular scientist. It was decided that the source for collecting data should not be a secondary one alone as generally in the case of bibliometrics and scientometrics but also resort to primary data from the 'horse mouth' – the concerned social scientist who is available very well on the campus of sri s.r.n.m. College. In addition to the data provided by the scientist, internet was also resorted to for supplementing data. Google.scholar.Com was hooked in to download the articles published by Dr. A. Subbiah

STATISTICAL TOOLS

The records downloaded were converted into iso format acceptable to cds/isis. The principles and laws governing bibliometrics have been applied.

The following tools were used to carryout the study

(1) descriptive analysis, (2) percentage analysis., (3) correlation analysis

Author's Affiliations: *Librarian, Central Library, Sri S. R. N. M. College, Sattur-626 203, Tamilnadu, e-mail: nattarwithu@gmail.com

Reprints requests: Mr. S. Nattar, Librarian, Central Library, Sri S. R. N. M. College, Sattur-626 203, Tamilnadu, e-mail: nattarwithu@gmail.com

Received on 14.9.09, accepted on 18.12.09

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of collected data, employing appropriate statistical tools and techniques wherever necessary.

Year and age wise publications of Dr. A. Subbiah

The year and age wise publication of Dr. A. Subbiah has been provided in the following table 1.

Table 1

Year and age wise publications of Dr. A. Subbiah (1996-2008 July)

S. No	Year of publishing	Total publications	Age of author
1	1996	2	42
2	1997	3	43
3	1998	5	44
4	1999	7	45
5	2000	7	46
6	2001	4	47
7	2002	1	48
8	2003	3	49
9	2004	4	50
10	2005	3	52
11	2006	17	53
12	2007	10	54
13	2008	4	55
Total		**70**	

The annual average publication productivity of the author works out to be 5.37 articles.

Table 1 shows that the first paper of the author makes his maiden entry as a social science communicator in 1996 when he was 42 years of age. His highest productivity is in 2006 with 17 publications (age 53) followed by ten papers in 2007, 7 papers in 1999 and 2000 (ages 45, 46) and 5 papers in 1998 (age 44).

From the table it is inferred that the most productive years are between 53rd and 54th years his age. These productive years saw as many as 27 (38.5%) papers of his publications forming more or less one third of his total contributions.

The remaining 61.5 percentage of productivity life was 42 to 55 years of his age. The total productivity taken for this study (up to 2008 July) of the author spans 13 years starting from his age of 42.

This shows that dr. A. Subbiah maintains the level of research almost throughout his research career.

PUBLICATION PRODUCTIVITY OF DR. A . SUBBIAH

The publication productivity of Dr. A. Subbiah has been provided in Table 2

Table 2
Publication productivity of Dr. A. Subbiah (1996-2008 July)

S.no	Year	1st Aut	2nd Aut	Mt	Tp
1	1996	-	2	2	2
2	1997	1	2	2	3
3	1998	5	-	-	5
4	1999	7	-	-	7
5	2000	7	-	-	7
6	2001	4	-	-	4
7	2002	1	-	-	1
8	2003	3	-	-	2
9	2004	4	-	-	4
10	2005	3	-	-	3
11	2006	17	-	-	17
12	2007	10	-	-	4
13	2008	4	-	-	5
Total		66	4	4	70
Percentage		94.3	5.7	5.7	100

Mt total of multi-authored publications tp-total publications.

Table 2 reveals that the authorship pattern of Dr. A. Subbiah. It is found from the table that Dr. A. Subbiah published 66 (94.3%) articles as first author, and 2 (5.7%) as second author.

AUTHORSHIP PATTERN OF DR. A. SUBBIAH

Table 3 shows the authorship pattern of dr. A. Subbiah

Table3
Authorship patterns and number of publications (1996-2008 July)

No. of authors	Total no. of Papers	%	Total no. of authorship	%
One author	24	34.28	24	20.69
Two author	46	65.72	92	79.31
Total	**70**	**100**	**116**	**100**
Percentage	**100**			

Dr. K. Veluthambi has published 24 single author papers and 46 co-authored papers during 1996-2008. The total number of collaborative authorship for the sum total of articles published by dr. A. Subbiah is 116.

DR. A. SUBBIAH'S COLLABORATION WITH RESEARCHERS

The scientist's interaction with the scholars working under him maintains a healthy record. The authorship credit of researcher's collaboration with Dr. A. Subbiah is given in the following table 4.

Table 4
Authorship credit of researcher's collaboration with Dr. A. Subbiah

S.no	Name	Period of Association	Tl yrs	No. of Authorship
1	Dr. A. Subbiah	1996-2008	13	70
2	Dr. V. Rengaswamy	1996-1997	2	4
3	Dr. S. Rajamohan	1999-2005	6	8
4	Rajitha	2003-2004	2	2
5	Dr. A. Muthumani	2003-2006	3	4
6	Selvaraj	2004	1	1
7	K.navaneethakrishnan	2003-2006	4	9
8	Dr. M. Selvakumar	2005-2007	2	10
9	K. Rajamannnar	2005-2007	3	2
10	R. Praveena	2008	1	2
11	R. Sundarajan	2006-2007	2	4
	Total			**116**

Dr. A. Subbaiah has collaborated with 12 researchers during 1996 – 2008. The publication productivity of Dr. A. Subbiah research group (collaborators) is displayed in table 4. It has been observed that Dr. M. Selvakumar has collaborated with Dr. A. Subbiah in the production of maximum number of papers i.e. 10 published during the years 2005 – 2007, Dr. N. Navaneethakrishnan follows next with 9 papers during the years 2003-2007, Dr. S. Rajamohan with 8 papers from the year 1999–2005 and Dr. V. Rengasamy, Dr. A. Muthunmani and R. Sundararajan with 4 papers each during the years 1996-1997, 2003–2006 and 2006-2007 respectively.

PUBLICATION PRODUCTIVITY OF DR. A. SUBBIAH AND HIS COLLABORATORS

Table 6 presents the details about the publication productivity of Dr. A. Subbiah.

Table 5

Publication productivity of Dr. A. Subbiah and his collaborators

No. of Papers (p)	No. of Authors (n)	Total no. of Authorship (n x p)	Prominent Collaborators
1	1	1	
2	3	6	
4	3	12	
8	1	8	Dr. M. Selvakumar -10 Dr. K. Navaneethakrishnan -9 Dr. S. Rajamohan -8
9	1	9	
10	1	10	
70	1	70	
	11	**116**	

Researchers collaborated with Dr. A. Subbiah for one time that is with one paper is 1; with two papers is 3; with four papers is 3; with eight papers is 1; with nine papers is 1; with ten papers is 1. Total authorship credit for 11 authors counts 116, each collaborating author being given one authorship credit for each paper.

CHANNELS OF COMMUNICATION PREFERRED BY DR. A. SUBBIAH

There are several types of channels of communication wise analysis of the publication ofdr. A. Subbiah which includes southern economist, facts for you, rural india, prajnan, kurushetra, readers self, university news and so on.

Table 6

Dissemination of the channels of communication used by Dr. A. Subbiah

S.no	Channel of communication	No. of Papers	Cumulative	Impact Factor
1	Southern economist	10	10	0.0021
2	Facts for you	10	20	0.0024
3	Rural india	9	29	0.002
4	Tamilnadu journal of co-operation	8	37	0.0018
5	Prajnan	4	41	0.0012
6	Kurushetra	4	45	0.0001
7	Readers shelf	4	49	0.0012
8	University news	3	52	0.0039
9	Kisan world	3	55	0.0028
10	Management researcher	2	57	0.0089
11	Vanijya	2	59	0.00012
12	National bank news review	1	60	0.00019
13	Finance india	1	61	0.00087
14	The insurance time	1	62	0.00082
15	Indian journal of marketing	1	63	0.00069
16	Rnj journal of commerce	1	64	0.00072
17	Science tech entreprenour	1	65	0.00069
18	Third concept	1	66	0.00091
19	The journal of banking information technology and management	1	67	0.00081
20	The management accountant	1	68	0.00069
21	Economic affairs	1	69	0.00071
22	Hrd time	1	70	0.000027

Table 6, replicates that the contributions of dr .a. Subbiah (70 publications) have been spread over 22 reputed journals in india. The journal-wise scattering of publications of dr. A. Subbiah is given in the table.

It is inferred that the top ranking journals with more number of publications comparatively speaking are: journal of southern economist (0.0021 impact factor), facts for you (impact factor 0.0024), rural india (impact factor 0.002) and tamilnadu journal of co-operation (impact factor 0.0018). The place of publication of the journals is from India.

DOMAIN –WISE PUBLICATION PRODUCTIVITY OF DR. A. SUBBIAH

Domain-wise research specializations are given below: Banking and Non banking domain-wise cumulative publication productivity: during 1996-2008, he has contributed 32 papers in the domain of banking and 38 papers of non banking.

The following chart shows the year wise publication of Dr. A. Subbiah.

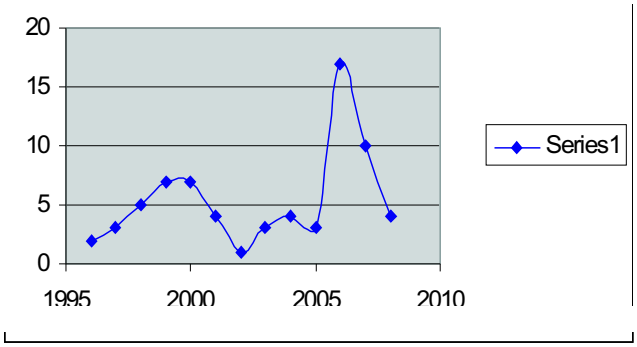


Fig.1: Year wise distribution & growth trend

The following chart shows the publication productivity of Dr. A. Subbiah

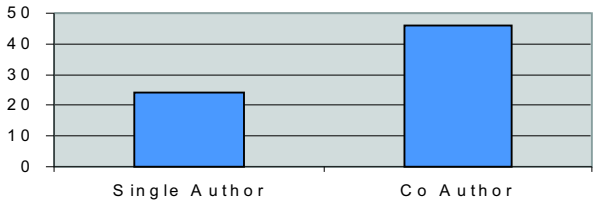


Fig. 2: Publication productivity of Dr. A. Subbiah and his collaborators

The following chart shows the authorship credit of researcher's Collaboration with Dr. A. Subbiah

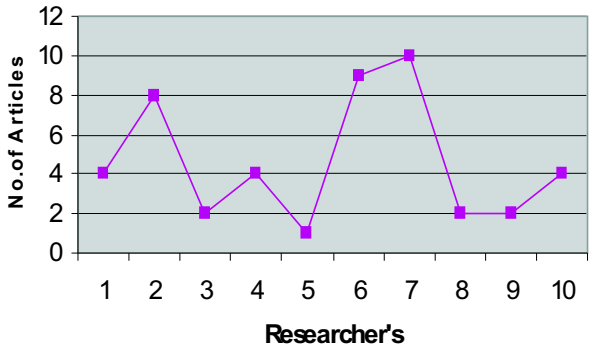


Figure 3: authorship credit of researcher's collaboration with Dr. A. Subbiah

1. Dr. V. Rengasamy, 2. Dr. S. Rajamohan, 3. Rajitha, 4. Dr. A.muthumani, 5. Selvaraj, 6. Dr. K. Navaneethakrishnan, 7. Dr. M. Selvakumar, 8. Rajamannar, 9. R. Paraveena, 10. R. Sundararajan.

Bradford's law of scattering

Zones	Number of journals
1	6
2	63
3	597

The total number of journals figured in the study were 666 which were ranked on the basis of their publication count (productivity) on the subject banking. The top ranking publication count was by "southern economist and facts for you" with 473 publications that formed 13.91 percent. The first 6 journals had produced 1122 records. Having this as the first zone the second and third zones were arrived at by counting the number of journals that had produced nearly 1122records.

On application of bradford's law on the data on banking literature it was found that the result invalidated bradford's law of distribution. The first zone contained 6 journals and the second zone contained 63 journals which was nearly 10 × 6.

According to bradford's law, the ratio of the

three zones should be in the form of 1: n : n^2. In the present study the ratio of the zones are

6 : 63 : 597

= 1: 10.5 : 99.5

= 1 : n : n^2 approximately where n=10. From this figure it is found that the present study corroborates with that of bradford's law.

CONCLUSION

The above bibliometric study of his collected works undoubtedly proves the usefulness of his work in the field of banking and non banking. The large amount of papers written in his field along with a large number of collaborators give us an indication to the inspiration of young social science researchers throughout the world. His passion to reach out to various people in different countries has been proved beyond doubt.

REFERENCE

1. Abramowitz, m. 1956. Resource and output trends in the united states since 1870, A*merican economic review,* 46: 5-23.
2. Braun, t. (ed.). 1998. Topical discussion issue on theories of citation, *scientometrics* 43: 3-148.
3. Burt, r. S. 1982. *Toward a structural theory of action*. New york, etc.: academic press.
4. Bush, v. 1945. *The endless frontier: a report to the president.* Reprinted new york: arno press, 1980.
5. Callon, m., and b. Latour. 1981. Unscrewing the big leviathan: how actors macro-structure reality and how sociologists help them to do so. In *advances in social theory and methodology.toward an integration of micro- and macro-sociologies*, edited by k. D. Knorr cetina and a. V. Cicourel. London: routledge & kegan paul, 277-303.
6. Callon, m., j.-p. Courtial, w. A. Turner, and S. Bauin. 1983. From translation to problematic networks: an introduction to co-word analysis, *social science information,* 22:191-235.
7. Skolnikoff, e. B. 1993. *The elusive transformation.* Princeton, nj: princeton university press.
8. Whitley, r. R. 1984. *The intellectual and social organization of the sciences*. Oxford: Oxford university press.
9. Wouters, p. 1999. *The citation culture*. Unpublished ph.d. Thesis, university of Amsterdam.
10. *Http://www.learnworld.com/znw/lwtext.york.race. Access.html*
Loet@leydesdorff.net;http://www.leydesdorff.net/

Red Flower Publication Pvt. Ltd.

The Red Flower Publication Pvt. Ltd. is a Medical and Scientific publishing group has been formed to deliver service with the highest quality, honesty and integrity. We continue to work to maintain a matchless level of professionalism, combined with uncompromising client service. **The Red Flower Publication Pvt. Ltd.** strives to exceed your expectations.

Over 80% of our business comes through the referrals of satisfied clients, a strong testament to our client service. We appreciate your support in the past, and with a new name and a new look. We are looking forward to serving you even better in the years to come.

The Red Flower Publication Pvt. Ltd. is a newly formed medical and scientific publishing company based in Delhi. **The RFPPL** publishing twelve peer-reviewed indexed medical and scientific journals that provides the latest information about best clinical practices and new research initiatives.

The Red Flower Publication Pvt. Ltd is publishing journals on the field of medicine and science like Library and Information Science, Neurology, Neurosurgery, Pediatrics, Genetics, Social Welfare, Management, Ayurveda, Yoga, Forensic Medicine, Dentistry, Pathology and Surgery.

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Library building and space utilization: A study of Mangalore University

S.S. Kumbar*

Pushpalatha**

ABSTRACT

This paper describes the new library building of Mangalore University, occupied in 1993. A brief history of the existing library is given. The paper highlights the location of the building, its accessibility to all the end users and features of the building. It discusses the benefits of the new library building in organizing the entire collection under a single roof. The constraints in the space utilization of the building have been mentioned. It is hoped that the present paper will be of some help to librarians involved in planning new buildings for their libraries. It concludes that the library building partly meets the present requirements of the university. There is a need for making provision for independent acquisition and technical processing sections, and also for the establishment of learning resource centre and internal binding sections within the library. Further, use of closed circuit cameras and RFID systems has been suggested from the security point of view of the reading materials.

Keywords: Library building; Library building infrastructure; Space utilization

INTRODUCTION

The library has been considered the heart of an academic institution. The successful functioning of the academic activities of the university largely depends on the effective and timely services of the library. The historical literature on library building reveals that any building unsuitable for any other purpose was used to store the books in the olden days. It was because the focus was on just collecting the reading materials rather than their use. Over the years the concept of the library has changed. Today libraries are called as 'information dissemination centres', knowledge dissemination centres', and 'learning resource centres'. They are acting as catalysts between the users and the sources of information. They have become service centres. In order to collect, organize, maintain variety of information and provide services to the users the library needs a well structured functional building.

According to McDonald[1]

Ten important qualities of an ideal library space are: functional, adaptable, accessible, varied, interactive, conducive, environmentally suitable, safe and secure, efficient, suitable for information technology. The layout of the building has to meet users' demands and facilitates the flow of users, books and staff. The library is not only a place to borrow and read books, but also a space for academic and cultural activities. Khanna[2] states that the university library is a common utility service centre for faculty members, researchers, students and other supporting administrative staff along with industrialists, businessmen and others of the locality. Further, the university library buildings are a ware house for books, a workshop for readers and business home for the staff. Today the libraries are termed as laboratories of learning. While planning the buildings the future requirements must be kept in mind. In this regard Mahatma Gandhi's[3] advice was to plan the building of the library in such a way that it can be

Author's Affiliations: *Deputy Librarian Mangalore University Library Mangalagangothri- 574 199, DK Mangalore, Karnataka, INDIA, Ph No.91-824-2287361, 2287394 (O)Mobile: 91-9449389392e-mail: sksiddalingappa@yahoo.com.; **Library Assistant, Mangalore University Library Mangalagangothri- 574 199 (DK)Mangalore, Karnataka, INDIA, Ph No. 91-824-2287361, 2287394 (O), e-mail: pushpalathaas@yahoo.com

Reprints requests: Deputy Librarian Mangalore University LibraryMangalagangothri- 574 199 DK Mangalore, Karnataka, INDIAPh No.91-824-2287361, 2287394 (O)Mobile: 91-9449389392, e-mail: sksiddalingappa@yahoo.com

(Received on 4.5.09, accepted on 25.5.09)

enlarged as the library expands without marring its symmetry. The later additions should not appear as extraneous accretions to the original building.

Sannwald[4] has given a checklist of library building design which will be taken as guiding principles for planning and designing the library building. However, the existing literature on library building does not point out the exact structure and layout of the library buildings suitable for a university. Therefore the local conditions such as availability of free area, financial constraints, size of the library holdings, and strength of the library users, govern the structure of library buildings. In the present paper an attempt has been made to report on the efforts made by the Mangalore University in organizing the collection and services of its library.

MANGALORE UNIVERSITY LIBRARY A BRIEF INTRODUCTION

Mangalore University Library came into existence in the year 1980. Prior to this it served as the library of the post graduate centre of the University of Mysore. Initially the library was started with a mere collection of 40,000 documents. It was housed in a single hall which was formerly used as the university auditorium. With the increase in the size of the collection as well as the strength of users the hall was found to be inadequate. Therefore the library collection was shifted to another building which was found to be sufficient for organizing only the stack, textbook and reference collection. The periodicals section and Kannada language collection were maintained in the nearby class rooms, both the library staff as well as the users found such scattering of library holdings inconvenient. Hence, the university planned for a new independent building for its library. Keeping in mind the ever growing size of the library collection as well as the strength of the users the library was planned for 9000 sq. mts. of carpet area. It was decided to build it three phases. The construction of the first phase of the building with a carpet area of 3000 sq mts. was initiated on 18th October 1993 and is a milestone in the history of Mangalore University.

Today it has 1,78,000 documents in its collection. With an increase in the number of post graduate departments of the university from five to 24, the strength of the library users has increased from 362 to 2500 over the years.

LOCATION OF THE LIBRARY BUILDING

The new library building has been located in front of the main faculty building facing towards the double road of the campus. On the right side of the library building there is the humanities block

Model of the Mangalore University Library Building

and on the left side the building for the Department of Business Administration is getting ready. Hence it is easily accessible to all the faculty members of various departments of the university.

The complete structure of the library building is hexagonal in shape. It was planned to be built in three phases. The entire plan comprises of six big reading halls, two office blocks and a beautiful garden at the centre. Each hall is also hexagonal in shape.

The first phase of the library building consists of an entrance hall, three big reading halls and two office blocks. Its exterior is very attractive and the interior is pleasing for the users. It has good ventilation and gets very good natural light. Further, there are two gardens, one in front of the library and another at the centre of the entire library building.

SPACE UTILIZATION OF THE PRESENT BUILDING

The entrance area of the library building has been used for establishing the property counter and circulation desk. The free area available on both sides of the circulation desk has been utilized for displaying the daily newspapers and general magazines. The mezzanine area has been used for organizing the text book collection. The right wing hall of the library building has been used for organizing the stack section. Its mezzanine area is used for Kannada Section. Similarly, the ground floor area of the left wing reading hall has been used for journals and the mezzanine area for organizing the reference collection.

Of the two office blocks, the ground floor of the right side block consists of the Deputy Librarian's chamber and the photocopying section. The weeded out collection of books has been maintained on its mezzanine area. The left side office block consists of the librarian's chamber and office, its mezzanine area has been divided into two halls. One of these halls is used as audio-visual room and the other has been used for housing the library web server.

There are two gangways on two sides of the circulation desk. The right gangway takes the users to the stack and Kannada sections. All along this gangway, five notice boards have been kept for displaying important information like population statistics chart, notices of seminars, conferences, workshops, refresher courses, orientation programmes, paper clippings on various subjects of interest to the academic community and also book reviews. The other gangway which takes the users towards the periodicals and reference sections also has five notice boards on wall. Here the first two boards contain the reprints of the publications of the faculty members, the third one is used for displaying the information about admissions, the fourth board is used for displaying the information about employment notifications and the last board for displaying information on the various scholarships and fellowships. At the end point of this gangway one more photographic unit has been installed to provide easy access to the facilities available for the periodicals and reference section users.

NETWORKING FACILITY

A local area network has been created within the library and it has been connected to the campus network and finally to the internet. The library web server has been maintained within the library and it has been connected with twelve client machines spread over different sections of the library. This has helped in developing the library database and managing the library house keeping operations of different sections of the library.

COMMUNICATION FACILITY

As a result of centralized library building all the ground floor sections have been connected through intercom facility. This has enabled the library staff to have interaction among themselves from their respective sections.

FURNITURE AND EQUIPMENTS

The library has been furnished with Godrej model book racks, cupboards, tables and chairs.

Each reading hall accommodates about 100 students at a time in addition to the book collection and back volumes of the journals.

LIGHTING AND VENTILATION

The present building gets adequate natural light and ventilation. To meet the lighting requirements during night and also during cloudy days it has a generator.

PROVISION FOR EXPANSION

The fifth law of Library Science 'Library is a growing organism' clearly emphasizes the necessity of making provision for expansion of the building. As the present library building has been planned to be constructed in three phases, in future, whenever the already built first phase of the building found inadequate, steps could be initiated for building its second and third phase part. This clearly shows that the building has adequate provision for future expansion.

BENEFITS

1. The present building has enabled the organization of the entire library collection under a single roof.
2. It has helped in avoiding duplication of work which resulted in the early days due to scattering of collection in different buildings.
3. It has enabled to get network facility within the library.
4. It has helped to provide all the sections with alternate electricity supply during power failure.
5. Each section has been built in such a way that, cannot carry books from one section to another without coming to the notice of the library staff. This has helped in reducing the misplacement of books.
6. The movement of books and staff does not disturb the serious readers in the library.
7. Library automation has become easy.
8. The audio visual room has helped in organizing user orientation programmes systematically.

CONSTRAINTS

Movement of Books: All the sections of the library must be well connected so as to make it easy for the movement of books and staff. In this regard the movement of books from the circulation counter to stack section is not easy as it is situated a little away. In the gangways if book trolleys were used it would have been easy for the staff to send the books to the stack for restoration. To reduce the noise, mats have been put along the gangways and pushing book trolleys over the mat will be difficult.

Workflow Arrangement: The workflow arrangement should be such that, the staff can keep a watch on the users carrying books from the stack to the circulation desk. But in the present building it is not possible for the staff members of either stack section or circulation section to keep a watch on such movement. Therefore, the charging work of the circulation section has been shared by the staff at the stack as well as circulation counter.

Further, the library must have separate sections for acquisition and technical processing. These sections perform the behind the scene activities and support the entire library services. There must be a facility for easy movement of books and staff from these sections to the stack and other sections to which newly added books are usually sent. This is lacking in the present library building. Both these sections have been accommodated in the Deputy Librarian's chamber itself. Therefore there is a need for making provision for this in the next phase of the building.

PROVISION FOR LEARNING RESOURCE CENTRE

In the modern era there is a need for the establishment of a learning resource centre or a division for using the e-resources. Therefore it is essential to make provision for such centre in the next phase of the library building.

NEED FOR AN INTERNAL

BINDING SECTION

Regular use leads to wear and tear of the library books and other reading materials, which needs to be repaired as early as possible. At present the library is availing the services of external binders for this purpose. As they carry the torn books to their bindery, there are chances of increased damage to the reading materials during transit, and the time lag in returning the bound books to the library will also be more. Therefore, it is essential to have an internal binding section in the library itself.

CONCLUSION

The newly constructed independent library building has helped in organizing the entire collection under a single roof. From the point of view of security of library materials, avoiding their misplacement of books and keeping a watch on the users the library must be equipped with closed circuit cameras. At present the circulation transactions are handled using barcodes, if it is replaced by RFID systems, the problem of replacement of barcode labels again and again will be solved. It also helps in keeping track of the movement of the reading materials.

REFERENCES

1. McDonald, Andrew. 2007. The top ten qualities of good library space. In IFLA library building guidelines: Developments and reflections. Edited by Karen Latimer and Hellen Niegaard. Munchen, K.G.Saur, p.14.
2. Khanna, J.K., 1984. Fundamentals of library organization. New Delhi: Ess Ess, p.268.
3. Gandhi, M.K. 1968-70. Libraries-Abodes of wisdom. Timeless Fellowship. Vol. 5& 6, p1.
4. Sannwald, William W. 2009. Checkilist of library building design considerations. 5th ed. Chicago: ALA.

SAMARPAN TRUST

Join hands and be a part of our mission

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

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

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

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

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

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

Some of the children you can sponsor.
There are thousand of children waiting for someone like you. You could be their only hope. There are just a few of our children who desperately need a sponsor. You can also view more children at.

☐ **Yes! I want to sponsor a needy child today. Here is my sponsorship gift!**
Please send my sponsored child's photograph and stoty right away.
☐ Rs.600/- every month ☐ Rs.1,800/- every 3 months ☐ Rs.3,600/- every 6 months
☐ Rs.7,200/- every year.
☐ **I will not be able to sponsor a child right now**.
But there is my gift to support a child's education.
☐ Rs. 1000/- ☐ Rs. 2000/- ☐ Rs.5000/- ☐ Rs._____ /-
☐ I wish to make my gift by Draft Dd.
In the name of Samarpan Trust-payable at delhi.

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

Personal Details

Name _____
Address _____
_____
_____ Pincode _____
Phone _____
Email _____ Nationality _____

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

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

SAMARPAN TRUST
1/50, Sector-II, Rajendra Nagar
Sahibabad - 201 005, Ghaziabad, U.P. (India)
Phone: 91-120-4153490, 9212471261, Fax: 91-11-48042168
E-mail: samarpantrust@vsnl.net, Website: www.samarpantrust.org

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

The impact of 'on time' reminders on defaulters - A case study of Islamia College of Science and Commerce, Srinagar

Mohammad Hanief Bhat*

ABSTRACT

A sizeable number of books are lost by degree college libraries in India to the drop out students at various levels. This has remained a cause of concern for college librarians. The paper discusses the effect of serving 'on time' reminders to defaulters, adopted at Islamia College of Science and Commerce, Srinagar.

Keywords: Outstanding books; Defaulters; College Library; Reminders; India

THE LIBRARY

The Islamia College of Science and Commerce, Srinagar established in 1961 by the government of Jammu and Kashmir as an autonomous educational institute with a view to offer higher education, is one of the premier educational institutes of the state imparting education at undergraduate and postgraduate level (Islamia Colllege of, 2009). The two main courses offered by the college are B.Sc and B. Com. The BCA and BBA courses were started in 1998 and 2002 respectively and MBA programme in 2005. The college saw a devastating fire in October 1990 which consumed all its structures including the splendid college library (Bhat, 2005). The entire gutted structure stands rebuilt with the generous funding of the government. The college is accredited at B++ level with the institutional score of 84% by NAAC (National Assessment and Accreditation Council (Islamia Colllege of, 2005). The college has a total population of about 3000 students.

A BRIEF HISTORY OF COLLEGE

The library with a collection of about 70000 volumes and 100 serial titles is housed in a double storey building with a carpet area of 6132 sft. The membership of the library is about 3500 which includes students, teachers and college staff. The total staff strength of the library is thirteen which includes four professionals, four assistants and five helpers.

OBJECTIVES

The objective of the present study is to assess the impact of on time reminders on returning the outstanding books by defaulter students.

SCOPE

The scope of the present study is limited to the central library of Islamia College of Science and Commerce, Srinagar covering a time period of 18 years (viz., 1991-92 to 2008-2009).

METHODOLOGY

The present library of Islamia College of Science and Commerce, Srinagar made its debut in 1991 after the old one was completely gutted in a tragic fire incident of 1990.During the ten year period of 1991-2001, the defaulter students were not served any reminders for the outstanding books. However from 2001-2002 the reminders are served to the students immediately after the completion of the academic session through normal post. The reminders have also been served to the defaulter students of 1991-2001 in 2002 after a gap of 1-10 years.

Author's Affiliations: *Senior Librarian Islamia College of Science & Commerce, Srinagar (J&K),India-190002, e-mail:- mhanief30@yahoo.co.in

Reprints requests: Mohammad Hanief Bhat, Senior Librarian Islamia College of Science & Commerce, Srinagar (J&K), India-190002, e-mail:- mhanief30@yahoo.co.in

(Received on 13.4.09, accepted on 17.11.09)

The library maintains the defaulter register containing complete details (Name of the book, Accession no. , Date of issue, Class, student's name and address). The same register is used for obtaining all data related to the study. The data is tabulated, and analyzed to reveal findings in accordance with laid down objectives.

RESULTS AND DISCUSSION

The Table 1 depicts the ten year data related to the outstanding books for which the reminders were not served to the defaulter students on time. Out of the ten academic sessions the percentage of return is zero for five academic sessions. During the rest five sessions the percentage of return varies from 3.44% to 28.57%. During this period out of 185 outstanding books against 141 students only 15 (8.10%) books have been returned by the students. The highest number of defaulters (as well as the books) are the Ist year students and least the 3rd year students. The highest returning percentage is for 3rd year students and the lowest for 2nd year students (Table2).

Table 1: Statistics of outstanding books for ten years (reminders not served on time)

S.No	Session	No. of defaulter students	No. of Books outstanding	No. of books returned
1	1991-92	4	4	0 (0.0)
2	1992-93	10	10	0 (0.0)
3	1993-94	6	7	1 (14.28)
4	1994-95	4	4	0 (0.0)
5	1995-96	9	12	0 (0.0)
6	1996-97	21	26	0 (0.0)
7	1997-98	25	29	1 (3.44)
8	1998-99	5	7	2 (28.57)
9	1999-2000	26	34	5 (14.70)
10	2000-2001	31	52	6 (11.53)
Total		141	185	15 (8.10)

Figures in parenthesis indicate percentage

Table 2: Class-wise statistics of outstanding books for ten years (reminders not served on time

S. No.	Class	No. of defaulter students	No. of Books outstanding	No. of books returned
1	Ist Year	82	108	11 (10.18)
2	2nd Year	35	41	0 (0.0)
3	3rd Year	24	36	4 (11.11)
Total		141	185	15 (8.10)

Figures in parenthesis indicate percentage

Table 3 depicts the eight year statistics of outstanding books. During this period the reminders have been served to the students immediately after the completion of the academic session. The figures are quite encouraging as the percentage of returned books during this period is 51.83% as against the 8.10% during the previous ten years. The percentage of returned books varies from a minimum of 28.00% to a maximum of 67.64%. Out of 436 outstanding books during this period 252 are outstanding against the students of Ist year, 117 against 2nd year students and 67 against the 3rd year students. The percentage of return is highest for the 3rd year students (62.68%), followed by the 2nd year students (57.26%). The lowest percentage of returning the books is for the students of Ist year (46.42%).

Table 3: Statistics of outstanding books for eight years (reminders served on time)

S.No.	Session	No. of defaulter students	No. of Books outstanding	No. of books returned
1	2001-02	32	41	13 (31.70)
2	2002-03	41	67	44 (65.67)
3	2003-04	42	66	38 (57.57)
4	2004-05	40	62	33 (53.22)
5	2005-06	31	55	29 (52.72)
6	2006-07	45	68	46 (67.64)
7	2007-08	15	25	7 (28.00)
8	2008-09	28	52	16 (30.76)
Total		274	436	226 (51.83)

Figures in parenthesis indicate percentage

Table 4: Class-wise statistics of outstanding books for eight years (reminders served on time)

S. No.	Class	No. of defaulter students	No. of Books outstanding	No. of books returned
1	Ist Year	173	252	117 (46.42)
2	2nd Year	70	117	67 (57.26)
3	3rd Year	31	67	42 (62.68)
Total		274	436	226 (51.83)

Figures in parenthesis indicate percentage.

CONCLUSION

The present study reveals that serving reminders to the defaulter students on time enhances the rate of returning the books considerably. The results also suggest that the Ist year students in Degree colleges are the maximum defaulters and the percentage of returning the books is also minimum for these students. It is recommended that reminders should be served to the defaulter students immediately after the completion of the academic session each year.

REFERENCES

1. Bhat, M. H. (2000). Glory restored. In Islamia Colllege of Science & Commerce, The Badamwari: Alumini special (College magazine)." P 186
2. Islamia College of Science & Commerce (2005). The Badamwari: Alumini special (College magazine).
3. Islamia College of Science & Commerce (2009). Prospectus, Islamia College of Science & Commerce. P 1-2.

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Use of internet by faculty members and research scholars in the 21st Century: A study of University Libraries of Karnataka State, India

Gururaj S. Hadagali*

B.D. Kumbar**

ABSTRACT

Internet is becoming more widely used by academic institutions to support the teaching, learning and research activities of faculty members and research scholars. The main aim of this study is to examine the impact of Internet on the users in University libraries of Karnataka State. The present study demonstrates and elaborates the various aspects of internet use, such as frequency of Internet use, place of access, purposes of Internet access, motivating factors to access Internet and most preferred search engines. It was found from the survey that the Internet has become a vital instrument for teaching, research and learning process of these respondents. Some suggestions have been given to make the service more beneficial for the faculty members and research scholars of the University libraries of Karnataka State under study.

Keywords: Internet Use, Faculty Members, Research Scholars. Universities, India, Academic Libraries and Karnataka State.

INTRODUCTION

The current digital revolution, especially Internet technology, integrated with a treasure of information has gained significance as an indispensable tool in pursuit of knowledge and information. At the dawn of information age, professionals are experiencing new vigour in the field of information collection, processing and retrieval. The Internet considered as the electronic mobile library in cyberspace provides an almost universal infrastructure for accessing the information with almost a global reach.

Author's Affiliations: *Assistant Professor, Department of Library and Information Science, Karnatak University, Dharwad – 580 003, Karnataka State, INDIA, Ph: 0836-2215260 and Mobile: 099452 11029, E-mail: gururaj_hadagali@yahoo.co.in.; **Professor, Department of of Library and Information Science, Karnatak University, Dharwad – 580 003, Karnataka State, INDIA, Ph: 0836-2215260, Mobile: 099454 08212, e-mail: bdkumbar@yahoo.com

Reprints requests: Dr. Gururaj S. Hadagali, Lecturer, Department of Studies in Library and Information Science, Karnatak University, Dharwad – 580 003, Karnataka State, INDIA, Ph: 0836-2215260 and Mobile: 099452 11029, e-mail: gururaj_hadagali@yahoo.co.in

(Received on 27.5.09, accepted on 12.6.09)

In the era of networked information, Internet the largest worldwide network of networks has emerged as the most powerful tool for an instant access to information (Rajeev Kumar and Kaur, 2005). Internet is undoubtedly, the worlds wonder network carrying information on almost any subject under the sun. Everybody today would like to be on Internet because of the wealth of information which lies there to be exchanged. It is known as the information superhighway.

The Internet or the Net, as it is better known has been perceived to be of several dimensions to its users, a medium of intercommunication between remote users, a mechanism to share information and work collaboratively, a means of publishing globally and a near exhaustive repository of information. The Internet plays an important role in teaching, learning and research processes. The usefulness of Internet lies in its ability to provide access to electronic information resources of library everywhere and at all times. It removes the constraints of time and space and also the dependence on conventional sources for learning. Faculty members and research scholars of Universities of Karnataka increasingly depend on the Internet for their teaching/research activities and for information on recent/current

developments in their study areas than on conventional sources.

REVIEW OF RELATED LITERATURE

Rehman and Ramzy (2004) conducted a study of health care professionals at the Health Sciences Centre of Kuwait University. A questionnaire was administered to all the 180 faculty members in HSC. The extent and patterns of their use of the Internet for 12 applications were analysed. The current level of skills was examined and perceptions for improving them were explored. Also, the impact of the Internet on professional and personal development was explored. It was found that the Internet had become a vital instrument for research, information and communication in the lives of these professionals.

Mishra, Yadav and Bisht (2005) conducted a study to know Internet utilization pattern of the undergraduate students of G.B. Pant University of Agriculture and Technology, Pantnagar. The findings of the study indicated that a majority of the students (85.7%) used the Internet. It also showed that 61.5% of the males and 51.6% of the females used Internet for preparing assignments. A majority of the respondents, i.e., 83.1% male and 31.3% female respondents indicated that they faced the problem of slow functioning of Internet connection.

Asemi (2005) conducted a study which shows that all the respondents were using the Internet frequently because all faculties were provided connection to the Internet. It was revealed from the study that the researchers were getting quality information through the Internet. Fifty five percent of the respondents searched for scientific information through the Internet because the University library had provided access to various databases and online journals for all the students and staff.

Ansari (2006) conducted a study of faculty from four colleges of Kuwait University, i.e. Arts, Social Sciences, Sciences, and Engineering. A questionnaire was used to collect data from faculty. Half of the 491 potential participants were selected as sample, with a response rate of 62.6 percent. Findings of the study indicated that a large majority have been using the computer and internet for more than five years. They use the internet mostly for, and give importance to, e-mail, search engines, and www resources mainly for communication, research, and publication. Slow speed, lack of time, and lack of access from home are the major problems. Most of them are interested in improving the Internet use skills through formal training.

Hadagali, Kumbar and Lakshmiraddy (2007) conducted a study on the use of Internet by the faculty members of Social Science faculty of Karnatak University, Dharwad, India. A questionnaire was prepared which was sent to 50 faculty members and the response rate was 84 %. The results indicated that the use of Internet services by the faculty members is associated with an increase in the number of research papers and with improvement in the quality of research and teaching.

Trivedi and Joshi (2008) conducted a study of faculty at Pramukhswami Medical College (PSMC) and Shree Krishna Hospital (SKH) of H.M. Patel Centre for Medical Care, Education, and Research (HMPCER), Karamsad, Gujarat, India. A total of 194 health care professionals (116 male, 78 female) were administered. It was found from the study that slow Internet speed is the major problems they are facing.

NEED FOR THE STUDY

The ever increasing number of people accessing Internet coupled with recent explosion of information resources on the Internet may have considerable implications for teaching, learning and research. Faculty members and research scholars are depending more and more on the Internet for their various educational purposes.

Lack of access to current materials in libraries of universities in developing countries, is a major problem that hinders research and teaching. Inter Library Loan and Document Delivery Services have not solved this problem by themselves. Internet makes it possible for users to have access to large volumes of information on many

disciplines irrespective of their geographical location.

The current study is conducted to gather, measure and access the changing users' attitude, and behaviour towards the Internet. It is necessary to examine the Internet facility provided at the campuses of the Universities and to evaluate the use of Internet.

SCOPE OF THE STUDY

The present study has the following limitations:

1. The study is restricted to use of Internet by the science and technology faculty of Universities of Karnataka State.
2. The study population consists of faculty members and research scholars.

OBJECTIVES OF THE STUDY

The main objective of this research was to investigate the impact of Internet on faculty members and research scholars of various Universities of Karnataka State.

The other objectives of the study are:

1. To highlight the importance of the Internet and its services over the traditional library services.
2. To identify the different purposes for which the Internet is used by faculty members and research scholars.
3. To study the various Internet resources and services used by the faculty members and research scholars on the Internet for various activities of teaching, learning and research.
4. To study the impact of Internet on users' research and teaching.
5. To suggest ways and means for the improvement of the Internet facility in the Universities of Karnataka State.

HYPOTHESES

1. Use of Internet has increased the contribution of research papers by the users to a great extent.
2. Internet has a positive impact on teaching / research activities of faculty members and research scholars of Universities in Karnataka state.

METHODOLOGY

The researcher visited all the six State Universities of Karnataka. Questionnaires were distributed among the faculty members, research scholars. A total of 604 questionnaires were distributed among users and 471 duly filled in questionnaires were received, thus resulting into a response rate of 77.98 %.

Faculty members and research scholars are the target population for this study. The survey method has been employed and in that questionnaire tool was used, supplemented with interview as well, to collect the data for the present study. Random sampling technique has been used. The data collected through questionnaires have been fed to computer, using SPSS (Software Package for Social Sciences).

RESULTS AND DISCUSSIONS

Distribution of questionnaires in different Universities of Karnataka State

Table 1 reveals university-wise distribution of questionnaires. The highest response has come from Gulbarga University with 80.95% followed by Karnatak University with 80.91%, Mangalore University with 80.00%, Kuvempu University with 78.21%, Bangalore University with 77.94% and Mysore University with 71.55%, the least.

Table 1: University wise distribution of questionnaires

Sl. No.	Name of the University	No. of questionnaires distributed	No. of questionnaires received	Rate of response
1.	Bangalore University	136	106	(77.94 %)
2.	Gulbarga University	84	68	(80.95 %)
3.	Karnatak University	110	89	(80.91 %)
4.	Kuvempu University	78	61	(78.21 %)
5.	Mangalore University	80	64	(80.00 %)
6.	Mysore University	116	83	(71.55 %)
	Total	604	471	(77.98 %)

Category-wise distribution of respondents

Table-2 reveals the category-wise breakup of respondents. It is observed that, of the total 471 respondents, 231 (49.04%) are faculty members, 240 (50.96%) are research scholars.

Table 2: Category wise distribution of respondents

Category	BU	GU	KU	KVU	MU	MYU	Total
Faculty members	59 (25.55)	33 (14.28)	37 (16.02)	30 (12.99)	36 (15.58)	36 (15.58)	231 (49.04)
Research scholars	47 (19.58)	35 (14.58)	52 (21.67)	31 (12.92)	28 (11.67)	47 (19.58)	240 (50.96)
Total	106 (22.50)	68 (14.44)	89 (18.89)	61 (12.95)	64 (13.59)	83 (17.62)	471 (100.00)

Figures in parenthesis indicate percentage

Geographical background of the respondents

Table 3 depicts the users geographical background. It reveals that the majority of respondents, i.e., 207 (43.94%) belong to rural area, whereas 167 (35.46%) respondents belong to urban area. About 82 (17.41%) respondents belong to semi urban, followed by only 15 (3.19%) respondents who belong to cosmopolitan city.

Table 3: Geographical background of the respondents

Category	Rural area	Semi urban	Urban area	Cosmopolitan City	Total
Faculty members	93 (40.26)	48 (20.78)	85 (36.80)	5 (2.16)	231 (32.72)
Research scholars	114 (47.50)	34 (14.17)	82 (34.17)	10 (4.16)	240 (34.00)
Total	207 (43.94)	82 (17.41)	167 (35.46)	15 (3.19)	471 (100.00)

Figures in parenthesis indicate percentage

Frequency of Internet Use

In order to assess the frequency of using the Internet services, the time gap has been classified into six different categories (see Table - 4). It has been found that 74.73 % of the respondents use the Internet every day and 19.32 % for 2-3 times in a week. It is interesting to note here that 2 (0.86 %) faculty members never used the Internet for their academic and research purpose. Compared to the

faculty members 205 (85.42%) research scholars use Internet every day. On an average the majority of the users from all the Universities use the Internet every day.

Table 4: Frequency of Internet Use

Frequency	Faculty members N=231	Research scholars N=240	Total N=471
Every day	147 (63.64)	205 (85.42)	352 (74.73)
2-3 times a week	64 (27.70)	27 (11.25)	91 (19.32)
Once a week	16 (6.93)	04 (1.67)	20 (4.25)
Fortnightly	01 (0.43)	03 (1.25)	04 (0.85)
Occasionally	01 (0.43)	01 (0.41)	02 (0.42)
Never	02 (0.86)	00	02 (0.42)
Total	231 (49.04)	240 (50.96)	471 (100.00)

Figures in parenthesis indicate percentage

Place of the Internet access by the faculty members

The faculty members were asked to furnish information regarding the place from where they access Internet. Their responses in this regard are presented in table – 5. It reveals that the majority of the faculty members, i.e., 167 (86.53 %) access Internet in their departments. About 66 (34.19 %) respondents access Internet in the departmental laboratory. The number of the faculty who access Internet at home is 58 (30.05 %), where as about 45 (23.32 %) respondents access Internet at cyber café, and 41 (21.24 %) respondents access from central library.

Table 5: Place of the Internet access by the faculty members

Place of access	BU n=51	GU n=24	KU n=29	KVU n=27	MU n=33	MYU n=29	Total n=193
Cyber Café	9 (20.00)	6 (13.33)	2 (4.45)	14 (31.11)	5 (11.11)	9 (20.00)	45 (23.32)
Department	46 (27.54)	23 (13.77)	25 (14.97)	16 (9.58)	30 (17.96)	27 (16.18)	167 (86.53)
Home	18 (31.03)	3 (5.17)	13 (22.41)	2 (3.45)	9 (15.53)	13 (22.41)	58 (30.05)
Central Library	6 (14.64)	14 (34.15)	4 (9.76)	8 (19.51)	5 (12.19)	4 (9.75)	41 (21.24)
Departmental laboratory	25 (37.87)	6 (9.09)	14 (21.21)	7 (10.61)	7 (10.61)	7 (10.61)	66 (34.19)

Figures in parenthesis indicate percentage

Place of the Internet access by research scholars

Table–6 reveals that the majority of respondents, i.e., 139 (65.26%) access Internet in the department. About 100 (46.95%) respondents access Internet at cyber café. This is followed by 56 (26.29%) respondents who access in the departmental laboratory, 45 (21.13%) respondents who access in central library and the number of those who access Internet at home is 20 (9.39%).

Table 6: Place of the Internet access by research scholars

Place of access	BU n=40	GU n=29	KU n=42	KVU n=30	MU n=27	MYU n=45	Total n=213
Cyber Café	20 (20.00)	11 (11.00)	28 (28.00)	12 (12.00)	9 (9.00)	20 (20.00)	100 (46.95)
Department	27 (19.42)	14 (10.07)	27 (19.42)	18 (12.95)	21 (15.11)	32 (23.03)	139 (65.26)
Home	5 (25.00)	1 (5.00)	4 (20.00)	1 (5.00)	6 (30.00)	3 (15.00)	20 (9.39)
Central Library	10 (22.22)	19 (42.22)	5 (11.11)	15 (33.33)	2 (4.44)	4 (8.88)	45 (21.13)
Departmental laboratory	17 (30.36)	3 (5.36)	23 (41.07)	3 (5.36)	2 (3.57)	8 (14.28)	56 (26.29)

Figures in parenthesis indicate percentage

Purposes of accessing Internet by the faculty members

In the modern era Internet has created the means for the people to communicate with each other and the way information is accessed. It has rapidly become an established medium of communication and connects people across the globe, removing geographic boundaries and simplifying access to information. The rich resources on the Internet are beneficial to all educational endeavours supporting teaching and research and academic in higher education (Biradar, Rajshekhar and Sampath Kumar, 2006). Universities and other higher educational institutions, where academic dialogue and information resources are essential for professional success, are without doubt, the most likely to reap the benefits of the Internet.

The faculty members were asked about the primary use of Internet. The responses of faculty members are recorded in table – 7. It is observed that e-mail seems to be the most primary use of Internet since about 181 (93.78 %) respondents have said so. About 144 (74.61%) respondents mentioned research purpose. Access to e-resources is indicated by 134 (69.43 %) respondents, whereas 127 (65.80 %) respondents indicated teaching as their purpose. Browsing e-journals is the purpose of 122 (63.21 %) respondents. General information and entertainment record relatively lesser preference.

Table 7: Purposes of accessing Internet by the faculty members

Purpose	BU n=51	GU n=24	KU n=29	KVU n=27	MU n=33	MYU n=29	Total n=193
E-mail	50 (27.62)	21 (11.60)	29 (16.02)	24 (13.26)	31 (17.13)	26 (14.37)	181 (93.78)
Entertainment	9 (28.12)	7 (21.88)	5 (15.62)	3 (9.38)	3 (9.38)	5 (15.62)	32 (16.58)
General Information	29 (28.43)	10 (9.80)	18 (17.65)	12 (11.76)	16 (15.69)	17 (16.67)	102 (52.84)
Browse e-journals	32 (26.23)	14 (11.48)	19 (15.58)	17 (13.93)	20 (16.39)	20 (16.39)	122 (63.21)
Access e-sources	40 (29.85)	22 (12.50)	20 (14.92)	14 (10.45)	22 (16.42)	16 (11.94)	134 (69.43)
Research	40 (27.78)	18 (12.50)	22 (15.28)	17 (11.80)	24 (16.67)	23 (15.97)	144 (74.61)
Teaching	33 (25.98)	9 (7.08)	10 (7.87)	21 (16.53)	24 (18.89)	20 (15.75)	127 (65.80)

Figures in parenthesis indicate percentage

Purposes of accessing Internet by the research scholars

Table-8 reveals that the majority of respondents, i.e., 192 (90.14 %) indicated that e-mail is the primary use of Internet. About 176 (82.63 %) respondents indicated that they access Internet for research. Browsing e-journals is the purpose of 147 (69.01 %) respondents. This is followed by general information, which was sought by 120 (56.33 %) respondents, whereas access to e-resources is indicated by 94 (44.13 %) respondents. Entertainment and teaching record relatively lesser preference with 84 (39.43 %) and 32 (15.02 %) respondents respectively.

Table 8: Purposes of accessing Internet by the research scholars

Purpose	BU n=40	GU n=29	KU n=42	KVU n=30	MU n=27	MYU n=45	Total n=213
E-mail	38 (19.79)	24 (12.50)	39 (20.31)	27 (14.06)	26 (13.54)	38 (19.79)	192 (90.14)
Entertainment	18 (21.43)	5 (5.95)	19 (22.62)	9 (10.72)	8 (9.52)	15 (17.86)	84 (39.43)
General Information	26 (21.67)	12 (10.00)	23 (19.16)	12 (10.00)	21 (17.50)	26 (21.67)	120 (56.33)
Browse e-journals	29 (19.73)	16 (10.88)	23 (15.65)	26 (17.69)	23 (15.65)	30 (20.40)	147 (69.01)
Access e-sources	21 (22.34)	10 (10.64)	24 (25.53)	7 (7.45)	12 (12.76)	20 (21.28)	94 (44.13)
Research	28 (15.91)	26 (14.77)	34 (19.32)	25 (14.20)	24 (13.64)	39 (22.16)	176 (82.63)
Teaching	5 (15.62)	4 (12.50)	5 (15.60)	7 (21.88)	5 (15.62)	6 (18.76)	32 (15.02)

Figures in parenthesis indicate percentage

Motivating factors in the case of the faculty members to access Internet

There are several factors that motivate the faculty members to access Internet. The responses in this regard are presented in table 9. It reveals that the mean value for the factor to keep abreast with area of research interest is one factor, i.e., it is an agreeable fact by all the Universities. Mangalore University (CV=52.16%) respondents' opinion is more stable as compared to that of the respondents of other Universities, and most variable opinion is observed in the case of the respondents from Gulbarga University. Respondents from all the Universities agreed to the factor that *Internet provides faster and reliable information*. *Search engines provide user friendly interface*, which is almost an agreeable statement in all the Universities and a similar response is again observed in the case of the faculty members *getting most updated information*.

It is further observed from table-9 that the opinion given by the respondents regarding *sending papers to journals /conferences /seminars and wide range of online databases /e-journals* is agreeable. The respondents are uncertain about the statement regarding *expert assistance of library staff* ($\overline{X}$ = 3). The CV is least for Mangalore University (CV=46.42%). Hence the opinion given by the Mangalore University respondents is stable, whereas the respondents of other Universities and the respondents from Gulbarga University are most variable (CV = 77.77 %).

Table 9: Motivating factors in the case of faculty members to access Internet

Motivating Factors		BU	GU	KU	KVU	MU	MYU
To keep abreast with area of research interest / course work	$\overline{X}$	1	1	1	1	1	1
	S.D.	0.81	1.07	0.80	0.66	0.64	0.90
	C.V.	69.88	82.49	64.03	55.36	52.16	73.47
Internet provides faster & reliable information	$\overline{X}$	1	1	1	1	1	1
	S.D.	0.70	1.09	0.85	0.66	0.94	0.91
	C.V.	56.83	76.57	64.30	49.57	62.74	72.51
Search engines provide user friendly interface	$\overline{X}$	2	1	1	2	2	2
	S.D.	1.05	1.03	0.85	1.04	0.80	1.15
	C.V.	66.85	72.44	65.17	58.87	49.83	71.59
Users get most updated information	$\overline{X}$	2	2	2	2	2	1
	S.D.	1.10	1.31	1.12	0.94	0.90	1.06
	C.V.	71.55	78.90	70.05	59.70	54.87	70.37
To send papers to journals / conferences / seminars	$\overline{X}$	2	1	2	1	2	2
	S.D.	1.00	1.16	1.14	1.14	1.18	1.18
	C.V.	60.58	87.28	70.24	72.45	61.58	77.42
Expert assistance by library staff	$\overline{X}$	3	2	3	3	3	3
	S.D.	1.70	1.23	1.87	1.66	1.46	1.61
	C.V.	54.77	77.77	69.15	60.71	46.42	56.14
Wide range of online databases / e-journals being provided by UGC – Infonet at University libraries	$\overline{X}$	2	1	2	2	2	2
	S.D.	1.13	1.03	1.50	1.33	1.24	1.34
	C.V.	60.99	72.44	78.05	62.45	58.59	69.86

Note: $\overline{X}$ – Mean S.D. – Standard Deviation C.V. – Coefficient of Variation 1–Full extent 2–Some extent 3–Uncertain 4–Very limited extent 5–No influence

Motivating factors in the case of Research Scholars to access Internet

Table – 10 shows that the mean value for the factor to keep abreast with area of research interest is almost 1, i.e., it is an agreeable fact by almost all the University respondents. The CV is least for Kuvempu University (CV = 48.50 %), hence Kuvempu University users' opinion is more stable than that of other universities and most variable opinions are observed in the case of the respondents from Gulbarga University (CV = 75.47%). For statements like Internet provides faster and reliable information, search engines provides user friendly interface, users get most updated information and to send papers to journals/conferences/seminars are agreeable to almost all respondents.

There is a mixed opinion for the statement expert assistance by library staff. The opinion given by the Mangalore University respondents is disagreeable (=4). The CV is least for Mangalore University respondents (CV = 37.98 %), and hence the opinion of the respondents of Mangalore University respondents is more stable, and most varied responses are received from the respondents of Banglaore University (CV=74.20%).

Table 10: Motivating factors in the case of research scholars to access Internet

Motivating Factors		BU	GU	KU	KVU	MU	MYU
To keep abreast with area of research interest / course work	$\overline{X}$	1	1	1	2	1	2
	S.D.	0.68	1.12	1.05	0.80	0.67	0.87
	C.V.	60.25	75.47	74.99	48.50	50.68	53.13
Internet provides faster & reliable information	$\overline{X}$	1	1	1	2	2	1
	S.D.	0.83	1.31	0.94	0.88	0.92	.093
	C.V.	64.72	95.38	62.62	53.33	57.03	62.41
Search engines provide user friendly interface	$\overline{X}$	1	2	2	2	1	2
	S.D.	0.71	1.01	1.05	0.85	0.55	0.88
	C.V.	59.70	65.47	61.59	54.90	41.47	56.65
Users get most updated information	$\overline{X}$	1	2	2	2	2	2
	S.D.	0.93	1.39	0.98	0.85	0.85	0.93
	C.V.	71.70	77.17	58.85	53.62	45.68	52.09
To send papers to journals / conferences / seminars	X	2	1	1	2	2	2
	S.D.	1.29	1.12	0.94	1.02	1.12	1.22
	C.V.	78.90	78.33	71.89	54.75	51.59	59.49
Expert assistance by library staff	$\overline{X}$	2	3	2	3	4	3
	S.D.	1.72	1.50	1.61	1.28	1.37	1.38
	C.V.	74.20	59.06	67.54	43.05	37.98	39.58
Wide range of online databases / e-journals being provided by UGC – Infonet at University libraries	$\overline{X}$	1	2	2	2	2	3
	S.D.	1.02	1.33	1.12	1.22	1.26	1.30
	C.V.	68.40	64.51	62.01	62.22	50.48	44.01

Note: $\overline{X}$ – Mean S.D. – Standard Deviation C.V. – Coefficient of Variation
1–Full extent 2–Some extent 3–Uncertain 4–Very limited extent 5–No influence

Use of Internet Services

A question was raised for the users on different services they avail from Internet. The results are presented in table - 11. It can be seen from study that the majority, i.e. 461 (97.87 %) respondents who use electronic mail service, followed by 459 (97.45 %) respondents use World Wide Web. It is essential to note here that 290 (61.57 %) respondents use List Serves/Discussion Groups service. The usage of two services, i.e. File Transfer Protocol and Frequently Asked Questions (FAQs) are very meager.

Table 11: Use of Internet Services

Internet Services	Faculty members N=231	Research scholars N=240	Total N=471
Electronic Mail (e-mail)	224 (96.97)	237 (98.75)	461 (97.87)
World Wide Web (WWW)	219 (94.80)	240 (100.00)	459 (97.45)
Chatting	04 (1.73)	131 (54.58)	135 (28.66)
Frequently Asked Questions (FAQs)	14 (6.06)	39 (16.25)	53 (11.25)
File Transfer Protocol (FTP)	02 (0.86)	16 (6.67)	18 (3.82)
Bulletin Board Services (BBS)	27 (11.69)	66 (27.5)	93 (19.74)
List Serves / Discussion Groups	128 (55.41)	162 (67.5)	290 (61.57)

Figures in parenthesis indicate percentage

Problems in the use of Internet

A question was asked for the users regarding problems faced in the use of Internet and this is presented in table - 12. It has been observed that 264 (56.05 %) respondents say that slow speed of

Internet community is the major problem. Interesting factors are observed: 46.07 % of the respondents indicate that there is a lack of support from the library staff, irrelevant information and lack of organized information. About 155 (32.91 %) respondents indicate that they face problems due to lack of time to acquire skills needed to use Internet.

Table 12: Problems in the use of Internet

Problems	Faculty members N=231	Research scholars N=240	Total N=471
So much information is available	67 (29.00)	41 (17.08)	108 (22.93)
Irrelevant Information	74 (32.03)	52 (21.67)	126 (26.75)
Lack of organized information	79 (34.12)	87 (36.25)	166 (35.24)
Lack of authenticity	64 (27.70)	71 (29.58)	135 (28.66)
Slow speed	136 (58.87)	128 (53.33)	264 (56.05)
Lack of time	74 (32.03)	81 (33.75)	155 (32.91)
Lack of support from library staff	105 (45.45)	112 (46.67)	217 (46.07)

Figures in parenthesis indicate percentage

Contribution of Research Papers

It is important to study whether contribution of research papers has increased after accessing and using electronic information resources. The responses are presented in table - 13. It reveals that the faculty members' opinion for the above statement is agreeable ($\overline{X}$ = 2). Gulbarga University respondents' opinion is more stable compared to that of the respondents of Mysore University (CV = 64.42 %), which is most variable. Research scholars' opinion in this regard is agreeable ($\overline{X}$ = 2). More stable opinions are received from Kuvempu University (CV=47.98%) respondents, whereas most varied opinions are received from Mysore University (CV=64.88%) respondents.

Table 13: Contribution of Research Papers

Use of Internet has increased the research output / contribution of papers		BU	GU	KU	KVU	MU	MYU
Faculty members	$\overline{X}$	2	2	2	2	2	2
	S.D.	0.96	0.79	0.87	0.76	0.84	1.20
	C.V.	58.43	39.53	55.33	39.94	48.05	64.42
Research scholars	$\overline{X}$	2	2	2	2	1	2
	S.D.	0.90	1.00	0.93	0.93	0.83	1.13
	C.V.	57.34	56.59	56.86	47.98	60.87	64.88
ANOVA Test	F	0.757**	2.936*	0.098	0.830**	2.878*	0.124

Note: $\overline{X}$ – Mean S.D.–Standard Deviation C.V. – Coefficient of Variation

1 – Strongly Agree 2 – Agree 3 – Uncertain 4 – Disagree 5 – Strongly Disagree

* Significant at 5 % level

** Significant at 1 % level

It is observed from the data that library users agree ($\overline{X}$ = 2) with the above statement. Further, the opinion of Gulbarga University users has 5% significant difference, whereas other University users' opinion is not up to the significant level. Hence, the **Hypothesis – 1***: Use of Internet has increased the contribution of research papers by the users to a great extent*, is accepted.

IMPACT OF INTERNET ON USERS

Considering the convenience of use, time taken, search and accuracy of output users were asked about the impact of Internet as a source of information on their study / research / teaching. Their responses in this regard are presented in table – 14. It reveals that the mean value (= 1) in the case of faculty members is agreeable. The opinion given by Mangalore University (CV = 46.43 %) respondents is more stable compared to that of the respondents of other Universities in the state. Most varied opinions are observed in the case of Gulbarga University (CV = 69.32 %) respondents. The mean value (= 1) is also agreeable for research scholars. The opinion given by the Kuvempu University (CV = 41.26 %) respondents is stable, whereas most variable in the case of Karnatak University respondents (CV = 74.99 %).

Table 14: Impact of Internet on users

Considering the convenience of use, time taken, search & accuracy of output, Internet has had a positive impact on my teaching / research		BU	GU	KU	KVU	MU	MYU
Faculty members	$\overline{X}$	1	1	1	2	1	1
	S.D.	0.70	0.92	0.62	0.81	0.64	0.75
	C.V.	57.07	69.32	65.67	49.51	46.43	67.27
Research scholars	$\overline{X}$	1	1	1	2	1	1
	S.D.	0.73	0.87	1.05	0.63	0.55	0.65
	C.V.	54.50	64.98	74.99	41.26	41.47	44.58
ANOVA Test	F	9.689**	1.379	3.615*	4.956**	1.371	2.014*

Note: $\overline{X}$ – Mean S.D. – Standard Deviation C.V. – Coefficient of Variation

1–Strongly Agree 2–Agree 3–Uncertain
4–Disagree 5–Strongly Disagree

* Significant at 5 % level

** Significant at 1 % level

Further, statistical analysis, i.e., One Way Analysis of Variance (ANOVA Test) is applied to know the variations with respect to Universities and different types of users. It is found that 1 % significant difference is observed in the case of Bangalore University and Kuvempu University respondents, 5 % significant difference is observed in Karnatak University respondents. This explains impact of Internet on different types of users is significantly variable. Hence the **Hypothesis – 2**: ***Internet has a positive impact on teaching / research activities of Faculty Members and Research Scholars at Universities in Karnataka State,*** is accepted.

SUGGESTIONS

Based on the opinion given by the respondents and findings of the study, the sfollowing suggestions have been made to improve the Internet facilities in universities of Karnataka State.

1. The majority of users prefer Internet as their first source to look for the needed information. They also agree that it has a significant impact on their teaching / research. Hence, the authorities of the Universities in general, and libraries in particular, must make all out efforts to upgrade Information and Communication Technology (ICT) infrastructure for providing seamless broadband Internet access to users.
2. The responsibility of the library personnel is increasing day-by-day in a changed environment. But the present study / survey revealed that the library staff does not take keen interest to help users in accessing Internet and also users have expressed their displeasure towards the library staff. These behavioural issues should be addressed by providing adequate training to the library staff about the use of Internet and first make them confidant users. This will certainly bring about some change in their attitude.
3. Orientation / training programmes for the faculty members and research scholars should be conducted at regular intervals regarding the effective use of Internet.
4. Users access Internet from several places like library, department, cyber café and home. However, it has been identified by the survey that the users are facing difficulties in libraries as these are not having enough number of workstations. Libraries must make provision of workstations in commensurate with the number of library users. Non-availability of computers results into users getting frustrated. Hence, it is recommended to the authorities of the University libraries to create necessary infrastructure facilities.
5. Trained personnel having Internet knowledge should be appointed to assist the faculty members and research scholars. It is also suggested by the respondents that the Internet Monitoring Board should be constituted.
6. To facilitate the Internet use, the directory of websites should be prepared and updated frequently.

CONCLUSION

The present study indicates that the concerned University authorities of the University should make attempts to provide the necessary infrastructure facilities such as high speed network connections to access Internet and conduct training programmes for the library professionals and user orientation programmes for the effective use of Internet facilities.

The results of this exploratory study show that Internet use by the academies is related to some more common needs and that some information and communication needs are dependent on proper access to Internet facilities. The results also suggest that some practical measures have to be taken to increase Internet use. Since the Internet is one of the most important resources of scholarly

activity, and scholarly requirements are critical to academies, the University authorities should do their best to overcome the obstacles for effective usage of the Internet.

In view of the above mentioned findings it is the prime responsibility on the part of the Universities in general and the libraries in particular to provide better internet facilities for the users. It is also suggested that the personnel working in the University libraries has to maintain very healthy and friendly relation with the users, this in turn will enhance the use of available facilities in the University libraries of Karnataka State.

REFERENCES

1. Ansari, H.A. (2006). Internet use by the faculty members of Kuwait University. The Electronic Library, 24 (6), 791-803.
2. Asemi, A. (2005). Information searching habits of Internet users: A case study on the Medical Sciences University of Isfahan, Iran. Webology, 2(1). Retrieved June 3, 2009, from *http://www.webology.ir/2005/v2n1/a10.html*
3. Hadagali, G.S., Kumbar, B.D., & Lakshmiraddy, S. (2007). Use of Internet by the Social Science faculty of Karnatak University, Dharwad, India: A case study. Pearl: A Journal of Library and Information Science, 1 (4), 3-10.
4. Mishra, O.P., Yadava, N., & Bisht, K. (2005). Internet Utilization Pattern of Undergraduate Students. University News, 43(13), 8-12.
5. Rajeev Kumar and Kaur, A. 2005. Internet and its use in the Engineering Colleges of Punjab, India: A Case Study. Webology, 2 (4). Retrieved June 3, 2009, from http://www.webology.ir/2005/v2n4/a21.html
6. Rehman, S.U (2004). Internet use by health professionals at the Health Sciences centre of Kuwait University. Online Information Review, 28 (1), 53-60.
7. Trivedi, M., & Joshi, A. (2008). Computer and Internet use by Health Care professionals in a Rural Medical College in India. Library Philosophy and Practice. Retrieved June 3, 2009, from *http://digitalcommons.unl.edu/libphilprac/204/*.

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Author Instructions

ABOUT THE JOURNAL

The Indian Journal of Library and Information Science (Print ISSN 0973-9548, Online ISSN 0973-9556, Registered with Registrar of Newspapers for India: DELENG/2007/22242) provides comprehensive international coverage of library & information science and technology. IJLIS is published 3 times a year by the Red Flower Publication Pvt. Ltd.

It presents peer-reviewed survey and original research articles on specific areas are: new information technology, education and training, human resource management, the changing role of the library, future developments, opportunities, bibliographic databases, cataloging issues, electronic publishing, acquisitions, collection development, administration, management, archives, preservation, and special collections, automation and cataloging. Its papers include letters to the editor, book reviews, and calendar of events, conference reports, interviews, and much more.

Indexing and Abstracting Services: Indexed in Index Copernicus, Poland

To be considered for publication in the **Indian Journal of Library and Information Science (IJLIS)** manuscripts are required to meet the following criteria:

CONTENT

Papers should be written in a concise and clear fashion, intended to further the study of Pediatric Emergencies, keeping in mind an international readership.

COPYRIGHT

All works submitted for publication automatically vest copyright in the editorial board of the IJLIS. Authors are fully responsible for obtaining permission to reproduce copyright material in their articles from the proper sources.

CONDITIONS

Papers and reviews submitted for publication in IJLIS should not have been published before in any other way and should not be under consideration for publication in any other journal or as chapters in books at the time of submission.

CONTENT

The **IJLIS** is a fully peer-reviewed academic journal.

All papers will be submitted for peer reviewing which will be carried out by two or three anonymous independent scholars and will benefit from a critical overview by the editors.

For this reason, no information which can reveal the identity of the author is to appear in the manuscript.

Peer reviewers will be asked to declare any competing interests before reviewing papers to ensure the ethical assessment of a paper for publication.

Complex statistical evidence may be submitted for review by a professional Statistician.

The Editor will make every possible effort to provide a rapid response to submitted manuscripts.

WORD LIMIT

Full-length papers should not exceed 8,000 words inclusive of footnotes.

Articles presented as Research Notes are not to exceed 1,500 words.

Book reviews must be short, critical in a constructive way, and provide a summary of the work under scrutiny. Reviews should not exceed 1,000 words and are to be sent to the Editor.

Manuscript format and submission

Manuscripts should be submitted in double-line spacing, typed on Word for Windows@ and sent to the Editor for peer reviewing. Double spacing is to be used throughout with right and left margins 3.5 cm each. Font: 12-point Times New Roman.

Articles are to be submitted both in electronic form and as hard copy, including all illustrative material.

COVER PAGE

Authors are to provide their full names, email and affiliation address and telephone number on a separate page.

An abstract of not more than 150 words should precede the manuscript on a separate sheet of paper. A list of up to six key words, suitable for indexing and abstracting, should follow the abstract.

A brief biographical note about the author - not exceeding three lines - should be supplied.

Language and Style format: The language used in this journal is English. Contributors are to follow the new edition of the Oxford English Dictionary. Foreign words should be italicized.

Paragraphs are to be indented. Single quotation marks should be used for quotations.

Illustrations and Tables: Tables, illustrations, photographs and diagrams should have a caption. Sources of information should be put below the table or figure. Each of these must be submitted on separate sheets, titled and numbered in one series in order of mention in text. All illustrative material should be of high quality and ready for reproduction.

Citations and References: Footnotes are to be used throughout. References to footnotes should be indicated by a super-script and consecutively numbered. Authors should follow these examples:

BOOK

World Health Organization. Rabies and envenoming: a neglected public health issue. Geneva, World Health organization; 2007.

PAPERS IN JOURNAL

Theakston RDG, Warrell DA, Griffiths. Report of a W.H.O. workshop on the standardization and control of ant venoms Toxicon 2003; 41:541-557.

PAPERS IN EDITED BOOK

Buzard, James, "The Grand Tour and after (1660-1840)", in The Cambridge Companion to Travel Writing, ed. P. Hulme and T. Young, Cambridge, 2002, 37-52.

Repeated references in text should give author's surname and pagination (Singhi 33-34). Authors with more than one publication already referred to in the text are to have surname, date of publication and pagination included (Hari, 2002, 37).

INTERNET SOURCES

Global Snakebite Initiative. Open discussion of the global snakebite initiative concept. Melbourne (2008) Available from http://www.snakebiteintitave.org/files/GICT%20Conference%202008/Audio/Session%2016%20audio/Session%2016%20 Open%20 Discussion.mp3 (Accessed 11th April 2009).

SELECTION OF PAPERS FOR PRINT

It is planned that a selection of papers appearing in IJEP will occasionally be published in printed book format. The Editor and Editorial board reserve the right to select papers from previous issues of the journal and to republish them after consultation with the authors.

COMPETING INTEREST POLICY

The following guidelines have been adopted as per the International Committee of Medical Journal Editors Uniform Format for Disclosure of Competing Interests in ICMJE Journals See:

Drazen JM, Van Der Weyden MB, Sahni P, Rosenberg J, Marusic A, Laine C, Kotzin S, Horton R, Hébert PC, Haug C, Godlee F, Frizelle FA, de Leeuw PW, DeAngelis CD. Uniform format for disclosure of competing interests in ICMJE journals. Lancet. 2009 Oct 24;374(9699):1395-6.

REPORTING STANDARDS

Authors of reports of original research should present an accurate account of the work performed as well as an objective discussion of its significance.

Underlying data should be represented accurately in the paper. A paper should contain sufficient detail and references to permit others to replicate the work. Fraudulent or knowingly inaccurate statements constitute unethical behaviour and are unacceptable.

Review and professional publication articles should also be accurate and objective, and editorial 'opinion' works should be clearly identified as such.

DATA ACCESS AND RETENTION

Authors may be asked to provide the raw data in connection with a paper for editorial review, and should be prepared to provide public access to such data (consistent with the ALPSP-STM Statement on Data and Databases), if practicable, and should in any event be prepared to retain such data for a reasonable time after publication.

ORIGINALITY AND PLAGIARISM

The authors should ensure that they have written entirely original works, and if the authors have used the work and/or words of others, this has been appropriately cited or quoted. Plagiarism takes many forms, from 'passing off' another's paper as the author's own paper, to copying or paraphrasing substantial parts of another's paper (without attribution), to claiming results from research conducted by others. Plagiarism in all its forms constitutes unethical behaviour and is unacceptable.

MULTIPLE REDUNDANT OR CONCURRENT PUBLICATION

An author should not in general publish manuscripts describing essentially the same research in more than one journal of primary publication. Submitting the same manuscript to more than one journal concurrently constitutes unethical behaviour and is unacceptable. In general, an author should not submit for consideration in another journal a previously published paper. Publication of some kinds of articles (eg, clinical guidelines, translations) in more than one journal is sometimes justifiable, provided certain conditions are met. The authors and editors of the journals concerned must agree to the secondary publication, which must reflect the same data and interpretation of the primary document.

The primary reference must be cited in the secondary publication. Further detail on acceptable forms of secondary publication can be found at www.icmje.org.

ACKNOWLEDGEMENT OF RESOURCES

Proper acknowledgment of the work of others must always be given. Authors should cite publications that have been influential in determining the nature of the reported work. Information obtained privately, as in conversation, correspondence, or discussion with third parties, must not be used or reported without explicit, written permission from the source. Information obtained in the course of confidential services, such as refereeing manuscripts or grant applications, must not be used without the explicit written permission of the author of the work involved in these services.

AUTHORSHIP OF THE PAPER

Authorship should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported study. All those who have made significant contributions should be listed as co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors.

The corresponding author should ensure that all appropriate co-authors and no inappropriate co-authors are included on the paper, and that all co-authors have seen and approved the final version of the paper and have agreed to its submission for publication.

HAZARDS AND HUMAN OR ANIMAL SUBJECTS

If the work involves chemicals, procedures or equipment that have any unusual hazards inherent in their use, the author must clearly identify these in the manuscript. If the work involves the use of animal or human subjects, the author should ensure that the manuscript contains a statement that all procedures were performed in compliance with relevant laws and institutional guidelines and that the appropriate institutional committee(s) have approved them.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

DISCLOSURE AND CONFLICTS OF INTEREST

All authors should disclose in their manuscript any financial or other substantive conflict of interest that might be construed to influence the results or interpretation of their manuscript. All sources of financial support for the project should be disclosed.

Examples of potential conflicts of interest which should be disclosed include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Potential conflicts of interest should be disclosed at the earliest possible stage.

FUNDAMENTAL ERRORS IN PUBLISHED WORKS

When an author discovers a significant error or inaccuracy in his/her own published work, it is the author's obligation to promptly notify the journal editor or publisher and cooperate with the editor to retract or correct the paper. If the editor or the publishers learn from a third party that a published work contains a significant error, it is the obligation of the author to promptly retract or correct the paper or provide evidence to the editor of the correctness of the original paper.

DECLARATION FORM for Authors

(Should be sent with original signatures by all authors alongwith one hard copy of the article)

I hereby submit that the paper entitled "…….....” along with two photographs of mine. This paper is my original work and has neither been published anywhere else, electronically or in print, nor has been submitted elsewhere simultaneously for publication. I have agreed for this paper to be published in your renowned journal "**Indian Journal of Library & Information Science**".

I vouchsafe that the authorship of this article will not be contested by anyone whose names are not listed by me here.

The article contains no libelous or other unlawful statements and does not contain any materials that violate any personal or proprietary rights of any other person or entity.

We also agree to the authorship of the paper in the following sequence:

Author's Name in Sequence	Signature of Authors

Thanking You,

Yours Sincerely,

Name & complete address .....

.....

Mail To

Red Flower Publication Pvt. Ltd.

41/48 DSIDC, Pocket-II, Mayur Vihar Phase-I
P.O. Box No. 9108, Delhi-110 091 (India)
Tel: 91-11-65270068 & 43602186, Fax: 91-11-43602186
E-mail: redflowerppl@vsnl.net, redflowerppl@gmail.com,
Website: www.rfppl.com

Indian Journal of library and information science

Library Recommendation Form

If you would like to recommend this journal to your library, simply complete the form below and return it to us. Please type or print the information clearly. We will forward a sample copy to your library, along with this recommendation card.

Please send a sample copy to:

Name of Librarian _____

Library _____

Address of Library _____

Recommended by:

Your Name/ Title _____

Department _____

Address

Dear Librarian,
I would like to recommend that the library subscribe to the **Indian Journal of Library and Information Science**. I believe the major future uses of the journal for our library would be:

1. As useful information for members of my library & information science specialty.
2. As an excellent research aid.
3. As an invaluable student resource.
4. **I have a personal subscription and understand and appreciate the value an institutional subscription would mean to our staff.**
5. Other

Should the journal you're reading right now be a part of your University or institution's library? To have a free sample sent to your librarian, simply fill out and mail this today!

Stock Manager
Red Flower Publication Pvt. Ltd.
41/48 DSIDC, Pocket-II, Mayur Vihar Phase-I
P.O. Box No. 9108, Delhi-110 091 (India)
Tel: 91-11-65270068 & 43602186, Fax: 91-11-43602186
E-mail: redflowerppl@vsnl.net, redflowerppl@gmail.com,
Website: www.rfppl.com

India Journal of Library and Information Science
Volume 4 Number 1, January-April 2010

Erratum

The article entitled "**Awareness & usage of E- Journals among teaching staff in the faculty of engineering and technology (Feat) Annamalai University**" by **K. Praveena and Dr. M. Nagarajan** has been published in volume 3, number 3; September-December 2009 without tables and figures. Now all missing tables and figures has been published in this issue (i.e. volume 4, number 1; January-April 2010). The mistake is regretted.

Editor-in-Chief

TABLES AND BAR DIAGRAMS

Table-1

Mean and Standard Deviation scores regarding the mode of search adopted by the teachers of FEAT

Designation	N	Mean	SD	"F value"	Level of Significance
Lecturer	45	1.8	0.79	0.09	NS
Reader	25	1.72	0.79		
Professor	20	1.75	0.72		
Total	90	1.77	0.77		

Bar Diagram -1

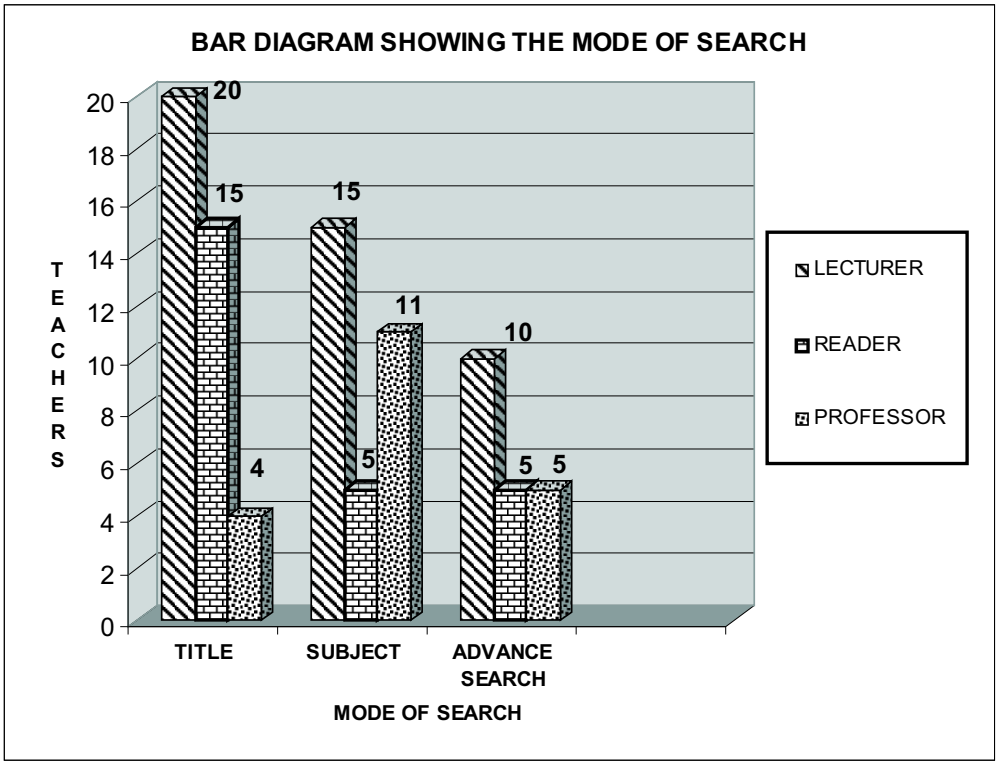
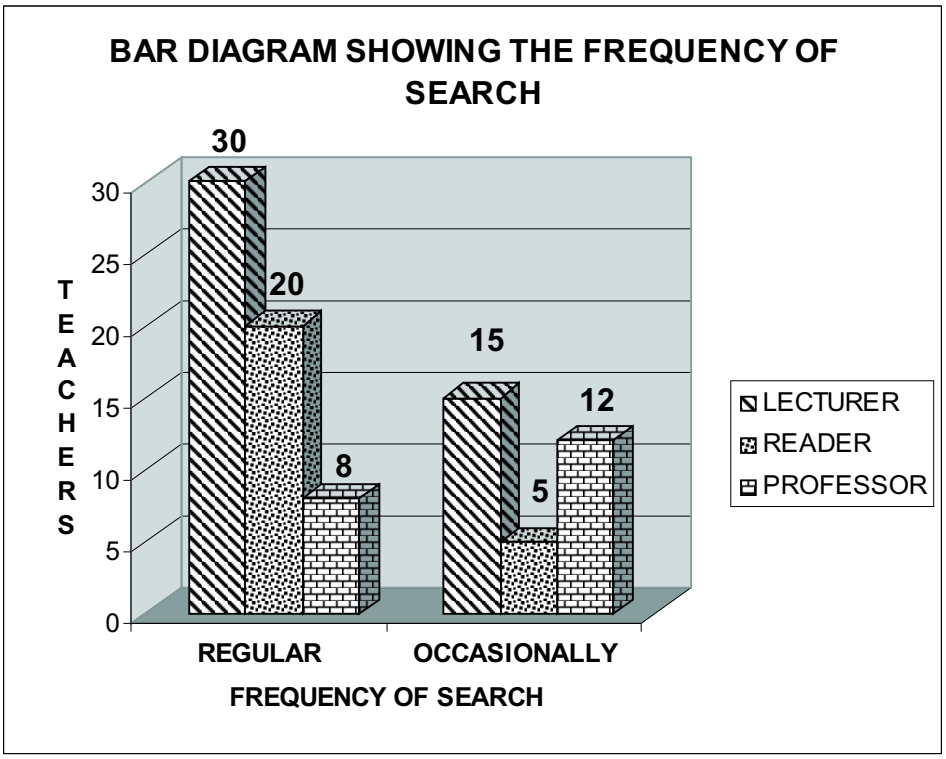


Table -2

Mean and Standard Deviation regarding the frequency of referring adopted by the teachers of FEAT

Designation	N	Mean	SD	"F value"	Level of Significance
Lecturer	45	1.33	0.48	0.13	NS
Reader	25	1.36	0.49		
Professor	20	1.40	0.50		
Total	90	1.36	0.48		

Bar Diagram - 2



Mean and Standard Deviation regarding the place of access for information using e-journals through internet adopted by the teachers of FEAT

Library

Table-3.1

Designation	N	Mean	SD	"F value"	Level of Significance
Lecturer	45	1.93	0.81	1.53	NS
Reader	25	2.04	0.84		
Professor	20	2.00	0.86		
Total	90	1.98	0.82		

Department

Table-3.2

Designation	N	Mean	SD	"F value"	Level of Significance
Lecturer	45	1.78	1.02	0.31	NS
Reader	25	1.80	1.08		
Professor	20	2.00	1.17		
Total	90	1.83	1.06		

House

Table-3.3

Designation	N	Mean	SD	"F value"	Level of Significance
Lecturer	45	2.84	0.88	1.53	NS
Reader	25	2.84	0.90		
Professor	20	2.45	0.89		
Total	90	2.76	0.89		

Internet café

Table-3.4

Designation	N	Mean	SD	"F value"	Level of Significance
Lecturer	45	3.44	0.87	0.38	NS
Reader	25	3.32	0.99		
Professor	20	3.55	0.83		
Total	90	3.43	0.89		

Table: 4

Table showing the purpose of using e- journals among the teachers of FEAT, Annamalai University

Designation	N	For research purpose	%	For writing articles	%	For teaching purpose	%	To update information	%
Lecturer	45	22	24.4	13	14.3	7	7.7	3	3.3
Reader	25	7	7.7	10	11	3	3.3	5	5.5
Professor	20	12	13.3	2	2.2	2	2.2	4	4.4

Table: 5

Table showing the commonly used search engines among the teachers of FEAT, Annamalai University

Designation	N	Google	%	Yahoo	%	Altavista	%	Ask.com	%
Lecturer	45	24	26.4	10	11	6	6.6	5	5.5
Reader	25	15	16.5	7	7.7	3	3.3	---	--
Professor	20	12	13.2	5	5.5	--	--	3	3.3

STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT "Indian Journal of Library and Information Science" (See Rule 8)

1.	Place of Publication	:	Delhi
2.	Periodicity of Publication	:	Fourmonthly
3.	Printer's Name	:	**Asharfi Lal**
	Nationality	:	Indian
	Address	:	3/258-259, Trilok Puri, Delhi-91
4.	Publisher's Name	:	**Asharfi Lal**
	Nationality	:	Indian
	Address	:	3/258-259, Trilok Puri, Delhi-91
5.	Editor's Name	:	**Asharfi Lal**
	Nationality	:	Indian
	Address	:	3/258-259, Trilok Puri, Delhi-91
6.	Name & Address of Individuals who own the newspaper and particulars of **:** 3/258-259, Trilok Puri Delhi-91 shareholders holding more than one percent of the total capital	:	**Asharfi Lal**

I Asharfi Lal, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/-
(Asharfi Lal)