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INFORMATION SEARCHING BEHAVIOUR OF RESEARCH SCHOLARS AND FACULTY MEMBERS IN ECONOMICS: A CASE STUDY

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ABSTRACT:

In this paper, an attempt is made to critically analyse the behaviour of research scholars and faculty members towards the usage of library facilities and information searching (IS). Most of the times the objectives of information searching depends on the ultimate purpose they are involved in, such as presenting a research paper, working to find a solution for the real time problem, etc. To obtain the suitable primary data, a survey was carried out among the research scholars and faculty members. The data analysis was carried

out based on the behaviour of the information seeking aspects, needs, and also based on the facilities provided in the Delhi University. For the study of the behaviour this study also considered the frequency of the visitors to the library and also about the awareness of different resources in the library are studies. The results obtained in this research summarized that the behaviour of more than 90% of the information seekers are interested in utilizing the internet based computer facilities with adequate ICT facilities to produce highly quality information and efficient research activities. Apart from that the misuse of library facilities also was highlighted in this study.

KEYWORDS: Information Searching, Behaviour, Library information systems, Delhi School of Economics, Library Infrastructure.

1) INTRODUCTION

The role of information is a key aspect for the development of the human beings towards development and success. It is difficult to describe the nature of information, but as per the literature, it is considered as a recorded experience, which helps to make decisions for future prospects. Therefore any kind of study considers the information as a key resource. Lot of change has

been seen from the industrial revolution to information revolution, and a lot of dependency is observed towards the information when it is considered with respect to the intellectual activities. Latest technological tools made the usage of information in an effective way so as to produce miracles in the area of research and developmental programs. Most of the times usage of information in an appropriate manner helps the research scholars and faculty members to invent new methodologies and meaningful analogies very efficiently. There are varieties of definitions for information and Oxford Dictionary

defines it as "...an assemblage of data in a comprehensible form recorded on paper or some other medium and capable of communication." In the Cambridge English Dictionary it is quoted that "...seeking is to inquire about or request (Something)". Similarly, behaviour is linked with psychological, emotional status, dynamics and paradigm of individuals or organizations. The behaviour of a user seeking the information

depends upon the need and purpose. Information works as a commodity impacting the behaviour of a person and the levels of satisfaction and opinions on different issues will be considered in this work. In this work, various information channels accessed by the research scholars and faculty members will be identified. Based on these parameters the behaviour of the information seeking will be assessed and analysed. Maslow (1967) and Poston (2009) considered some of the important parameters of seeking behaviour include: a) what one should have, b) the surrounding circumstances, c) the things which cannot be done without the information, and d) which is really needed for health and wellbeing. These parameters included with self-actualizing needs, self-esteem needs, love and belonging needs and safety needs as well according to Maslow (1967).

2) LITERATURE REVIEW

The primary goal of a library dealing with academic students and teachers needs to fulfil the access to information (Mahajan, 2005). Sometimes the methods may change along with different formats but not at the cost of the quality of the information. In the recent times, many libraries are facing a massive reduction in budget allocations to maintain the infrastructure and library facilities. The evolution of internet and related software facilities using different types of mobile applications made the scenario more challenging to ensure a good flow of library users in the traditional library systems. The role of digital age allowed the users to go through the information using the print and electronic resources was discussed by Anunobi (2008). The author presented a conceptual model towards accessing the academic libraries of the global nations which are developing very vastly. The inclusive role of information and communication technologies (ICT) created a new face of the academic libraries with evolving expectations and behaviour of the user groups. The role of print and e-resources proved to be a great boost for the librarians to consider and include different parameters in academic libraries. Expansion, flexibility and compatibility are the three parameters highlighted in the case of information sharing among the user groups. In this context, Goswami (2009) highlighted the mediation of the present computers towards information storage and retrieval methods to develop and manage the libraries information systems (LIS). Most of the LIS professionals are suppose to facilitate the user friendly services in the libraries by understanding the requirement of researchers and professors with their vast experience. Most of the academic libraries in the recent times are changing rapidly, as compared to the parent institutions (Midda *et al.* 2009).

A study carried out by Khan and Shafique (2011) revealed that the services provided in most of the college libraries not capable or not fulfilling the requirements of the college faculty to sort out their information requirements. Most of the researchers are either depending on the informal sources such as the peers, guides, teachers, friends, etc. instead of visiting the libraries. The massive usage of information technology (IT) with computer and internet evolution influenced the information seeking behaviour. However, Wong (2011) instigated the limited experience of the information at the school ages and the impact of IT related software's in LIS systems to improve the competency and perceptions among the students. Similar attempt was made by Dutta (2009) by focusing on two types of user groups: a) information seeking behaviour of the research scholars, and b) human information behaviour in developing world. From the findings of her work it is seen that economy of a country and global status is having a greater impact on the libraries towards accessibility of resources and ICT facilities. The influence of a country's economy is directly impacting the library infrastructure and the e-resources provided by under developed nations are marginally differentiated with the developed countries according to Chauhan *et al.* (2012). The information seeking behaviour of the researchers is also affected by this type of gap in the economical terms. A study carried out by Karlsson (2012) with respect to competencies, practices and knowledge of university actors, revealed that it is a complex phenomenon. It is also found that most of the information seekers are either having minimum contact with library or had little knowledge of using the library and its importance towards using the library competence.

A case study was presented by Balaji and Ragavan (2016) towards the information seeking behaviour revealed the importance for the improvement of online information systems, to provide

adequate information based on online journals, books, and databases. In a similar attempt made by Bhardwaj (2016) suggested the importance of specific libraries and the importance to adopt this concept at local, university, state level, etc. were highlighted. The role of internet, file footage, and online databases and their importance was also highlighted by Bhavana and Kataria (2017) and insisted the impacting role they play on the media professionals. Kundu (2017) suggested seeking behaviour models using qualitative analysis on information needs and shown different factors that influence the needs of user groups. A survey carried out by Manjunath and Babu (2018) revealed that majority of the students (98.5%) are using various types internet services for information search, and communication. In a different scenario, Maamiry (2018) suggested that based on the cultural adoption also the behaviour of the information searching process will take place and most of the students search the information to satisfy their needs.

3) METHODOLOGY AND RESPONDENT PROFILES

a) Objectives

The main aim of this work is to study the information seeking behaviour of the research scholars and faculty members in economic studies.

b) Scope and Limitations of this Study

This work is carried out for the purpose of Ph.D. and therefore the scope of this paper is limited with the research scholars of economic studies at University of Delhi (DU). The complete study is limited only to study the information seeking behaviour as this the study is only focused on the research scholars and faculty members of the University of Delhi.

c) Hypotheses

Some of the hypothetical assumptions are made in this study to critically analyse the theoretical literature with the obtained results from the primary data collection. The hypotheses are designed in such a way that they obtain the results for the objective of this work, i.e. to understand the seeking behaviour of the research scholars and faculty members at Delhi School of Economics, University of Delhi.

H01 – the null hypothesis (H_0) assumes that the research scholars from DU are not aware of the information needs and with no clarity on their requirement of information.

H02 – the null hypothesis (H_0) assumes that the research scholars from DU are not aware of the type of sources and type of information to be used for different types of academic problems.

H03 – the null hypothesis (H_0) assumes that the research scholars from DU are not aware of all the information sources available at the DU and are not using facilities and services at DSE Library.

To calculate different observations from the statistical data in this work, Chi-Square method is applied with the help of r , x , and c contingency tables.

$$\text{Chi-Square } (\chi^2) = \sum \frac{(O_i - E_i)^2}{E_i} \sim (r - 1)(s - 1)df$$

Where, O_i is the observed frequency, E_i is the expected frequency, r is for rows, c is for column and df is for degree of freedom.

d) Respondents Profile

The characteristics of participants involved in this research are basically from Economic Libraries of DU includes the research scholars and faculty members as shown in Fig. 1. Most of the participants is shared by the research scholars from Ph.D. and M.Phil. However, this research has got some meaningful information and balanced share of faculty members working in different faculty positions from Assistant Professors to Professor.

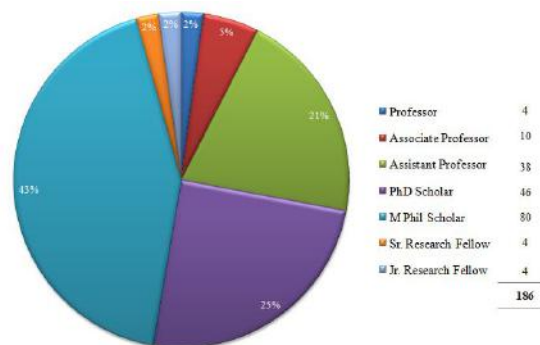


Fig. 1. Participants involved based on their designation and qualification

Data Collection: To conduct this research a questionnaire was distributed among 260 participants, in which both faculty members and research scholars from DU were involved. The complete questionnaires were filled by only 186 respondents and some of them filled the questionnaire partially, therefore, to assess the research scholars behaviour only fully filled questionnaires were considered. The percentage of participants from different categories is shown in Fig. 1.

4) DATA ANALYSIS

a) Information Needs

Most of the times the issues of seeking information is addressed only when the need is there otherwise most of the participants ignore the facts and importance of the information. In some cases most of the participants found to be calculating variety of factors involved with complex cost function in making a decision on information collection. Some of the reasonable evidences are made out of this research towards making the decisions and attitudes of respondents towards the extent of information seeking behaviour. In Table – 1, different types of library users listed with different types of information needs and are articulated with rank value of 1 to 12 to identify variety of sources of information. Sometimes the respondents also pay for procuring the information resources, since they could not find some information in the library. It is observed that total ranks indicate the attitude of the respondents for nature and extent of information needed found to have an average value of 55.45% in the choice of 1st rankings.

In case of Delhi School of Economics (DSE) members the information needs were found to be complex and varying constantly. The need for the information was dependent on different types of roles and problems of the participant involvements. Most of the information seekers engage themselves to fulfil the needs of information, which satisfy their needs and roles they are playing in professional life. Since DSE is a national apex body, needs to keep abreast of all activities taking place in different types of institutions such as municipal, national and international events, etc. to make efficient contributions for nation building. To accomplish such a critical and crucial tasks, DSE members need to have a clarity and uninterrupted flow of valid information based on variety of subjects.

Table 1: Information Needs

Area	Rank											
	1	2	3	4	5	6	7	8	9	10	11	12
Political Activity	16	14	24	26	18	55	7	4	8	6	4	4
	8.60	7.53	12.90	13.98	9.68	29.57	3.76	2.15	4.30	3.23	2.15	2.15
Government Affairs	6	30	46	46	16	18	6	8	4	6	0	0
	3.23	16.13	24.73	24.73	8.60	9.68	3.23	4.30	2.151	3.23	0	0
Social Activity	30	36	60	20	18	10	8	4	0	0	0	0
	16.13	19.35	32.26	10.75	9.68	5.38	4.30	2.15	-	-	-	-
Economic Activities / Development	54	70	8	18	14	8	0	6	4	2	2	0
	29.03	37.63	4.30	9.68	7.53	4.30	-	3.23	2.15	1.08	1.08	-
Religious Activities	0	6	8	4	6	20	50	24	12	24	12	20
	-	3.23	4.30	2.15	3.23	10.75	26.88	12.90	6.45	12.90	6.45	10.75
Hobbies and Recreational Activities	0	12	24	16	8	14	40	12	36	8	12	4
	-	6.45	12.90	8.60	4.30	7.53	21.51	6.45	19.35	4.30	6.45	2.15
Writing on Sports	0	4	4	4	0	8	20	20	16	28	60	22
	-	2.15	2.15	2.15	-	4.30	10.75	10.75	8.60	15.05	32.26	11.83
Educational Activities	96	26	10	14	18	6	6	2	6	2	0	0
	51.61	13.98	5.38	7.53	9.68	3.23	3.23	1.08	3.23	1.08	-	-
Health / Family	2	6	4	6	24	0	4	24	40	28	32	16
	1.08	3.23	2.15	3.23	12.90	-	2.15	12.90	21.51	15.05	17.20	8.60
Personalities	0	6	10	2	16	36	16	24	16	32	28	0
	-	3.23	5.38	1.08	8.60	19.35	8.60	12.90	8.60	17.20	15.05	-
Business / Finance	42	24	12	4	12	22	15	6	18	11	18	2
	22.58	12.90	6.45	2.15	6.45	11.83	8.06	3.23	9.68	5.91	9.68	1.08
Searching Jobs	4	8	20	8	12	18	19	21	14	14	8	40
	2.15	4.30	10.75	4.30	6.45	9.68	10.22	11.29	7.53	7.53	4.30	21.51
Chi-Square Statistics (χ^2)	784.625		@df-8		p-Value-3		Significant					

For the above discussion another important factor needs to be added is the type of work the participants are involved with. This factor plays a vital role in terms of need for information for a basic need or for an applied research or to sort out a key factor related with working environment. On the other side, characteristics of a person working in different roles influence the behaviour of information seeking. The characteristics include seniority, background, activities they are involved with, etc.

b) Information Seeking Behaviour of the Participants

In the context to understand the need of information or to know the purpose of information search, a summary of events is listed in the questionnaire to differentiate the activities of participants as well. It is found from the survey results that most of the information search is done by the participants for the purpose of academic needs (58%) or for the purpose of research activities (70%) as seen from the Table 2 under Rank 1. However, for the research guidance also there was the third highest response, can be expected this kind of response due to good percentage of participation from the faculty members in the survey. It means the information search is not just restricted to the scholars but there is a response from the faculty members also a good sign for the librarians to get some kind of boost or encouragement for working hard. In the case of Rank 2, a highest response of 27% was found for the category of research scholars and it is followed by 20% response from the academic involvements. From the above it can be understood that the respondents seek most of the information for the purpose

of accomplishing their research work and the faculty members are in need of information search for updating their knowledge levels.

Table 2. Purpose of Information Search

Purpose		Rank										
		1	2	3	4	5	6	7	8	9	10	11
Academic	Frequency	108	38	21	11	6	2					
	%Age	58%	20%	11%	6%	3%	1%	0%	0%	0%	0%	0%
Research	Frequency	131	50	5								
	%Age	70%	27%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Research Guidance	Frequency	7	37	100	22	10	4		2	2		2
	%Age	4%	20%	54%	12%	5%	2%	0%	1%	1%	0%	1%
Writing Article Thesis	Frequency	2	25	92	40	21	2		2	2		
	%Age	1%	13%	49%	22%	11%	1%	0%	1%	1%	0%	0%
Writing Articles for Conference/Seminar/Workshops	Frequency		10	21	97	36	12	8			2	
	%Age	0%	5%	11%	52%	19%	6%	4%	0%	0%	1%	0%
Writing for Newspaper	Frequency	4	24	14	8	8	50	35	8	23	4	8
	%Age	2%	13%	8%	4%	4%	27%	19%	4%	12%	2%	4%
Travel Purpose	Frequency	4		16		4	6	30	78	8	24	16
	%Age	2%	0%	9%	0%	2%	3%	16%	42%	4%	13%	9%
Recreational	Frequency	3		14	17	20	4	12	76	20	12	8
	%Age	2%	0%	8%	9%	11%	2%	6%	41%	11%	6%	4%
Sports	Frequency	4	8		12	4	8	8	20	16	28	78
	%Age	2%	4%	0%	6%	2%	4%	4%	11%	9%	15%	42%
Document Selection	Frequency	1	7	15		24	60	24	15	16	16	8
	%Age	1%	4%	8%	0%	13%	32%	13%	8%	9%	9%	4%
Health	Frequency	2	6	8		6	27	20	16	18	26	57
	%Age	1%	3%	4%	0%	3%	15%	11%	9%	10%	14%	31%

c) Frequency of Visiting of the Library

This is a typical question to ask the participants, how frequent they visit the library in the era of digitization of libraries and world running crazy over the internet for everything. However, the response for this scenario is quite interesting as many of the DSE respondents (110 participants, i.e. 59.14%) said to be visiting the library on the daily basis, followed by 17.2% (32) participants visiting library twice in a week. That means, still there is a lot of scope for the librarians to be more cautious towards maintaining the LIS systems carefully as the behaviour of scholars and faculty is very much positive towards collection of information from the library sources. In a vague statement it can be said that the role of libraries still plays a key role in the research scholars and faculty members even in the digital era.

d) Sources of Information

From the previous section, it is evident that the users visiting the libraries are not reduced. However, in the recent times it is a concern to observe most of the DSE members depending on their personal collections from the TV Channels, mobile phones, internet based applications, social

networking sites, etc. Therefore a keen interest has been developed to see the behaviour of the participants, especially research scholars towards the usage of informal and formal sources to collect the information. Usage of private entities for data collection (such as internet café) is also negligible and is almost ignored by many participants by giving the ample opportunity in the market for internet data packages given by the mobile networks after the introduction of 4G technology. Apart from that almost every participant is having high speed internet access at home and even in the university for free at designated locations. Therefore, the behaviour of participants for both informal sources and formal sources are tested with the help of Table 3 and 4.

• Informal Sources

Most of the times research scholars and faculty members use the raw information developed by some of the peers, supervisors or library staff during a period of time. Such information is sometimes very much suitable to submit as a research report to finish their work. In this context, the response from the DSE respondents is quite interesting (see Table 3) as most of the participants (59.14%) try to collect information from their supervisors in preference Rank 1. In the Rank 2 order, peer groups provide most of the data as per the participants (46.24%). However, collection of data from the Librarians comes out to be in Rank 3 with respondents of 48.39%.

Table 3: Usage of Informal Sources by DSE Members

Source	Order of Preference					
	1		2		3	
	Number of Responses	% of Responses	Number of Responses	% of Responses	Number of Responses	% of Responses
Supervisor	110	59.14	34	18.28	42	22.58
Peer Group	46	24.73	86	46.24	54	29.03
Library Staff	30	16.13	66	35.48	90	48.39

• Formal Sources

The formal sources of information includes the resources like books, journals, catalogues, publishing articles, etc. as shown in Table 4. To collect the information by an individual may follow variety of methods or procedures or patterns to prioritize the information seeking from different sources. From the Table 4, in the Rank 1 category the DSE members are using library catalogues / OPAC by 48% followed by internet resources with 43%. In Rank 2, internet usage is having highest percentage of 32% with a nearest percentage of 27% for Library catalogues.

Table 4. Usage of Formal Sources by DSE Members

Sources	Order of Preference					
	1	2	3	4	5	6
Current Accession List of the Library	22	18	60	31	30	25
	12%	10%	32%	17%	16%	13%
Book Reviews	18	20	60	32	40	16
	10%	11%	32%	17%	22%	9%
Library Catalogue/ OPAC	90	50	20	16	10	
	48%	27%	11%	9%	5%	0%
Bibliography, Indexing and Abstracting	15	30	60	35	30	16
	8%	16%	32%	19%	16%	
Internet	80	60	22	18	2	4
	43%	32%	12%	10%	1%	2%
Publishers' Catalogue	8	18	16	26	38	80
	4%	10%	9%	14%	20%	43%

e) Consult any of the following while searching information

In most of the cases the research scholars or faculty members tend to visit the library with an intention to get the information resources easily by asking the librarian or staff available. However, sometimes people wish to search themselves by following different types of library procedures. In this context, the survey revealed that most of the scholars or faculty members (97.85%) of DSE are depending on the OPAC (Open Public Access Catalogue). However, they also mentioned their dependency on circulation counter (of 94.09%) and periodicals category (of 86.02%). There is almost an equal response for YES (49.46%) and NO (50.54%) was seen for the library card catalogues as shown in Fig. 2. Similarly, the news papers also got an equal response of YES (54.84%) and NO (45.16%) in the case of consulting behaviour of the participants. However, some participants even shared their views towards the small libraries in other cities being dependent mostly on the librarians or reference librarians as compared to the present results shown in Fig. 2.

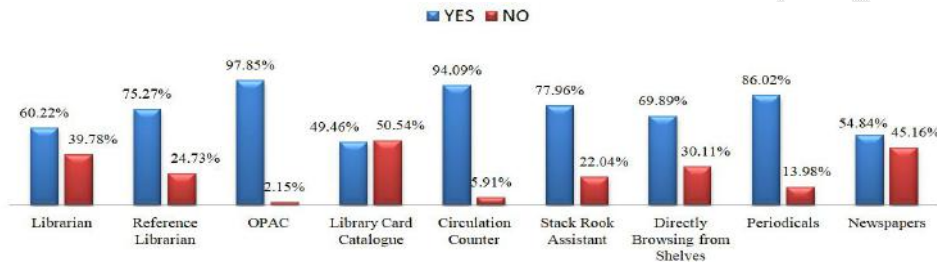


Fig. 2. Consult any of the Following while Searching Information

f) Awareness of the Library Services

Awareness of library and the services rendered for the research scholars and faculty members at DSE was tested to understand the overall attitudinal and observatory behaviour. It is seen from various literature concepts that people tend to ignore or forget most of the things as the time passes. Such kind of behaviour is going to play a vital role towards defining the sensitivity of the respondents towards information seeking and assessing formats. Most of the participants (75.27%) are aware of current services and followed by CD ROM / DVD search in equal percentage. However, the usage of internet based online services is leading the response late with a percentage of 77.96% and it clearly shows that the participants are very much keen to use online material or to download the information saved in digital formats. Apart from the above three services, many participants (64.52%) expressed their keenness to have awareness of the inter library loan services, which highlights the role of financial part in obtaining the information from library service. The impact of financial part is playing a key role in terms of emotional or psychological behaviour of the participants in many cases, though it sounds to be in fourth position from the survey results.

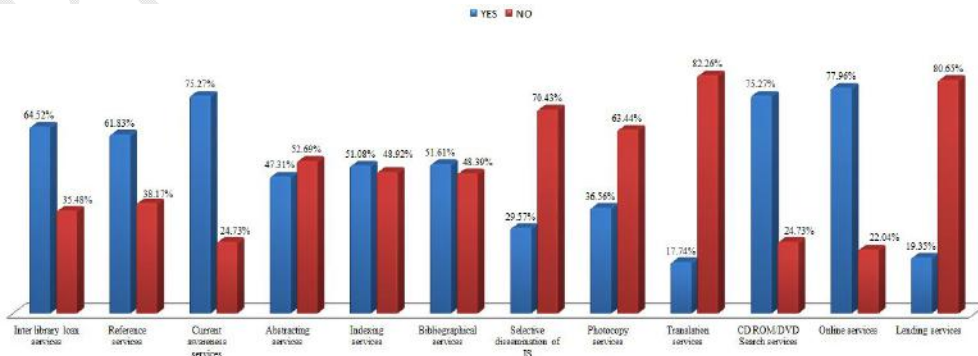


Fig 3: Awareness and use of the Library Services

However, there is a negative feedback by saying NO for translational services (82.26), lending services (80.65%), and selective dissemination of information services (70.43%). Apart from these three parameters, participants (63.44%) also showed their displeasure for using the photocopy services from libraries due to ample opportunities outside with best price offers. Therefore it is very important to very important to maintain a consistency at this area to attract more participants towards using the library services. Also in a nutshell, users with high demand for internet access from the faculty members and research scholars in DSE acquainted with modern means of education lifestyles. Optimistic thinking in most of the participants towards usage of ICT based information sources found to be a new challenge to be addressed by the librarians. Such type of behavioural change in research scholars and faculty increases the expectations to a new level from the library services.

The users of *microfilms* or *bounded journals* and *inter-library loans (ILL)* are having average scores from the survey results and this may be due to less availability of the facilities or uncomfortable procedures followed in the libraries for accessing them. A positive change in these areas is clearly observed with the negative attitude expressed by the participants in the survey.

g) Information Technology Used in the Library

The main intention of many participants from the DSE members found to be showing their interest with maximum number of participants saying YES for using the library services mostly for the usage of compute services (91.40%) and internet services (88.17%) as shown in Fig. 4. Heavy usage of these two resources helps the librarians to understand the importance of providing the internet based digitized information to attract more number of users in the libraries. Whereas a big NO was seen from the respondents for the remaining services in the libraries includes Fax (95.70%), WAN (91.40%), CD ROM/ DVD (89.25%), LAN (81.72%), and Scanners (81.18%) services.

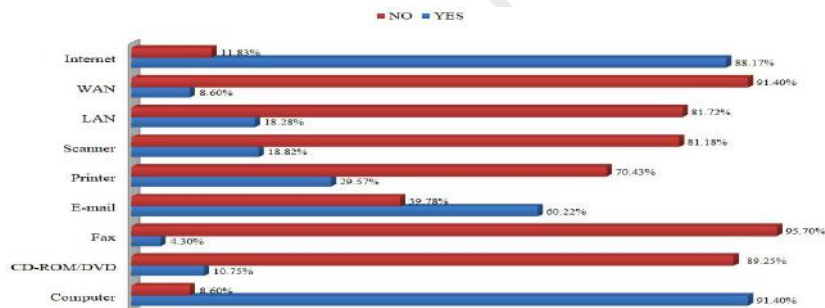


Fig. 4. Information technology used in the library

Table 5. Information technology used in the library

Technology	Yes	No
	Number of Respondents	Number of Respondents
Computer	170	16
CD-ROM/DVD	20	166
Fax	8	178
E-mail	112	74
Printer	55	131
Scanner	35	151
LAN	34	152
WAN	16	170
Internet	164	22

However, it is also noticed and expressed by various faculty members and even research scholars that the internet services provided in libraries are misused or users are involved in utilizing these services for non-academic purposes (see Table 5). This in turn causes a big challenge for the librarians to restrict usage of library services for academic and research purposes. Sometimes these issues are turned out to be a challenging task towards monitoring such misuses.

5) FINDINGS AND SUGGESTIONS

The study carried out for understanding the behaviour of the research scholars and faculty towards library facilities revealed various interesting facts. The seeking for information may have number of reasons or motives from personal to professional or towards entertainment, but the successful library operations will only be based on choice of large number of library collections to support the end users in different formats of research events and academic activities. The collection of information needs to meet the requirements of the users with a consistency in modern day of technological advancing life trends. Knowledge of the faculty members and research scholars towards variety of library facilities encourage them to get into various research activities which help the society and nation building. The creative thought process starts by studying the data collections and by observing new events in the worlds thorough the facilities provided in the libraries. The end users attitude and behaviour towards the library for information seeking needs to be evolved by introducing latest articles, events and updated ICT facilities to bring a positive mood for visiting the libraries.

The development of valuable collections, improved facilities and services at the libraries impact the information seeking behaviour of the research scholars and faculty members. A good assistance for these users by the librarians or library staff is always a big boost towards the improvement of library image. Reference librarians role is key to educate the teachers improve the information seeking behaviour of the research scholars in most of the academic institutions. At DSE wide range of information is used from most popular search engines to highly professional technical databases for variety of research activities. The role of librarians and library staff with the users considered to be highly collegial, interacting and friendly. Almost all the participants in the survey expressed their satisfaction towards finding their needs for different activities, such as teaching, research and professional updates. It is very important to note that in the era of digitization, the survey results revealed that DSE members (93.7%) are still using and showing craziness towards usage of books and bounded journal articles to collect the needed information.

The behaviour of users or participants from the survey outcome revealed that internet access and computers with latest ICT facilities are high in demand with frequent users of two third majorities. The good sign for the DU is that the faculty members are well acquainted with ICT facilities and are having hands on experience to use them professionally. Therefore, the behaviour of information seekers tend to change with good facilities of internet and computer found to be very positive and the overall outcomes of such facilities also shown a positive result to produce quality information. The impact of ICT hegemonies over other facilities influenced the faculty members of DSE (around 90%) to believe the positive intent of ICT and its ability to enhance the communication facilities, professional advancements and endless learning process to make teaching and research events more interesting and fruitful. The dissatisfaction levels seem to take a reduction path after improved ICT facilities in most of the libraries and still most of the institutions in India need to consider this change of behaviour as a serious issue to consider. Appropriate solutions are needed to provide financial support and aids to improve the ICT facilities in libraries to improve the competence and quality for the information seekers. A lot of satisfaction and positive behavioural change is observed with the introduction of online catalogue (OPAC) services. However, demand for the outdated facilities such as CD-ROM/ DVD's seem to be reduced in the libraries and negative behaviour was seem towards these facilities in the survey results.

The role of DSE members and research fellows is critical to deal with wide range of statistical data, economical surveys, etc. to produce variety of reports and forecast for the new market trends and

towards new developmental programs. Therefore it is very important to have updated resources with advanced training and facilities to deal with users at different levels.

6) CONCLUSIONS

In these studies, the nature of information seeking behaviour of the research scholars and faculty members from DSE members was examined carefully. The need to seek the information may differ from variety of reasons but the role of ICT based services at the libraries were seem to obtain high demand over the users. Whether it is in India or abroad the information seeking behaviour also varied based on the economic status of the nations, in terms of providing the library infrastructure and advanced technological based database access to the research scholars and faculty. These gaps due to economical status of the nations are clearly impacting on the behaviour of the research scholars towards using library resources.

In this paper, three hypotheses were considered to and used Chi-Square method to analyse the statistical data obtained from the primary research.

H01 - the null hypothesis (H_0) assumes that the research scholars from DU are not aware of the information needs and with no clarity on their requirement of information.

The statistical analysis from the survey results for the data shown in Table 1 is carried out for the Chi-Square test is having more than the value of P as summarized from the assumed hypotheses is true. This hypothesis is tested with a degree of freedom @ 8, P-Value = 3 and Chi-Sq = 784.625. Therefore the P-value is greater than the Chi-Square, so assumed hypothesis is being rejected.

H02 - the null hypothesis (H_0) assumes that the research scholars from DU are not aware of the type of sources and type of information to be used for different types of academic problems.

From table No-3: Informal Sources	Chi-Square Statistics (χ^2)	53.838	@df-4	P-value-0
From table No. 4 Formal Sources Used by the DSE members	Chi-Square Statistics (χ^2)	299.4	@df-25	P-value-0

From the obtained data in Table 3 and 4 shows the usage of informal and formal sources by the participants is uniform, means no different in each case was found to appear. The null hypothesis in both the cases was accepted for $P > 0.05$. Since the responses are uniform in both the cases, the behavioural pattern is similar for information seeking from the library resources. These resources and services influenced both the sources of information based on the user interests and demands.

H03 - the null hypothesis (H_0) assumes that the research scholars from DU are not aware of all the information sources available at the DU and are not using facilities and services at DSE Library.

The similarities are found in gathering the information and methods applied to information seeking among all the participants of DSE members. Majority of the users are using all types of information resources when the hypotheses is accepted when $P > 0.05$.

From Table No. 5: Sources of information gathering			
Chi-Square Statistics (χ^2)	21.77	@Df-9	P-Value-0.00963815
Insignificant/Significant	Insignificant	Insignificant	Insignificant

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