Use of Resources by Research Scholars in University Libraries with Special Reference to Electronic Media

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ABSTRACT

In view of the transition stage from print media to electronic media, information seeking pattern of users particularly research scholars are likely to change. The present study was undertaken with an objective to ascertain as to what extent electronic as well as other traditional resources are being used in university environment in India as well as in neighboring counties having similar conditions like India, The analysis was focused to determine the use of the basic information sources in research particularly electronic resources. Results indicate that traditional sources are still dominantly used with little use of electronic media except the use of some commercial subject databases on CD-ROM. Internet use is much below the expectation. Even free e-journals are not being referred. Users, no doubt, have the aptitude to use electronic resources including Internet but lack adequate facilities as well as initiation from professionals. Suggest that enhancing the usability of available resources by way of adapting user to the systems and services seems to be more viable.

KEYWORDS: Electronic Media; Print Media; User Studies; Electronic Resources; Information Seeking; Internet Use

0.   INTRODUCTION

There had been proliferation of literature on user studies since 1970's onwards, though it had made its beginning as early as in 1920[1]. Some consider that some studies were conducted even earlier to this also. But got more momentum since 1955[2]. History is long now and there had been always upward trend in these studies. While scanning LISA[3] (1998), following number of studies relating to user studies   published between 1968-1998 under the various subject headings are given below to have an approximation of literature growth in this area.

SL.NO	Name of Topic	No. of Publications
1	User Needs	1846
2	User Satisfaction	507
3	User Behavior	267
4	User Demands	32

| 5 | User Interest | 18 |
| 6 | User Surveys | 1857 |

Table-1

The estimated growth trend is given below which excludes literature growth on *user surveys* given at sl. no. 6 in above figure-1. This coverage is in a single database only.
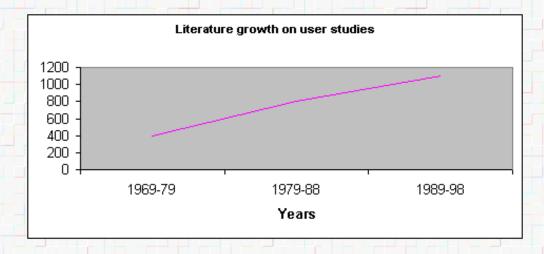

Figure-2

Crawford[4] had estimated in 1978 that more than 1000 studies might have been conducted so far. Since 1960's, attempts were being made to develop different international and national information systems, so more studies got great deal of attention to design need-based information systems. End of 1963 seems to have something of take off point for empirical research[5]. In the field of social sciences take off stage may be considered from INFROSS project, which began in 1967[6]. Menzel[7] who initiated user studies in science and technology had also realized that user studies are necessary for wise planning of science information systems and policy. There was almost unanimity of opinion that information needs of the user is 'essential basis for planning, implementation and operation of information system and network.[8] Lately, the need to evolve theories of information processing behaviour was realized. As a result, efforts were put to develop different models of information seeking behaviour to ascertain the cognitive approach of the user. Literature got flooded with these studies attempting to predict perhaps unpredictable behaviour of users.

The studies are now being conducted on users' attitude towards IT such as behaviour pattern to use electronic media and other aspects of new technologies, use of websites/search engines, network. Shift is towards computer-mediated communication (CMC) studies which refer to a number of ways in which electronic sources are consulted[9]. Despite, so much interest and upward trend in user studies, some still have reservation about the usefulness of such studies and criticize the trend. (Rosenbaun and Newby)[10] observe that user-centred studies during early 1990's remained secondary to system-centred studies. Savolainen[11] also endorses the opinion by stating that situation did not change even today. This indicates the importance of such studies in spite of the facts that literature is flooded on this aspect of librarianship. It also cannot be denied that users have always been in focus, and all kinds of studies revolve around them. However, what had been the results of these studies could be debatable issue. Nevertheless, subject needs proper evaluation and analysis to know as to what extent these studies have been successful in achieving the objectives of such studies for which these were conducted.

Dervin and Nilan[12] have summarized the objectives of these studies given in the following four propositions:

1.   OBJECTIVES OF USER STUDIES

Information systems could serve users better - increase their utility to their clients and be more accountable to them.

To serve clientele better, user needs and uses must become a central focus of system operation.

Serving clientele better may require implementation of a system redesign mandate.

2.   SCOPE

The concentration of the past studies had been on:

Ø   What patrons prefer to use as media/channels of communication and frequency of their use

Ø   Individual/community preferences for reading and research material with their ratings/rankings

Ø   Information needs, wants, demands of different communities and groups

Ø   Use of available facilities by different user groups in different disciplines

Ø   Dissemination studies

Ø   User satisfaction etc.

Many believe that user studies have not yielded the desired results. Instead, most of the studies have given diminishing returns due to some or the other reasons in spite of the merits of some of these studies. However, importance and usefulness of such studies are being reiterated and reinforced in spite of some criticism. To re-assess the utility aspect of such studies, one small study was purposely undertaken to investigate mainly the following issues:

3.   OBJECTIVES OF PRESENT STUDY

Ascertaining the main channels of communication being used by the research scholars in the changed/changing environment of information technology;

Observe the use, acceptance and impact of electronic resources over traditional ones;

Ascertain the researchers' preferences for information sources; and

Finally, assess the relevance and usefulness of the study.

4.   METHODOLOGY

Authenticity of data collection through questionnaire method has always been questionable and may not give very accurate results. This is the inherent limitation of this methodology. However, proper care has been taken to extract factual data.

4.1   Sample

Present sample was drawn from the following three Universities:

Name of University	No. of Respondents

1.	University of Dhaka, Dhaka, Bangladesh (DU)	33
2.	North-Eastern Hill University, Shillong (NEHU)	28
3.	Dr. Y S Parmar University of Horticulture and Forestry, Solan. (UHF)	23
	Total respondents	84

The population of the sample is research scholars at M.Sc. / M.Phil and Ph. D. Only those students from M.Sc. level were approached to fill up the questionnaires who were engaged in writing dissertations and are expected to use various sources of information almost similar to PhD students.

The authors of this paper were quite familiar with these Universities and data was collected personally by way of explaining questions wherever required. The sample from Dhaka University was drawn as representative of other developing countries having almost similar conditions like India. This comparative study also was likely to give interesting results.

5.   FINDINGS

5.1   Internet Access

Changes in information seeking behaviour and use of information resources in electronic environment are quite likely to change. No doubt, that digital information is becoming popular among users in almost every society. Herring[13] believes that scholars and researchers become more comfortable and familiar with the electronic resources available through web. He[14] further believes that understanding how scholars use these resources, librarians and other professionals will be able to provide enhanced service to their users.

No doubt, that Internet is becoming popular source of information among various types of users particularly among researchers, though they may not find web searching much of use for their academic pursuit. However, we had a curiosity to know the status of Internet access to research students in the Universities. Users were asked whether they have access to Internet or not. In case of affirmative, they were inquired further about the places where they use Internet. Findings are given below:

Name of University	*Accessibility in %*	*Places of Internet Access*			
Dhaka University	39.3	36.36		18.18	45
NEHU	33.3		7.1	28.6	64.3
UHF	27.4	16	6	25	52.4

Places of Internet access is given in figure-3

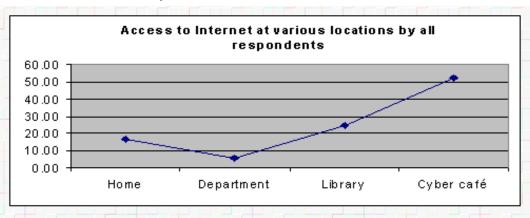**Access to Internet at various locations by all respondents**

Figure-3

It is not only academic community, which is its user. Instead, it has become a common media of communication. E-Mail facility is being availed by majority of the users all over the world. It was observed through personal experience that faculty could enhance their participation in national and international conferences manifold by availing *E-mail facility*. It would not be out of context to mention in this paper that during the year 1998, Internet facilities was introduced in one of the libraries of the present sample (UHF library) where the author of this paper was then the Librarian. It was encouraging to note that as many as 22 conference papers were accepted for presentation in International Conference of IUFRO. It was creditable to have such a large presentation from single organization only, which was unanimously attributed by the scientists to fast communication of Internet provided by the library. It was, of course, a satisfying experience to library staff. Subsequently, there was a sharp decline in Internet access due to slow speed of the network and certain other problems. But impact of technology was quite visible.

As per finding of the present study, not even 40% of the researchers are making use of Internet. However, it is encouraging to note that some of the students have the facility to make use of Internet even at home. Time is not far off when almost every home particularly in urban area will have Internet facility. What is important to note is that Internet facility is not being availed by the research students at the right place. Could library be not the right place? Students have no option other than going to Cyber Café for Internet accessibility, even though Internet facilities are available in all the above libraries included in the sample of this study. Use of Internet was observed almost negligible in libraries. Status of accessibility to Internet by the respondents of respective university as well as of whole sample is given in table-2 above. Low use of Internet could be attributed to the following reasons:

Poor maintenance of the network due to lack of suitable manpower

Financial constrains to sustain the network system

Frustrating and distracting slow speed of Internet connectivity

5.2   Preferences for Electronic Media

The use of electronic media still is minimum as is evident from the following tables, though electronic access has become important as well as common tool of research, wherever facilities are available. These libraries are subscribing some E-journals along with the hard copy, but their use is almost negligible due to slow speed of Internet, lack of professional initiative to introduce these services effectively and also more familiarity of user with traditional sources. Still, it is almost exclusive dependence of the researchers on print media except the use of CD ROM databases. Nevertheless, the students have given preferences for electronic media like E-Journals and E-books as given in the following tables-3 & 4, But actual use is almost negligible. Students of Dhaka University rank higher in their preferences for electronic media perhaps due to high speed of connectivity of Internet. Institutions are availing broadband width including Dhaka University Library. The question asked was 'which type of reading material do you prefer to use for your research work? Give preferences giving rating from most preferred to least preferred in the scale of 5 to 1.But preferences here are given in the reverse order i.e. from least preferred to most preferred.

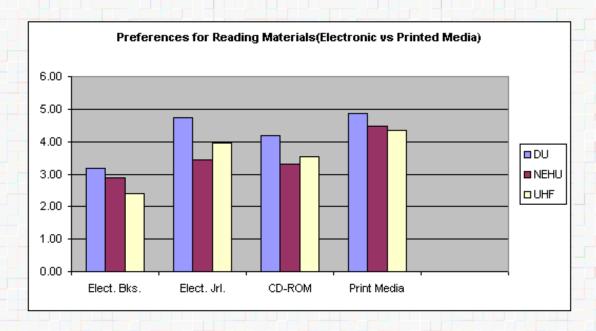**University- wise** *status of preferences*

Preferences for Reading Materials(Electronic vs Printed Media)

Figure-4

Preferences given by all the respondents from all three universities have been presented in the following figures-5:

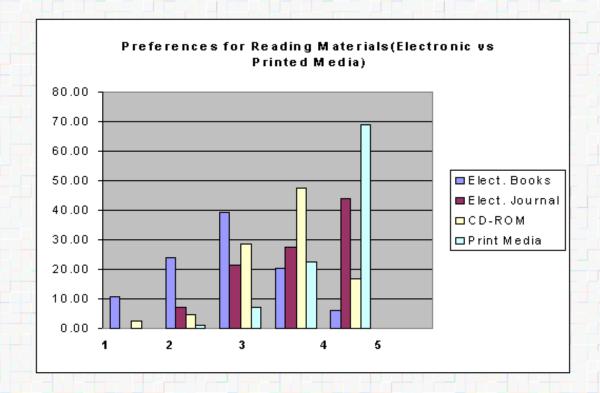**Preferences for Reading Materials(Electronic vs Printed Media)**

Figure-5

5.3   Computer Literacy

Majority of the user *i.e.*, 41% had the experience of working on computer for the last 3-4 years, whereas it is only 26% of user who have more than 4 years of experience using computer. But all of them reported that they have working knowledge of computer. The detail is given in the following table:

Computer Experience of Respondents (Frequency count into %) (n=84)

Duration	Frequency	%
1 –2 years	17	20.238
3-4 years	41	48.810
4-5 years	26	30.952
Total	84	100

5.4   Other Sources

Having ascertained the highest preferences for print media, the actual usability of most Common sources were further investigated combining all three universities. It was revealed that books and journals are almost equally used whereas use of journals is expected to be significantly more. Indexing journals, CD-ROM Databases and Internet, follow this. Use of Internet ranks fourth as shown in the following chart. This also supports the earlier findings on accessibility of Internet. It is significant to note that the use of *Current Contents* (and other current awareness sources) is quite low, in spite of the fact that these are being subscribed in all the three Universities. It was also observed that *Current Contents* service could not become popular either in hard copy or in electronic format. However, its usefulness for current information cannot be in any way undermined. Preference goes to search CD-ROM databases, though CD-ROM databases cannot maintain currency. Even, faculty members make least use of sources of current information like current content and other similar sources. The study revealed the following results:
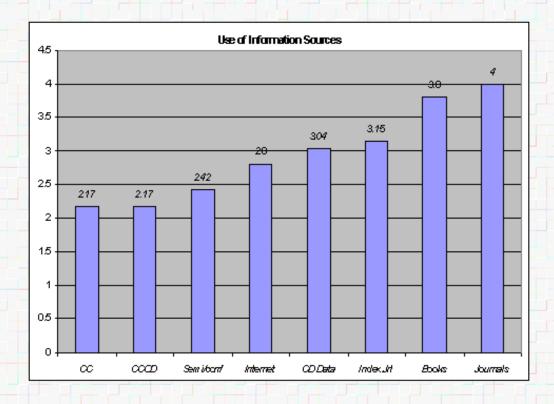

Figure-6

5.5   Main channels

The figures given below indicate that researchers in addition to using their own library, depend significantly   on other libraries. Use of Internet ranks 4th in the order. The users themselves obtain research material from neighouring libraries through photocopy service. Inter- library is quite low. Results of all three universities are almost similar with no marked difference as reflected in the following figures-7 to 9.
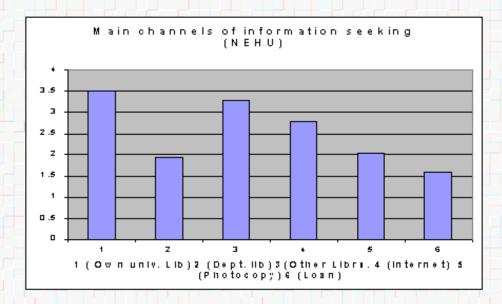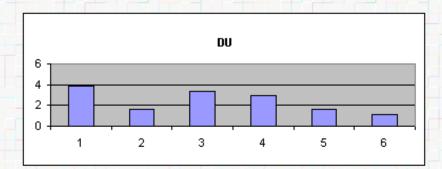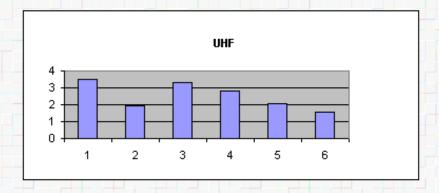

Figure 7

Figure -8

Figure -9

6.   INTER-CORRELATION AMONG BACKGROUND VARIABLES

Inter-correlation among all the variables used in this study was worked out. However, only background variables are being shown which influence information seeking behaviours of user. Inter-correlation is shown by ** and *. Inter correlation between Department and the University is significant. Computer experience has negative significant inter-correlation with the educational institution. Organisational climate (background variables) are important area of research which seems to influence searching behaviours of users. Detail is given below in the table:

Name of Variables	Educational Institutions	Dept.	Status M. Sc./ PhD	Gender	Res. Exper.	Comp. Exper.	Internet Exper.
Educational Institutions	x						
Departments	0.40**	x					
Status M.Sc./PhD)	0.02	-0.12	x				
Gender	-0.17	-0.10	-0.09	x			
Research Experience	-0.07	-0.05	0.38**	0.11	x		
Computer Experience	-0.48**	-0.25*	-0.01	-0.03	0.08	x	
Internet Experience	0.23*	0.03	0.00	-0.06	0.07	-0.07	x

*** Correlation is significant at the 0.01 level (1-tailed).*

** Correlation is significant at the 0.05 level (1-tailed).*

7.   CONCLUSION

On the basis of the results obtained, it may be summed up that electronic media could not bring any significant change in information *seeking* behaviours of research scholars, in spite of the fact that digital resources are now well established and recognized tools of communication and research. Change, of course, is quite visible but definitely slow.The resources had been under-utilized or non-utilized which otherwise is implicit also. Traditional resources are still in use as earlier. Efforts and initiatives are not enough to exploit existing resources. Researchers are not making expected use of even essential secondary sources like *Current Contents* etc. Situation does not differ much among different university libraries with the exception of very few which might have been influenced more by the new technology due to organizational climate and many other favourable factors. Nevertheless, further change is likely to be a little faster provided each library begin to subscribe or purchase every new media of information useful to their users. However, there are many, problems too, and solutions are escaping the attention of those who matter. Nothing is so surprising, it always had been. Coming to the last objective of this study to evaluate its utility part along with the background of other similar past studies, our conclusion could be, though highly controversial and debatable issue. In fact we had been trying to find out through these studies about the users as to *how they seek information, what resources they prefer to use, what are their information need* and *how they meet them etc. etc*. It seems that mostly professionals working with a particular community know their clientele. If not, they must know their requirement by developing better methodology within the library. Are we not re-affirming what is mostly known? Secondly, we are perhaps trying to assess and explore the information needs, which may be latent/inert/dormant, but constantly changing. Thus, a source, which is meeting user need today, may not suit him next day. Maurice line[15] after completion of INFROSS project realized that it is doubtful that any of these findings can be used as the basis for information system design. Many others might have thought on similar lines. No doubt, that user has been always in focus and cannot be isolated in future also. But, to increase the usability of existing resources seems to be more important and useful. Ranganathan[16], had well realized that don't stop with the expressed want of user... use your knowledge of changing social needs, intellectual possibilities and changing emotional wants of the community, and select books (now any media of information) and exploit such needs and possibilities. His call is to change behaviours of the user. Not only this, professional responsibility is not only to concentrate to change the behaviours only r but also generate need for right information. However, this approach had remained secondary so far. Shinebourne[17] is also of the similar opinion that need is to put efforts to develop better procedures to more fully describe the features of the text and materials. This would lead to enhancing the

usability of available resources by way of adapting user to the systems and services. Libraries must develop print as well as electronic resources as per their acquisition policy. Equally important is to introduce new media and new products to the user effectively and motivate them to make best use of available resources.

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