

Usages of On-Line Journals vs. Printed Journals in NCR Libraries

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World Digital Libraries 5(2): 21-32

Abstract

Although information gathering and use patterns in the traditional print environment have been prolonged for centuries, but the electronic databases oriented atmosphere of learning/reading/study has explored a new and relatively unexplored avenues to library users. This article describes a citation analysis of research articles from scholarly electronic journals published in 1999-2000. The analysis focused on the scholars/users was using electronic resources and the types and subject areas of online resources those are being referenced. Findings of study suggests a growing reliance on electronic resources by scholars, a high occurrence of non-traditional types of resources, and a relatively high use of interdisciplinary references. More and more user of Libraries and information centre are becoming dependent on e-resources of learning like e-journals, E-books and internet surfing to gaining up to mark knowledge in the desired/required areas of study and research as well.

Keywords: On-Line journal, E-journal, Print Journal, E-Resources, Digital Library

1. Introduction

We live in the epoch of globalization. Globalization is an era of e-commerce, e-business, and facilitation to technology diffusion. The world knowledge system is digital divide. Digital technology comprised zip of time and space and exaggeration of motion. Information and Communication Technology (ICT) articulate the of high speed learning in terms of use of software technology and hardware comprised instruments, goods and services. In such a way we are facing a radical change in the people find and use information resources, a change that all information professionals need to understand.

More and more researches have been done upon the information-gathering behaviour of various groups (David Ellis1; Gloria J Leckie, Karen E Pettigrew, and Christian Sylvain; and William Sugar). The paper is focussed on reasonably good idea of how and why scholars use traditional print-on-paper and personal resources. Now that work needs to be expanded to understand, how is the electronic revolution changing information selection and use patterns of users of libraries and information centres? How has the exposition of electronic resources changed researchers' mind-set in the context of information use? What kinds of online resources are researchers using? Does the diversity of the online environment and its search tools encourage the researchers to go beyond the traditional resources of their disciplines? Major studies investigating the impact of e-journals on scholarly communication have been reported by Stephen P Harter and by Harter and Hak Joon Kim. Using ISI's *Journal Citation Reports* to analyse the citation patterns and impact factors of a sample of e-journals published between 1993 and 1995, these researchers attempted to determine the extent to which scholars were aware of e-journals and built their own work on research published in e-journals.

Harter's analysis of thirty-nine e-journals found very little impact, and of which the top five journals studied, three appeared in both print and electronic form, making it impossible to determine the true impact of the e-journals. Overall, Harter concluded that almost none of the scholarly, peer reviewed electronic journals in the sample have had a significant impact on formal communication in their respective fields.

Harter and Kim analysed a sample of citations from e-journals to determine the extent to which researchers publishing in e-journals relied on other electronic resources for their own research. Less than 2 per cent of the total references in their study were to online sources, and only 0.2 per cent was to e-journals. They concluded that e-journals presently play almost no role in scholarly communication, as measured by references cited, but also noted that this might change over time.

In a study of the impact of Internet-based resources on scholarly communication in library and information science, Yin Zhang (1998) not only showed a higher impact rate, but also an increase in use over time. Almost 7.5 per cent of the articles in Zhang's sample included references to online resources. In addition, articles in e-journals were more likely to cite electronic resources than were articles in print journals. Zhang noted that a different sample might show different results. One factor to consider in analysing references to online sources is the type of resource being cited. Examining how individual scholars are invoked on the Web, Blaise Cronin, Herbert W Snyder, Howard Rosenbaun, Anna Martinson, and Ewa Callahan pointed out that .The defining feature of the Web, hypertextuality, affords the possibility of multiple modes of mentioning or linking to a named individual and/or related cognitive resources.

Their research identified eleven categories of Web-based documents linked to scholarly research, including electronic articles, conference papers, home pages, syllabi, and book reviews.

Harter and Kim listed fourteen different types of sources found in their citation analysis. These included Web pages, personal papers, e-journal articles, email, list-serves, and local files, plus a large category of not determined. The variation in types of resources found in electronic research may reflect the more porous disciplinary boundaries of Internet-based searching. As Cronin and Hurt have pointed out, the Web supports browsing and discovery by scholars, well beyond the typical, traditional bibliographic tools from well-defined bodies of literature. Because most commonly used Web search engines are not subject specific, sites and pages found using these search engines will not be limited by the disciplinary confines and expectations of the searcher/users.

2. Objectives of the study

- To explore the scope of on-line journals and printed journals in Indian libraries
- To study and elaborate the need for on-line publishing of journals in libraries
- To analyse the usage pattern of on-line journals and printed journals in the selected libraries in NCR

3. Research methodology

The research will be both qualitative and quantitative in its nature. The qualitative approach will apply to both, descriptive and inductive forms of research. While as in case of quantitative approach, an extensive use will be made of the literature available to carry out a detail research on the nature of the problem.

To carry out the study, one has to collect data from those libraries, for which the following methods are planned to so:

- A questionnaire was prepared to survey the available library resources and the Librarian's willingness to share this information.
- Selected libraries in New Delhi were surveyed through questionnaire or personal interview method.

Sample size: 100 (Students: 45; Library Professional: 21; and Research Scholar: 34).

Sample area: NCR Delhi

Sample unit: Students (under graduates/post graduates), library professionals, and research Scholars (Officials/faculties/Students) of the selected libraries in NCR Delhi are interviewed.

Limitations: The scope of the project is confined to the libraries which are located in NCR.

4. Data analysis

A survey method based on a questionnaire was used for this study. The questionnaire was focused to users' profile, their awareness about online journals and databases, frequency of usage, reasons for use and skip of online journals and databases, and other related issues being faced by users regarding online journals.

4.1 Awareness of online Journals and Databases (OJ & DB)

The awareness of OJ & DB was found fairly well amongst the respondents available through the library. According to the given table no.1, 100 per cent library professionals are well aware of the online journals, research scholars (85.3 per cent) while students (91.1 per cent) also superseded research scholars in NCR Delhi. Thus, library professionals and database dealers should take it serious challenge as to how could research scholars' level of awareness of OJ & DB be improved to 100 per cent mark.

Table 1: Configuration of Awareness of OJ & DB

Sr. No.	Particulars	No. of Respondents	Per cent of the Respondents
1	Students	41	91.1
2	Research Scholars	29	85.3
3	Library professional	21	100.0
4	Unaware to OJ & DB	09	-
Total		100	

4.2 Gender configuration of OJ & DB

Database learning requires a minimum level of training and exercises. Even though share of

females in total users is less than one-third but their level of usage of OJ & DB are alike the male users in Delhi-NCR.

Table 2: Gender configuration of OJ & DB

Sl. No.	Particular	Configuration of Total Respondents	Per cent of Total Male respondents	Per cent of Total Female Respondents
1	Male	70 per cent	91.4	-
2	Female	30 per cent	-	90.0

4.3 Level of using online journals

Now print media is recognized as an old mode of reading materials and online is totally electronic database and supported by Information technology paper free medium of reading material. According to Table no. 2, more than

three-fourth of respondents (including common users) depend on online learning materials and less than one-fourth are dependent on print media only. Thus, electronic database learning is going to be more popular amongst users of Libraries in Delhi-NCR.

Table 3: Configuration of Users as per Types of Learning Materials

Sl. No.	Types of Publications	No. of Respondents	Per cent of Total Respondents
1.	Online	52	57.1
2.	Print	21	23.1
3.	Both	18	19.8
4.	Total	91	100.0

4.4 Purpose of using OJ & DB

From the following table, it is clear that most of the respondents, i.e., 47.5 per cent use online journals and databases for their research work. A total of 45.63 per cent of respondents use it for studying their course work. 41.25 per cent of respondents use online journals for update subject knowledge and 38.75 per cent

respondents use for writing papers. A total of 26.25 per cent of users using online journals and databases for teaching and only 21.88 per cent respondents' use for other work like competitive exams, etc.

4.5 Information and Communication

Technologies-based learning requires a consistent effort and rational learning aspirations. Database

learning oriented users belong to mostly course work and research works. According to Table no. 1, share of teaching (25.3 per cent) oriented learning is meagre amongst the database

learners. As per Figure 1, research-works and for study course works were highly attentive and they account 62.6 per cent and 53.8 per cent, respectively.

Table 4: Configuration of Users as per Types of Learning Objectives

Sl. No.	Types of Objectives of Studies	No. of Respondents	Per cent of Total Respondents
1.	Research Work (RW)	57	62.6
2.	Studying Course Work (FSCW)	49	53.8
3.	Update Subject Knowledge (FUSK)	43	47.3
4.	Writing Papers (FWP)	29	31.9
5.	Teaching (FT)	23	25.3
6.	Other Works (OW)	19	20.9

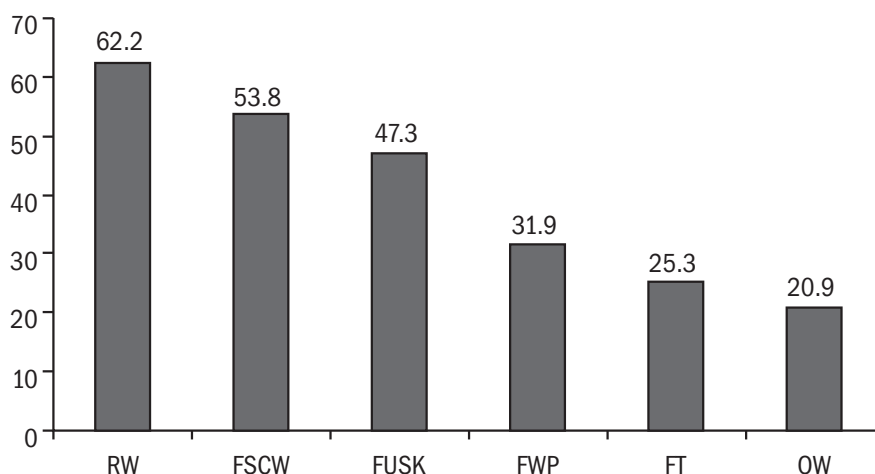


Figure 1: Objective-wise learning status of Users

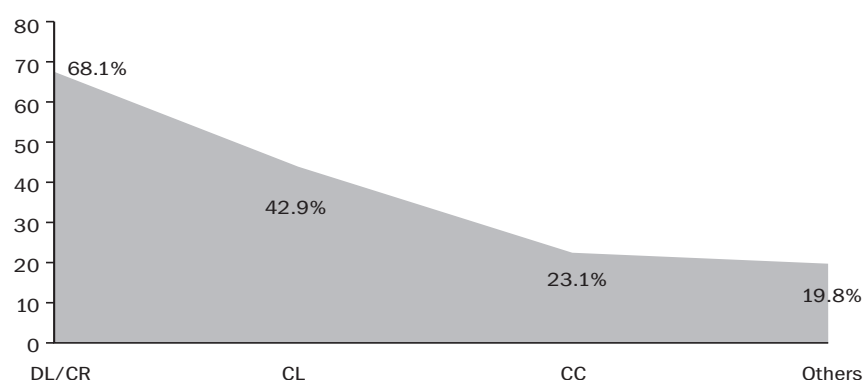
4.6 Location for accessing online journals

Further a question asked to the respondents to know whether they make greatest use of online journals. Table 5 shows that majority 68.1 per cent of respondents like to access online journals at their departmental library or departmental computer room. A total of 42.9 per cent access

it at central library and 19.8 per cent at other places like hostels, cyber cafe, etc., while only 23.1 respondents' access it at computer centres. It shows that most desired place is library and computer rooms which are preferred for electronic database users in Delhi-NCR. (See Figure 2).

Table 5: Responses against location for access the computers

Sl. No.	Location	No. of Respondents	Per cent of Total Respondents
1.	Central library (CL)	39	42.9
2.	Departmental library/ computer room (DL/CR)	62	68.1
3.	Computer Center (CC)	21	23.1
4.	Others	18	19.8

**Figure 2:** Locations for access the computers for users

4.7 Satisfaction level of users for services provided by library personnel

A question was asked to know the satisfaction level of infrastructure among the users for accessing online journals. It was observed that three-fourth of respondents are satisfied with the infrastructure provided by the library for accessing online journals and their databases at different levels of services. According to Table 6, more than three-fourth of users were satisfied

with the services of electronic journals, internet facility and library infrastructure and the calm and quiet atmosphere of the library alongwith other reading and learning materials. There are less popular libraries in Delhi-NCR that claim excellent service with a highly satisfied user base. Simultaneously one-fourth of users are unsatisfied with functioning and services provided by libraries. It raises a very pertinent question regarding the quality services of libraries in Delhi-NCR.

Table 6: Satisfaction level of users against services provided by Library Personnel

Sl. No.	Satisfaction level	No. of Respondents	Per cent of Total Respondents
1.	Highly Satisfied	10	11.0
2.	Satisfied	24	26.4
3.	Average	35	38.5
4.	Not Satisfied	22	24.2

4.8. Do you agree that the e-library system requires a better mechanism to preserve literature and culture than the traditional library system?

Traditional library system was human resource intensive while the e-library system is highly technology and capital intensive. The e-library system requires a better mechanism in order to preserve literature and culture in comparison to traditional library system. Here more than four-fifth of respondents responded positively. (See Table 7).

Table 7: Responses against requirement of better mechanism for e-library functioning

Sl. No.	Types of Acceptance	Per cent of Total Respondents
1.	Agree	82
2.	Disagree	12
3.	Do not know/ can't say	06

4.9 Do you agree that software selection is a crucial task for a successful e-library operational management system (se-loms)?

Digital libraries' functioning is highly software dependent. Selection of software is required a highly trained and skilled library personnel who might have an exact understanding about

the technological level of their users as well as management skills those would be supportive to provide quality services to them. Around six-seventh of users agreed that software selection is a crucial task for a successful e-library operational management system. (See table 8).

Table 8: Responses against the Software Selection

Sl. No.	Types of Acceptance	Per cent of Total Respondents
1.	Agree	85
2.	Disagree	09
3.	Do not know/ can't say	06

4.10 what should we do for the development of a broader level digital library system (bldls) in india?

It is well established fact that ICT-based e-library system/digital library system is required a well-qualified related science background oriented personnel. According to Table no.9, one-fifth of total respondents agreed that we should recruit trained manpower first in order to establish a broader level of digital library system in India. Then 35 per cent respondents were in favour of developing an infrastructure which could provide logical support for establishment of a BLDLS. Simultaneously, 40 per cent respondents were very keen to its nature of services which could be served in future and that should be user friendly.

Table 9: Types of initiatives taken for the development of a BLDLs in India

Sl. No.	Types of Initiatives	Per cent of Total Respondents
1.	Trained manpower should be recruited	57
2.	Development of infrastructure	69
3.	Making the libraries user friendly	78
4.	Other factors	05

5. Conclusion

Learning consists of concentration, punctuation, continuity, non-interruptions, and logistical support, calm and quiet place provided by ICT-based instruments/equipment and logistics. A healthy environment for study to the users in the epoch of information technologies based development in learning is provided by LICs' professionals to the users. The study highlights the digital divide of male and female users. In political environment feminists demand 33 per cent reservation in political arena, but they use to miss to look into the level of participation

of women in learning and development-oriented activities. Gender configuration of users indicates that in terms of regular feature of learners women (30 per cent) are leg behind to male (70 per cent).

Out of total students 91.1 per cent were regular users while research scholars comprised 85 per cent only (Table 10).

More than half of total respondents recognized that trained manpower should be recruited for establishment of digital library in NCR Delhi. About two-third of total respondents used ICT-based library logistics for research work and more than half for study of course work (Figure no.3).

Table No. 10: Users' views upon library services and complexities in establishment of e-libraries in NCR Delhi

Sl. No.	Particular	Per cent Responses of total Respondents
1.	Students	91.0
2.	Research scholars	85.0
3.	Making the library user-friendly (MTLUF)	78.0
4.	Male users	70.0
5.	Development of infrastructure (Dev. Infrs)	69.0
6.	Research works	62.6
7.	Trained manpower should be recruited (TMSBR)	57.0
8.	For Study of Course Work (FSOCW)	53.8
9.	Female users	30.0

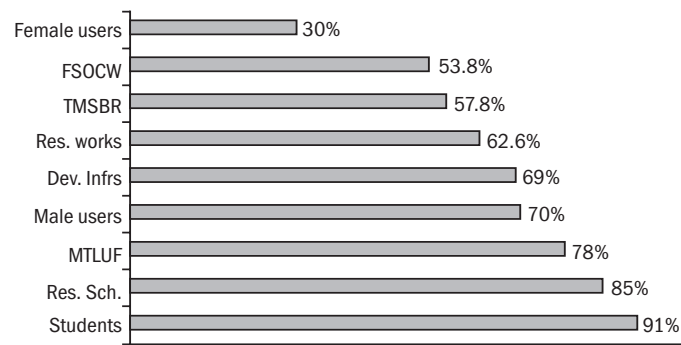


Figure 3: Per cent Share of Views of Users and Librarians on Establishment of E-libraries

The result of the survey reflects a growing interest in online journals among users at the libraries of NCR. This study reveals that mostly users are aware about the availability of online journals through the library and they can make maximum use of it for various purposes.

Online journals and databases are mostly used for “research work”, followed by “studying course work” and “updating subject knowledge”. They are least used for “teaching” and “writing papers”. Majority of respondents stated that coverage of online journals and databases is not sufficient for their subject area and they need more subscription of online journals and databases in their respective field. The result of the study also showed that there is a significant association between the time spent on reading online/offline and the frequency of use of online journals. We found that majority of users take printout of online journals before read. This study has shown that PDF is the most preferred format for online journals. Very less users wanted to use it in HTML format. It is noted that the PDF and HTML formats are common formats for online journals, in which the full texts are available. For the linking of online journals, mostly users prefer to link through the various search engines and also from the linking facility provided through the library website.

This study has also shown that online journals and databases are mostly accessed at the departmental library/computer room, and is followed by central library. Only a small population is keen on accessing it at the computer centre and other places. The level of satisfaction among the respondents regarding the infrastructure provided by the library for accessing OJ & DB indicates that majority of users (73.75 per cent) are satisfied at the various levels whereas, only 26.25 per cent were scared with behaviour of LICs professional in NCR Delhi.

The research described in this article confirms that online resources are increasingly important to today’s scholars and researchers. This was an

exploratory study using a non-random sample of articles and is inherently not generalized. By examining a sample of articles published in e-journals, we may be looking at researchers who are at the leading edge of use and acceptance of electronic sources. However, the findings reflect the fact that a radical change in information-seeking behaviour and information resource use is taking place as scholars and researchers become more comfortable and familiar with the resources available through the Web. An awareness of this change can only help us in preparing for the future. Online resources offer an exciting alternative to, and an expansion of, traditional research sources and tools. By understanding how scholars use these resources, librarians and other information professionals will be able to provide enhanced service to their users.

Awareness and convenience seem to be major factors in the selection of resources, whether print or online. The results of this study indicate that more users prefer online resources to print and that many users access these resources remotely. However, they use only a small portion of the resources available to them. Users tend to select a limited number of databases and seem to be unaware of the availability of databases other than those they use regularly. Further research is needed to determine if users were in fact unaware of the resources available to them or if users were aware of the resources but did not see them as useful in fulfilling information need. Promotion, education, and organization may all be factors to consider maximizing patron use of the library resources.

Challenges remain in balancing print and online resources to meet the needs of various groups, organizing resources, and educating users to select resources based on information needs rather than format or convenience. The findings of this study suggest that databases without links to full text and online journal collections without links from a bibliographic database will have lower use. Promotion of the

online catalogue as the point of access to both print and online journals will encourage use based on need rather than convenience. Likewise, libraries also need to consider selecting databases that provide full-text links to their online collections in a seamless manner. Furthermore, libraries need to be proactive in facilitating access to the library catalogue or full-text journals directly from bibliographic databases.

The need to teach the scope and purpose of resources must be reinforced as a priority in instructional programmes. Limited instruction time means that librarians concentrate on key resources and have little time to explore specialized or supplementary databases. Reliance on desktop access reduces the need for users to come to the library. This fact presents further challenges for instruction and promotion of resources, because users might not think to approach a librarian about training. In fact, Adams and Bonk found that lack of training and lack of information about databases were perceived as the top two obstacles to the use of electronic information and technologies by faculty respondents in a large academic centre. Web-based instruction, online point-of-use guides, virtual library tours, self-paced tutorials, and real-time online access to reference services should become part of the library instructional programme to support users at their desks. Outreach and aggressive promotion of resources remain a challenge for health sciences librarians. New approaches might include onsite training of remote users, special events to introduce new resources, or distribution of information via institutional electronic mailing lists. It is interesting to note that although many respondents returned the training request form, indicating a realization of lack of knowledge about resources; few replied to the follow-up call offering additional instruction or came to a class as a direct result of the survey.

Findings of this study confirm that computers and the Internet are now ubiquitous for members of an academic health sciences community.

However, information literacy is not. As libraries provide more online resources, librarians should take steps to make sure users are aware of these resources and teach users their importance in filling information needs. The online information environment is not static; rather, frequent changes in content, search engines, and access points make for a constantly moving target. The results of this study also demonstrate that the use of the resources is varied among the user groups. User groups differ in their methods of access and in their frequency of use of online resources. Perhaps most importantly, differences exist in the information needs and the reasons for accessing the online resources among the user groups. These are all factors to keep in mind when considering training issues and promoting library resources.

The era of online information, although in its infancy, has been embraced by users. Many questions are yet to be formulated about the effect online collections will have on libraries. However, some of the questions that remain to be answered sound very familiar. How do librarians best organize resources to meet users' information needs? How do libraries integrate new formats with existing formats? How do librarians obtain a meaningful measure of what resources are used, by whom, and how much? How do librarians educate users about resources? How do librarians ascertain if collections are meeting the information needs of diverse clientele? Supporting online collections involves functions across the library: collection development, information services, access services, and technical services. The success of online journals and databases will depend on how well these various functions come together to produce a system of immediate and seamless access to online information.

The findings in this study confirm that a large percentage of users in an academic environment prefer online resources to print. Faculty, and to a lesser extent students, access the resources remotely rather than in the library. Furthermore,

users select a small number of available online resources and seem unaware of the broader spectrum of available resources. Convenience seems to play a major role in selecting resources, whether print or online. Changing use patterns will require librarians to examine collection development policies, instructional programmes, and reference services to meet information needs in the online environment.

Further studies are needed to examine the impact of online journals on information-seeking behaviours and patron use patterns. Studies to assess the characteristics of online journal users and user preferences for online or print journals will inform future collection

development decisions. Some user characteristics already seem apparent, such as undergraduate students' preference for the convenience of full-text articles. However, research is needed to examine if the introduction of full text is affecting how professional school students and faculty obtain information. Studies are needed to track whether reliance on convenient personal journal collections will shift to include reliance on online journal collections. Studies to assess if computer literacy plays a role in the choice between online or print will further inform collection development decisions and library instruction programmes.

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