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Use and Impact of Electronic Journals on the Users of University of Pune, Pune, India

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Abstract:

University of Pune library subscribes to a number of electronic journals to satisfy the information needs of its users. The present study is an attempt to find out whether the users of University of Pune prefers the new format of journals and whether the electronic journals are able to satisfy the information needs of the users. Samples were selected from each category of users comprising of faculties, research students and post-graduate students for the present study.

Keywords: Electronic journals, use of electronic Journals, usage of e-journals.

1. Introduction:

The history of electronic publishing is very short if compared with traditional forms of publishing, but full of important events. The very first e-publishing came in the 1980's in the form of plain text e-mails. They were sent to the subscriber via a mailing list. After many changes, finally in the years 1994-95 appeared the very first e-journals. The first e-journal to be distributed was Electronics Letters online by IEEE (Institution of Electrical Engineers) (Pettenati, Corrado, 2001)

The 24x7 availability of the online journals; facility to access the issues from any corner of the world with the help of internet and more importantly as the journals are available online there is no need to bound the issues at the end of the year and preserve it on the shelf for year together has forced the librarians to go for the electronic journals. Readers are also getting addicted to this new form of publication because it saves the time in searching the required information.

Across all disciplines, faculty members and other users have come to value electronic access to scholarly literature, and use of such resources increases dramatically with their availability in electronic form (Guthrie and Schonfeld 2004; Tenopir 2004; Marcum and George 2003; Wolverton and Tenopir 2005)

Seeing all the advantages of the online journals and in order to overcome the budget factors the libraries are either entering into the consortia for the subscription of the electronic journals or they are individually going for the databases where they can have access to the e-journals at a very discounted price. Through this the librarians have overcome the budget and the storage problem but are facing the new problem of archiving the subscribed electronic information for future use.

2. Profile of the University Library:

The Library was established in January 1950 and was named in honor of the first vice-chancellor Dr. M.R. Jayakar. The library is one of the richest libraries in Western India in terms of collection and the services rendered by it to its users. Library is fully automated and is providing access to its collection through its webopac by using LIBSYS library software package. Presently the library has more than 4,65,000 documents in its collection which contains, books, bound volumes of journals, theses and dissertations etc. . The Jayakar library is also participating in the consortia program launched by UGC (University Grant Commission) and INFLIBNET (Information and Library Network centre) called UGC-INFONET under which it is getting access to more than 4000 electronic journals covering all the subjects from science, social science and humanities. Apart from the access to electronic journals received under UGC-INFONET consortia, the library is individually subscribing for many of the electronic

databases and journals such as Science direct, EBSCO, PsycArticle, Nature, Lexisnexis etc. (Jayakar Library Portal, 2010) taking into consideration all the journals received from UGC-INFONET and the journals subscribed individually, presently the library is having access to more than 8000 journals. The library has developed library portal which list out all the databases and journals subscribed by the library and is available for the user to use.

3. Services provided by the library:

With the help of the electronic journals library is in a position to render many of the services to its users which they were not able to provide with its print collection of journals into the library. The following services are being provided to the users of the library.

3.1 Access to the electronic version of the subscribed printed journal:

The library is subscribing to more than 550 printed journals which also contains the journals published by Sage and as per the policy of the publisher the users are getting free access to the electronic version of the printed one.

3.2 Access to the electronic resources under UGC-INFONET consortium:

Jayakar library is one of the university library which is participating into the consortium and is getting access to more than 4,000 electronic journals from the field of science, social science and humanities.

3.3 JCCC:

INFLIBNET has designated 22 libraries to fulfill ILL request from the users, affiliated to universities covered under UGC (INFLIBNET, 2011). The ILL libraries together subscribe the journals that are not available through consortia. Under these the library has been identified as one of the resource centre by the INFLIBNET for providing ILL service to the users who are in need of the article available in the electronic format.

4. Objectives of the study:

Many studies has been carried out in India and abroad which gives information on use of electronic resources by the users of the library. This study will be helpful to the library staff and the authorities of the university to decide whether they have to invest more on the development of electronic collection or to go for an alternative format of journals. The following objectives were framed for the study:

1. To know the awareness of the users towards the electronic resources available in the library.
2. To find out whether the user are making use of the electronic resources
3. To know whether the subscribed resources are satisfying their information needs.
4. To know which format is more comfortable to them i.e. printed or electronic.
5. To identify the barriers if any which the users has come across while accessing electronic journals.

5. Literature Review:

By 1998, studies began to indicate that electronic access to journals was increasing in popularity among the users of the library. Kaur Baljinder & Verma Rama (2009) found that usage of e-journals has increased due to awareness among the users about the library e-resources and services. Borrelli Steve, Galbraith Betty and Eileen E. Brady (2009), Morse, David H. & Clintworth William A. (2000) found that the use of electronic journals is more as compared to the print journals. Researchers have indicated that electronic journals have impact on their research activities. They feel that the improved accessibility to journal articles results in more thorough and interdisciplinary research (Henk Voorbij and Hilde Ongering, 2006). A survey of science faculty conducted at the University of Oklahoma revealed that, less than 50% of faculty read electronic journals (Cecelia M. Brown, 1999). Lenares (1999) conducted a survey and found that 61% of the faculty surveyed uses electronic journals further he also found that half of the respondents that read electronic journals report that they read journals in this format infrequently. Moghaddam, Golnessa Galyani & Talwar, V.G. (2008) conducted a survey at Indian institute of Science and found that, Electronic journals were mostly used for research needs and PDF was the most preferred format.

As with regards to the adoption of the journals subject wise many of the study has revealed that, the faculties from science subjects are more active in making use of electronic journals (Erin T. Smith, 2003; Judit Bar-Ilan, Bluma C. Peritz, and Yechezkel Wolman, 2003)

6. Methodology:

The survey method was selected, as it is one of the most appropriate tool for surveying large population. Structured questionnaire was developed and was used as a tool for data collection supported by the interview. The questionnaire were distributed to all the users covering all science departments comprising of faculties, research scholars and post graduate students from the university of pune after two days the questionnaire was collected from the users. Interview was also conducted of the faculties and the research students in order to get the answers of the unanswered questions. The study was restricted to the faculties, research scholars and post graduate students from science departments only, because it is easy to focus on the homogeneous group rather than going for heterogeneous group of users

7. Results & Discussion:

A sample of 100 each was selected from the categories of faculties, research scholars and post-graduate students. In all 300 questionnaires were distributed and 264 dully filled in questionnaire were received from the respondents. Among the respondents 97 (32.33%) were the faculties from various science departments, 84 (28%) were research scholars and 83 (27.66%) respondents were the post graduate students doing M.Sc. from various science departments of the university. So these 264 respondents form the sample for the study. Findings of the present study are compared with the findings of the previous studies conducted on the same topic.

7.1 Distribution of Questionnaire:

When asked about the awareness of the electronic journals received under the consortia and the subscribed one. It was revealed that, out of 264 respondents 243 (92.04%) were aware about the fact that the library is receiving access to electronic journal under the UGC consortia plus subscribed resources and they can have an access to these literature from any corner of the campus (Table no.1). Even though some of the respondents responded that they are not aware particularly about the UGC-INFONET consortia, but are aware that the university is having access to the electronic journals from their respective subjects.

Awareness of the electronic journals

Table No. 1

| Category of users | Yes | No | Total |
|------------------------|--------------|-------------|------------|
| Faculty | 95 (97.93%) | 02 (2.07%) | 97 (100%) |
| Research Scholars | 72 (85.71%) | 12 (14.29%) | 84 (100%) |
| Post-Graduate Students | 76 (91.57%) | 07 (8.43%) | 83 (100%) |
| Total | 243 (92.04%) | 21 (7.96%) | 264 (100%) |

7.2 Frequency of usage of electronic journals:

Attempt was made to find out how frequently they make the use of electronic journals received under UGC-INFONET consortia , the responses received from the respondents are tabulated in the following table no 2.

Frequency of usage

Table No. 2

| Frequency of usage | Faculty | Research Scholars | Post-Graduate Students | Total |
|--------------------|---------|-------------------|------------------------|---------------|
| Daily | 49 | 15 | 13 | 77 (29.16%) |
| 2/3 times a week | 33 | 51 | 47 | 131 (49.63%) |
| Once in a week | 15 | 18 | 11 | 44 (16.67%) |
| Once in a month | 00 | 00 | 12 | 12 (4.54%) |

As far as the usage is concerned out of 264 respondents, 131 (49.63%) respondents make the use of electronic journals 2/3 in a week and the major category of the respondents comprises of research scholars followed by Post-Graduate students and faculties. 77 (2916%) of the total respondents uses electronic journals daily and here faculty is the major respondent which comprises of 49 respondents followed by Research Scholars and Post-graduate students. Whereas 44 (16.67%) respondents uses the same facility once in a week and only 12 (4.54) Post-graduate students uses it occasionally. It seems that it is the faculty who is making daily use of electronic journals because their cabins are well equipped with all the facilities that are required to access electronic journals.

Gupta (2011) at Kurukshetra University, India found that 66.7% of the faculties use the e-journals daily and few of the faculties using then either weekly or monthly. Naushad Ali and Faizul (2011) found that at university of Delhi nearly 50% of the research scholars claim to use electronic journals daily.

7.3 Place of access of electronic journals:

Access to the journals under the UGC-INFONET and the subscribed is IP based. The university has communicated the range of IP to the INFLIBNET and in turn the IP's are passed on to the publisher so that the university can be provided with the access to the journals or database procured by the UGC under the consortia. Also the range of IP is communicated to respective publishers whose resources is been subscribed by the library. As the campus of the university is properly networked using optic fibre with 10 MBPs connectivity, the users can have an access to the journals received under the consortia from any corner of the campus. Library has kept 35 terminals to the users in the internet hall for accessing the internet, one can have access either from the internet hall or from their own department.

Place of access of electronic journals

Table no. 3.

| Category of users | Department | Library's Internet Hall |
|------------------------|--------------|-------------------------|
| Faculty | 90 | 07 |
| Research Scholars | 63 | 21 |
| Post-Graduate Students | 29 | 54 |
| Total | 182 (68.94%) | 82 (31.06%) |

When asked to the users from where do they access the electronic journals it was found that 182 (68.94%) users access the electronic journals from their departments only, of which faculties and the research scholars access more from their department only, the reason is simple as the faculties are having the proper infrastructure in their cabins and research scholars spend most of their time into the laboratories which are provided with terminals and net connectivity so they prefer to access from their departments, whereas 54 post-graduate students i.e. 31.06% of the total population of post-graduate students prefer to access the electronic journals from the internet hall of the library. One of the reasons for more use of Internet hall facility is that they get very less time to utilize the facility of the laboratories offered by the department as the lectures and the practicals of various batches are continuously going on in the department, hence becomes easier for the students to have an access to the Library's Internet hall as they frequently visit the library for issuing and returning of books.

Kaur & Verma (2009) has also reported that nearly 96.24% research scholars and 94.83% of faculties use their department for accessing the information whereas Raza and Upadhyay (2006) found that 32.69% respondents access e-journals from a departmental lab, and 86.53% access e-journals from the computer center.

7.4 Purpose of using electronic journals

Attempt was made to reveal the purpose for which the journals are consulted or used by the respondents and the responses received are tabulated in the following table no. 4.

Purpose of using electronic journals**Table no. 4**

| Purpose | Faculties | Research Students | Post Graduate students | Total |
|---|-----------|-------------------|------------------------|-------------|
| Keeping update + Preparing a lecture + For Research Purpose | 69 | 00 | 00 | 69 (26.14%) |
| Keeping update + For Research Purpose | 28 | 11 | 00 | 39 (14.77%) |
| Only For Research Purpose | 00 | 73 | 17 | 90 (34.09%) |
| Preparing Examination | 00 | 00 | 66 | 66 (25%) |
| | 97 | 84 | 83 | 264 (100%) |

69 (26.14%) faculties are using the electronic journals for various reasons such as keeping themselves updated with the new information appearing in their subject of interest and, preparing for the lectures and also to carry out their own research, whereas 39 (14.77%) respondents are using electronic journals for keeping themselves updated with the new information and for research purpose which constitutes 28 faculties and 11 research scholars. Followed by 73 research scholars and 17 post-graduate students i.e. 90 (34.09%) respondents are using the electronic journals for just research purpose only, while 66 (25%) respondents which constitute only the post-graduate students are using it for making preparation at the examination.

Tenopir (2009) revealed that faculties are using electronic journals mainly for research, teaching, and for writing articles, proposals and reports. Raza and Upadhyay (2006) found that at Aligarh Muslim University 80.76% respondents are using e-journals for research purpose.

7.5. Satisfaction of information need:

The library is trying to procure more number of electronic journals to satisfy the information needs of the users. It was asked whether the electronic journals subscribed by the library satisfy their information needs and the responses received are tabulated in the following table no. 5.

User's satisfaction**Table no. 5**

| | Fully satisfied | Partially satisfied | Up to some extent | Not at all |
|------------------------|-----------------|---------------------|-------------------|------------|
| Faculty | 81 | 16 | 00 | 00 |
| Research Scholars | 76 | 08 | 00 | 00 |
| Post graduate students | 57 | 14 | 12 | 00 |
| Total | 214 (81.06%) | 38(14.39%) | 12(4.55%) | |

It was found that, out of 264 respondents 214 (81.06%) respondents admits that their information requirements are fully satisfied with the electronic journals subscribed by the library, followed by 38 (14.39%) respondents are not fully satisfied the resources subscribed by the library can only partially fulfill their information needs. whereas according to 12 (4.55%) respondents they can satisfy their information needs up to some extent. When tested with the usage of the electronic journals it was found that there were only 40 journals was used for more than 500 times by the users out of which the journal viz. Tetrahedron letters stands first for heavy use, it was used for more than 4500 times. Nearly 160 electronic journals were used within the range of 100 to 499 times and 360 journals were used 10 to 99 times by the users. 355 journals were used for less than 10 times and about 401 journals were not used for a single time by the users.

The statistics reflects that the core journals from the various science subjects are heavily used which counts for nearly 43% and these journals are sufficient to satisfy the information needs of the users.

7.6 Journal format Preferred:

Attempt was made to know the format of the journal which is more preferred by the users and the responses received is been tabulated in the following table no. 6.

**Format preferred
Table No. 6**

| Type of format | Faculties | Research Students | Post Graduate students | Total |
|--------------------|-----------|-------------------|------------------------|--------------|
| Print | 19 | 13 | 08 | 40 (15.15%) |
| Electronic | 63 | 71 | 75 | 209 (79.17%) |
| Print + Electronic | 15 | 00 | 00 | 15 (5.68%) |

It is clear from the responses received from the respondents that majority of the users i.e. 209 (79.17%) prefer for the electronic format of electronic journal, followed by 40 (15.12%) users still preferring for the printed journals were as for 15 (5.68%) users format doesn't matters a lot with the format of the journals they are comfortable with the printed as well as electronic format of the journal.

For the respondents who prefer electronic journals is due to the search facility provided by the journal and more over the respondents can get access to the newly published information within no time, as soon as the journal is published they can have access in an online version. Also the electronic journals are providing the facility to download the articles and can be readout as and when required, so ultimately the problems that used to occur in the print journals i.e. if they require any article every time the users use to issue the journal on his/her name and get it photocopied. Whereas some of the respondents are not happy with the quality of the electronic journal particularly the graphics used and also are having some doubts regarding the authenticity of the information content of the electronic journal.

Keller (2002) conducted a survey namely Ejust study and reported that nearly 75% of the users prefer online version when asked their preference for print or electronic journals. Dillon & Hahn (2002) also found that at the university of Maryland libraries respondents preferred the electronic format for journals. Survey conducted of Academic staff of the universities belonging to the consortium of academic libraries of catalonia (CBUC) revealed that, 52% of the respondents stated that they used electronic journals exclusively or mainly and 28% used both media (Borrego, Anglada, Barrios, Maite & Comellas, 2007).

7.7 Impact of electronic journals:

An open ended question was asked to the respondents to reveal the impact of the electronic journals and as far as the impact of electronic journals is concerned, it seems to be positive, for 216 (81.81 %) respondents access to electronic journals has helped them a lot. For faculties it has helped in increasing their productivity, the faculties are able to find out the references for writing research reports within no time they can prepare themselves for the lectures and conferences. Most of the faculties admitted that their quantity of paper publication has been increased due to the use of electronic journals only. The research scholars were able to find out the appropriate references as

well as can complete their review of literature within no time, where as for 48 (18.19%) respondents the impact is neither negative nor positive.

7.8 Problems in accessing the journals:

There are many factors which can create problems or barriers in accessing the electronic journals such as slow internet connectivity, difficulty in finding relevant information, low configuration of the computers, lack of knowledge of search strategy to be used etc.. Attempt was made to find out whether the users are coming across any of the problems while accessing the electronic journals and the responses received are been tabulated in the following table no. 7.

Problems in accessing electronic journals

Table no. 7

| Problems | Faculties | Research Students | Post Graduate students | Total |
|---|------------------|--------------------------|-------------------------------|--------------|
| Low configuration of computers | 12 | 08 | 00 | 20 (7.57%) |
| Difficulty in finding information | 07 | 01 | 00 | 08 (3.03%) |
| Slow Internet Connectivity | 59 | 60 | 62 | 181 (68.56%) |
| Lack of knowledge of proper search strategy | 19 | 15 | 21 | 55(20.83 %) |

From the responses received it is clear that the 181 (68.56 %) respondents are facing more problem because of the slow internet connectivity, followed by 55 (20.83%) respondents stating that they lack the knowledge of search strategy. 20 (7.57 %) respondents felt that due to low configuration of computers they are facing problems in accessing electronic journals whereas only 8 (3.03%) stated that they find it difficult to find appropriate information using electronic journals.

Naushad Ali & Faizul (2011) stated that slow internet speed (56%) is the major problems that are faced by the users in accessing electronic journals. Gupta (2011) feel the need for some training in using the e-journals.

When the university library is going for the number of electronic journals at the same time the authorities should also give a thought for the required bandwidth for accessing the journals. The university library should go for higher bandwidth so that the users can have easy and speedy access to the electronic journals. Library staff should frequently undertake the orientation of the users so that the users can get knowledge of various search strategies to be used for searching

8. Conclusion:

The present study reports the use of electronic journals by the users of university of Pune. Even though it seems that some of the users are not aware of the UGC-INFONET consortia but the fact is that, they know that the university library is having access to the electronic journals from their respective subjects. It seems that majority of the users are preferring the electronic journals than the printed journals also the electronic journals are found to be beneficial to them. Right now they are having some problems regarding the bandwidth and search strategy but that can be overcome.

As far as the impact is concerned, electronic journals are really helpful in finding out the appropriate references and is useful to each and every user the only thing that needs to verify that does it really helped the faculties to increase their productivity this can be done by undertaking the citation analysis

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