

## Use of E-resources by Users of Dr. Y.S. Parmar University of Horticulture and Forestry

Nazir Ahmad Bhat\* and Shabir Ahmad Ganaie\*\*

\*Central Library, Sher-e-Kashmir, University of Agricultural Sciences and Technology of Kashmir, Kashmir-191 121  
E-mail: bhatnazeerahmad@gmail.com

\*\*Department of Library and Information Science, University of Kashmir, Srinagar-190 006  
E-mail: shabir311@rediffmail.com

### ABSTRACT

The paper is the outcome of a survey conducted at Dr. Y. S. Parmar University of Horticulture and Forestry (DYSPUH&F). The aim of the survey was to assess the use of electronic information resources (EIRs) by the academic community of the university. Questionnaire method was used as a data collection tool. It was found that users of DYSPUH&F library prefer both print and electronic format of EIRs. In case of electronic version majority of them prefer online mode of access. The preference of users with regard to format and mode of access does not vary significantly from one type of users to another. AGRIS & CABI databases and the e-journals available through Consortium for Electronic Resources in Agriculture (CeRA) are the commonly used EIRs. The users yet do not use e-books and e-theses at a large scale. Though used by a small percentage of users CAB e-books and KrishiPrabha appear to be the leading e-books and e-theses collections, respectively. With regard to use of indexing and abstracting databases, e-journal and e-theses collections the choice among three types of users varies quite significantly; which however is not true for e-books.

**Keywords:** Electronic information resources, use, impact, user preference, variation

### 1. INTRODUCTION

The study is an attempt to assess the use of electronic information resources (EIRs) by the academic community of the Dr. Y.S. Parmar University of Horticulture and Forestry (DYSPUH&F).

DYSPUH&F is a hillside Agricultural University situated at Nuani, Solan, Himachal Pradesh, India. The University was established in 1985. The University comprises of two faculties known as 'College of Horticulture' and 'College of Forestry' both located in the same campus at Nauni. The University has a faculty of 237 Scientists out of which 169 are posted at its main campus. 102 PhD scholars and 120 Masters degree students stood enrolled at the main campus during the academic year 2015<sup>1</sup>.

According to Lee & Boyle<sup>2</sup> an electronic resource or e-resource 'is any cohesive publication in digital form that is being marketed' or 'any electronic product that delivers a collections of data, be it text, numerical, graphical or time based, as a commercially available resource' and includes 'full text databases, electronic journals, image collections, multimedia products, collections of numerical data'. The International Coalition of Library Consortia<sup>3</sup> defines e-information (or electronic information) as 'A broad term that encompasses abstracting and

indexing services, electronic journals and other full text materials, the offerings of information aggregators, article delivery services, etc.' which can be accessed via remote networks from information providers, or locally mounted by a consortium or one of its member libraries.

### 2. LITERATURE REVIEW

Tyagi<sup>4</sup> reported that almost all Indian Pharmacopoeia Commission Scientists and Associates were seen to use new versions of e-journals (100 %), online database (100 %), CD-ROM database (100 %), subject specific information websites (89 %) & e-books (79 %) and other internet based resources. The author also revealed that some Scientists (30.77 %) and Associates (37.50 %) prefer print version of journals. Majority (100 %) of them prefer to take along printouts instead of downloading on storage devices (48.65 %). Among the e-resources the abstract level databases (MEDLINE used by 78 %), e-journals (PubMed used by 77 %) and e-books (76 %) prove to be highly used e-resources in Institute of Medical Science Library of Kashmir<sup>5</sup>. While attempting to estimate the actual priority among different e-resources through a single choice question Santhi<sup>6</sup>, *et al.*, found that the majority of respondents prefer to use e-journals (20.4 %), followed

by e-mail (17.6 %), www (14.8 %), e-theses (14.4 %) and e-newspapers (14 %). E-books (10 %) and e-magazines (8.8 %) are preferred by a comparatively lesser percentage of respondents.

Kumar<sup>8</sup>, *et al.*, note that 65 % of respondents prefer to access both print and e-sources equally, despite the fact that 70 % of them agree that e-sources provide more comprehensive information than print. Nikam<sup>9</sup>, *et al.*, analysed that the faculty members and research scholars of the University of Mysore use both print and electronic sources of information almost equally, as the mean values calculated for journals (print= 3.68 & electronic= 3.29), books (print= 2.76 & electronic= 2.60) and theses (print= 2.39 & electronic= 2.03), etc. are close to each other. However, the print format registers a slightly better use than electronic format in each case. Ali<sup>10</sup>, *et al.*, revealed that 45 % of users prefer printed journals, 31 % of them prefer online journals, and 24 % wish to access simultaneously both print and electronic forms.

The library patrons are keenly interested in using online mode of e-resources than that of offline and as such the former registers more usage than the later mode<sup>11</sup>. Raza<sup>12</sup>, *et al.*, observed that 68.8 % of the respondents prefer to use journals through online mode. Kumar<sup>13</sup>, *et al.*, also revealed that the users at National Science Library of India prefer to access the databases and journals in online mode. Archana<sup>14</sup>, *et al.*, upon studying the use of e-resources in Cochin University of Science and Technology (CUSAT) registered a demand for online form of information resources, as indicated by 67 % of respondents.

### 3. SCOPE AND OBJECTIVES

The survey has been conducted in Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh. The university consists of two colleges, viz., 'College of Agriculture and Horticulture' and the 'College of Forestry'. Survey has been restricted to 'College of Agriculture and Horticulture'. The population under study comprises of Scientists (Faculty), PhD scholars and Masters degree students. In developing countries like India, libraries are still hybrid in nature. They need to procure both print and electronic formats of information resources. Thus a need is felt to decide about the proportion at which these two formats need to be acquired. A library must have an eye on the range of preference of users among these formats and the frequency at which they tend to use the same. Major proportion of budgeted amount in libraries is nowadays spent on procurement of e-resources. The libraries are supposed to decide which of the e-resources they need to procure, that is why it is very essential to know the most popular e-resources.

To make appropriate arrangements for meeting out the immediate requirements of different types of users and enhance their satisfaction level, it is very important to know variation in their opinion and choice. The objectives of the study are to:

- (a) Identify the preferred format of information resources and mode of access adopted by users;
- (b) Assess the popularity of e-resources, viz., indexing and abstracting databases; e-journals; e-books, and e-theses;
- (c) Measure the level of variation in preference and use with respect to type of user.

### 4. METHODOLOGY

The number of scientists (Faculty), PhD scholars and Masters degree students was worked out from the online portal of National Information System on Agricultural Education Network (NISAGENET) and finalised after personally cross checking it with official records of the University. The sample size was determined with the help of Krejcie & Morgan Table, which corresponds to 103 for a total population of 140 subjects under study. To achieve the desired sample size a total number 140 questionnaires in print form were administered to all Scientists (60), PhD scholars (40) and Masters degree students (40). Statistical Package for Social Sciences (SPSS) has been used to analyse the data and derive the descriptive statistics. To determine the significance of the derived facts, the data was subjected to a non-parametric statistical test, viz., Chi-Squared ( $\chi^2$ ).

### 5. DATA ANALYSIS AND INTERPRETATION

To draw an overall trend regarding the use of e-resources and see if there is any variation in choice of the three types of users the collected data has been analysed and interpreted under different sub-headings as follows:

#### 5.1 Preferred Format

The respondents were asked to mark out one of the options among three choices about the format of information they prefer to use. Data collected in this regard is presented in Table 1.

It is evident from Table 1 that majority of library users (80.76 %) in DYSPUH&F prefer to use both print and electronic form of information resources. In case of this preferred option the PhD scholars (90.00 %) lead other two types of users, viz., Scientists (82.50 %) and Masters degree students (70.58 %). It is however statistically observed that there is no significant variation in preference of three types of users with regard to format of information resources ( $p > 0.05$ ).

**Table 1. Preference with regard to format of use**

Format of information source	Scientists n=40	PhD scholars n=30	Masters n=34	Total n=104
Print only	03 (7.50)	00 (00.00)	06 (17.64)	09 (08.57)
Electronic only	04 (10.00)	03 (10.00)	04 (11.76)	11 (10.65)
Both print & electronic	33 (82.50)	27 (90.00)	24 (70.58)	84 (80.76)
<b>Total</b>	<b>40 (100)</b>	<b>30 (100)</b>	<b>34 (100)</b>	<b>104 (100)</b>

$\chi^2= 6.67$ ; df =6; p >0.05

Note:\*(n) in each table indicates number of respondents and the figures in parentheses indicate their percentage

**5.2 Preferred Mode of Access**

In order to assess the preferred mode of access adopted to use of e-resources the users were asked to tick mark one of the three options. The response collected in this context is given in Table 2. Majority of respondents (53.46) prefer both online and offline modes of access. However, it is evident that users have got more tendency to prefer ‘online only’ mode (40.60 %) as compared to the ‘offline only’ mode (5.94 %). In case of the preferred mode of access it is the user group Masters degree students (68.75 %) who lead the fray, leaving Scientists (48.71 %) and PhD scholars (43.33 %) at 2<sup>nd</sup> and 3<sup>rd</sup> positions, respectively. The statistical observation, however, substantiates the fact that preference of three types of users with regard to mode of access does not vary significantly (p>0.05).

**Table 2. Preference with regard to mode of access**

Mode of access	Scientists n=39	PhD scholars n=30	Masters n=32	Total n=101
Online only	19 (48.71)	15 (50.00)	07 (21.87)	41 (40.60)
Offline only	01 (02.56)	02 (06.66)	03 (09.37)	06 (05.94)
Both online & offline	19 (48.71)	13 (43.33)	22 (68.75)	54 (53.46)

$\chi^2= 7.59$ ; df=4; p >0.05

**5.3 Use of Indexing & Abstracting Databases**

Response was sought about five indexing & abstracting (I&A) databases relevant to agro-biological science through a multiple choice question. Data collected in this regard is displayed in Table 3.

It is obvious from Table 3 that AGRIS (64.42 %) and CABI (50.96 %) are the majorly used I&A databases. The other three databases are used by only 10-20 % of users. Masters degree students

(73.53 %) prove to be voracious users than Scientists (67.50 %) and PhD scholars (50 %) with regard to use of AGRIS, while in case of CABI it is PhD scholars (63.33 %) who are voracious users than that of Scientists (55.00 %) and Masters degree students (35.29 %). It is statistically substantiated that there is a significant variation in choice of three types of users with regard to use of I&A databases (p<0.05)

**Table 3. Use of I&A databases**

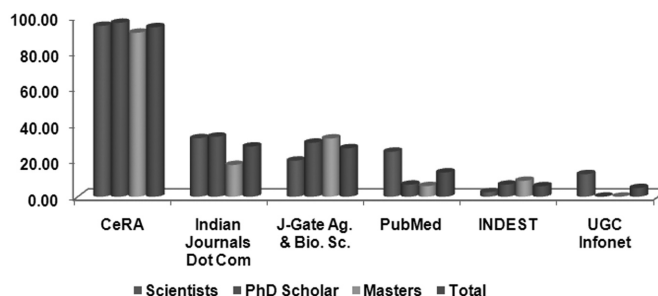
Abstract database	Scientists n=40	PhD Scholar n=30	Masters n=34	Total n=104
AGRIS	27 (67.50)	15 (50.00)	25 (73.53)	67 (64.42)
CABI	22 (55.00)	19 (63.33)	12 (35.29)	53 (50.96)
FSTA	2 (5.00)	7 (23.33)	10 (29.41)	19 (18.26)
AGRICOLA	12 (30.00)	4 (13.33)	2 (5.88)	18 (17.30)
BIOSIS	3 (7.50)	5 (16.67)	6 (17.65)	14 (13.46)

$\chi^2=19.03$ ; df=8; p <0.05

\*users were allowed to opt for more than one option

**5.4 Use of E-Journal Collections**

In order to judge the popularity of e-journal collections response of users was collected about six e-journal collections commonly available in India, with an option to mark out more than one collection. Data collected in this respect is displayed in Figure 1.



**Figure 1. Use of e-journal collections.**

It is quite clear from Figure 1 that Consortium for Electronic Resources in Agriculture (CeRA) is the most preferred e-journal collection, being used by majority of respondents (94.23 %). It is followed by ‘Indian Journals Dot Com (IJDC)’ (27.88 %) and ‘J-Gate Agriculture & Biological (JABS)’ (26.92 %). PubMed is used by 13.46 % of users. The users are least interested to use INDEST (5.77 %) and UGC-Infonet (4.81 %) e-journal collections. PhD scholars (96.67 %) take a slight lead over Scientists (95.00 %) and Masters degree students (91.18 %)

w.r.t. use of CeRA. So far as the use of IJDC is concerned PhD scholars (33.33 %) and Scientists (32.50 %) prove to be voracious than Masters degree students (17.65 %). In case of JABS it is Masters degree students (32.35 %) and PhD scholars (30 %) who lead the Scientists (20 %). PubMed is majorly used by scientists (25 %) than PhD scholars (6.67 %) and Masters degree students (5.88 %). It is also statistically verified from the p-value of the table underlying the Figure 1 that there is a highly significant difference in use of different e-journal collections across three types of users ( $\chi^2=23.92$ ;  $df=10$ ;  $p<0.01$ ).

### 5.5 Use of E-book Collections

Information about popularly used e-book collections was sought through a multiple option question among two e-book collections commonly available in India. A blank space was also provided to mention any more e-book collections they use other than the two in the list. The response of users in this context is presented in Table 4.

Table 4 indicates that the e-book collections have not yet become much popular among library users of DYSPUH&F, as only 48.07 % of them marked to have used the CAB e-Books and only 34.61 % the KrishiKosh. Not a single e-book collection has been observed to be in use in the University, through the space provided for 'any other' option. So far as the use of CAB eBooks is concerned PhD scholars (56.67 %) happens to be the leading user group than Masters degree students (50 %) and Scientists (42.50 %). It is however statistically observe that there is no significant variation among three types of users with respect to use of e-books ( $p>0.05$ ).

Table 4. Use of e-book collections

E-book Collection	Scientists n=40	PhD Scholar n=30	Masters n=34	Total n=104
CAB eBooks	17 (42.50)	17 (56.67)	17 (50.00)	51 (49.04)
KrishiKosh	2 (5.00)	2 (6.67)	2 (5.88)	6 (5.77)

$\chi^2=0$ ;  $df=2$ ;  $p>0.05$

\*users were allowed to opt for more than one option

### 5.6 Use of E-thesis Collections

Names of four open access e-theses collections and one International e-theses directory was placed before the respondents to judge their popularity among library users of DYSPUH&F. An overall view of the user response in this connection is displayed as Figure 2.

It is evident from Figure 2 that the users of DYSPUH&F appear to be less familiar about all the five open access e-theses collections, as only 34.07 % of them are observed to use the Indian

Doctoral Dissertations Database 'KrishiPrabha', followed by the Indian National Agricultural Information Repository 'KrishiKosh' (23.70 %). However, some users are observed to use the non-agriculture-specific e-theses collections 'ShodGanga (19.26 %)' and the 'Yahoo Directory' (18.52 %). 'Vidyanidhi' is noted to be used by least number of respondents (1.48 %). The statistical observation derived for the underlying table of Figure 2 substantiates that there is not a significant difference in use of different e-theses collections across three types of users ( $\chi^2=6.50$ ;  $df=8$ ;  $p>0.05$ ).

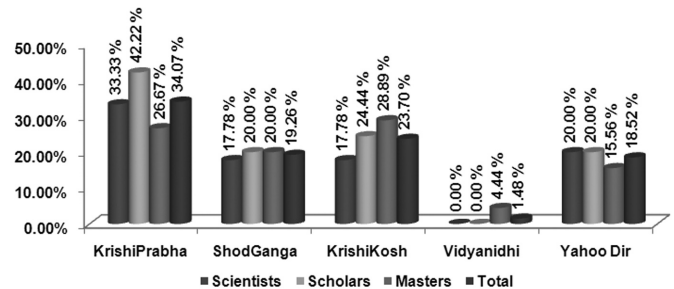


Figure 2. Use of e-theses collections.

## 6. FINDINGS AND DISCUSSION

Majority of Scientists, PhD scholars and Masters degree students of DYSPUH&F (80.76) still prefer to use both print and electronic information resources and the majority of respondents (94.06 %) prefers to access and use them through online mode. The preference of users resembles to a great extent to the preference of users of other parts of the country as explored by research studies like that of Tyagi<sup>4</sup>, Bhat<sup>5</sup>, *et al.*, & Santhi<sup>6</sup>, *et al.* The finding that users prefer to use e-resources through online mode of access is supported by the findings of Swain<sup>11</sup>, *et al.*, Raza<sup>12</sup>, *et al.*, (68.8 %), Kumar<sup>13</sup>, *et al.* and Archana<sup>14</sup>, *et al.*, (67 %).

AGRIS (64.42 %) and CABI (50.96 %) appear to be the majorly used indexing & abstracting (I&A) databases. This finding, however, goes contrary to the findings of Tyagi<sup>4</sup>, & Bhat<sup>5</sup> *et al.*, who recorded a heavy usage of I&A databases. The lower percentage of users (50 % to 65 %) using these databases makes us to presume that the users are either not aware about their existence in the library or satisfy their need by searching the abstracts from Internet.

CeRA proves to be the number one full text e-journal collection as it is used by majority (94.23 %) of users. Tyagi<sup>4</sup> (100 %), and Bhat<sup>5</sup>, *et al.*, (78 %) in their respective studies also registered a heavy usage of e-journals; while Santhi<sup>6</sup>, *et al.*, found that only 20.4 % of respondents use e-journals. A couple of research studies even reveal that it is print format of e-journals which is preferred over that of electronic format (Kumar<sup>8</sup>, *et al.*, Nikam<sup>9</sup>, *et al.*, and Ali<sup>10</sup>, *et al.*).



The e-book collections have not yet become popular among library users of DYSPUH&F, as only 48.07 % of them marked to have used the CAB e-Books and only 34.61 % the KrishiKosh. The users appear to be less familiar about the freely available full text e-theses collections, as only 'KrishiPrabha' is observed to be used by a considerable percentage of users (34.61 %). Nikam<sup>9</sup>, *et. al.*, also found that almost similar proportions of respondents (52 %). However, users of some academic institutions of the country, as reported by Tyagi<sup>4</sup> (79 %) and Bhat<sup>5</sup>, *et al.*, (76 %) are observed to use e-books to a considerably high magnitude.

The overall analysis shows that the I&A databases and e-journals emerge out as the most widely used e-resources, whereas the e-books and e-theses are not yet used to a desirable magnitude. These findings resemble to the outcome of a number of research studies reviewed in this paper, while also go contrary to some findings noted there upon.

The preference of users with regard to format and mode of access does not vary significantly from one type of user to another ( $p>0.05$ ). However, it is statistically substantiated that there is a significant variation in choice of three types of users with regard to use of I&A databases ( $p<0.05$ ), e-journals and e-theses collections ( $p<0.01$ ). But at the same time, no statistically significant variation is observed among three types of users with respect to use of e-books ( $p>0.05$ ).

## 7. CONCLUSIONS AND SUGGESTIONS

The users of DYSPUH&F prefer to use both print and electronic sources of information. In case of e-resources the 'online' is the most preferred mode of access. Majority of the users are seen to use I&A databases, viz., 'AGRIS (64.42 %)' & 'CABI (50.96 %)' and the e-journal collection 'CeRA (94.23 %)'. E-books and e-theses are not being yet used to a desired magnitude. The choice of 3 types of users varies significantly w.r.t. to use and preference of e-resources, while it does not vary in some cases.

The DYSPUH&F library should still adhere to a balanced collection development policy while procuring two formats of information resources in almost in equal proportion. The library should procure reputed e-book and e-thesis collections and launch an awareness campaign to promote their use. The library must ensure a smooth and reliable online access to its e-resource base.

## REFERENCES

1. Dr. Y.S. Parmar University of Horticulture & Forestry, Solan, HP, India. <http://www.yspuniversity.ac.in/> (accessed on 2 July 2015)
2. Lee, S.D. & Boyle, F. Building and electronic resource collection: A practical guide, Ed.2. Facet publishing, London, 2004.
3. International Coalition of Library Consortia (ICOLC). Statement of current perspective and preferred practices for the selection and purchase of electronic information, Vol. 17. ICOLC, Toronto, 1998. <http://legacy.icolc.net /statement.html> (accessed on 13 September 2013).
4. Tyagi, S. Use of electronic information resources at the Indian Pharmacopoeia Commission. *DESIDOC J. of Lib. & Inf. Tech.*, 2012, **32**(2), 171-78.
5. Bhat, I. & Mudhol, M.V. Use of e-resources by faculty members and students of Sher-E-Kashmir Institute of Medical Science (SKIMS). *DESIDOC J. of Lib. & Inf. Tech.*, 2014, **34**(1), 28-34.
6. Santhi, J. & Jeyachitra, S. Use and impact of e-resources at the Urumudhanalakshmi College, Trichirapalli. *Inter. J. of Sci. Res. (IJSR)*, 2014, **3**(2), 235-37.
7. Thanuskodi, S. Usage of electronic resources at Dr T.P.M. Library, Madurai Kamaraj University: A case study. *DESIDOC J. of Lib. & Inf. Tech.*, 2011, **31**(6), 437-45.
8. Kumar, B.T.S. & Kumar, G.T. Perceptions and usage of e-resources and internet by Indian academics. *The Electronic Library*, 2010, **28**(1), 137-56. DOI: 10.1108/02640471011023432.
9. Nikam, K. & Kumar, D. Evaluating the effective use of electronic journals by the academia: A study. *DESIDOC J. of Lib. & Inf. Tech.*, 2013, **33**(2), 125-30.
10. Ali, P.M.N. & Nisha, F. Use of e-journals among research scholars at Central Science Library, University of Delhi. *Collection Building*, 2011, **30**(1), 53-60.
11. Swain, D.K. & Panda, K.C. Use of electronic resources in business school libraries of an Indian state. *The Electronic Library*, 2009, **27**(1), 74-85.
12. Raza, M.M. & Upadhyay, A.K. Usage of e-journals by researchers in Aligarh Muslim University: A case study. *Inter. Inf. & Lib. Rev.*, **38**(3), 170-79.
13. Kumar, D. & Singh, R. Information resources and services of National Science Library, India, New Delhi: A user study. *Inter. J. of Lib. & Inf. Sci.*, 2009, **1**(2), 17-21. <http://www.academicjournals.org/ijlis>.
14. Archana, S.N. & Padmakumar, P.K. Use of online information resources for knowledge organisation in library and information centres: A case study of CUSAT. *DESIDOC J. of Lib. & Inf. Tech.*, 2011, **31**(1), 19-24.

### **About the Authors**

**Mr Nazeer Ahmad Bhat** started his carrier as Library and Information Assistant in All India Radio (Prasar Bharati) in the year 1995 and is currently working as Assistant Librarian in Central Library of Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir (SKUAST-K) since 2005. He has obtained his BSc, BLibSc, MLISc and MPhil in LIS and is presently pursuing his PhD from the University of Kashmir. He has 10 publications to his credit.

**Dr. Shabir Ahmad Ganaie** is presently working as Senior Assistant Professor in the Department of Library and Information Science, University of Kashmir. He holds BSc, BLISc, MLISc, and PhD. His field of specialization includes: Foundations of Library and Information science, library management, academic librarianship, etc. He had published a number of papers in national and international journals. His research interests include: Information seeking behavior, academic librarianship, library and information science profession, and LIS education.