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Use of Open Access Sources of Information in Agricultural Libraries of Northern India

Nazir Ahmad Bhat[1] and Shabir Ahmad Ganaie[2]

[1] Assistant Librarian, Central Library, Sher-e-Kashmir University of Agricultural Sciences and Technology-Kashmir

[2] Associate Professor, Department of Library and Information Science, University of Kashmir.

ABSTRACT

Purpose *– The paper aims to assess the level of awareness about open access sources of information (OASI) among users of agricultural libraries in northern India and to analyze the impact of this type of information source in catering the information needs of the users.*

Design/Methodology/Approach *– Survey method was adopted for the study in which Seven sampled universities were surveyed by using questionnaire as a data collection tool. The data collection procedure was further supplemented through the telephonic/ e-mail communications and face to face interactions with the respondents for collection of timely and prompt responses and removing ambiguities thereof. Data analysis and statistical tests were carried out using SPSS statistical package for drawing results and inferences on empirical basis.*

Findings *– The level of awareness regarding the use of open access sources of information is quite encouraging in the studied libraries but on the contrary the users are not seen much interested in their use. The majority of respondents are able to satisfy only about 20 to 25 percent of their potential information need by using this type of information source.*

Research Limitations *– The facts can be re-explored at a deeper level by adopting other methodologies like that of log analysis, citation analysis and the analysis of data collected through un-intervening personal observation of actual usage.*

Originality/value *– The paper is the first ordered and thorough attempt to analyze the user perception of OASI in north Indian agricultural libraries. The findings of the*

study will be useful towards establishing the futuristic approach about OASI.

Keywords *– Open Access, Open Access Sources of Information, OASI, Open Access Usage, Agricultural Universities, Information needs.*

INTRODUCTION

The open access movement is striving hard in an invisible manner to satisfy at least the minimum possible information needs of users across globe. It has also played a vital role to place a controlling effect on the otherwise accelerating inflation in prices of information resources. A lot stands written on the origin and history of open access (OA) movement, **Poynder(2004a); Poynder(2004b),** for example, has given a comprehensive, critical & historical account of this movement in two articles in *Information Today*. **Anbu (2013)** besides throwing light on existing scholarly publishing models, has also written a comprehensive article on the open access initiatives and products available across world, ranging from open access journals to institutional repositories. The movement has given birth to not only the open access journals, but continuous efforts are on to establish open access platforms for full text of books, theses, and other significant sources of information. On one side these are purely open access initiatives like that of DOAJ, DOAR, DOAB; while on the other side the commercial publishers have started to publish a good proportion of research articles on open access philosophy by publishing them through golden or green route mechanism. The vendors and aggregators of information products marketing the information on consortia basis have also incorporated the open access products across their platforms to not only make their end products attractive but also to facilitate prompt and proficient access to such information on anytime anywhere basis. **Sathyanarayana, (2008)** reports that Informatics India Pvt. Ltd., as a part of its contribution to OA movement, created a subset for the OA content indexed in JGate. This subset was launched as Open J-Gate (OJ) in February 2006. It indexes articles from 4,350 academic, research and industry journals in English language. Around 2,200 of them are peer-reviewed scholarly journals and the number is growing at a fast pace (more than 3,00,000 articles added every year). This way a plenty of information is around users across the net in online mode and remains to see how much the users are interested to use the same.

REVIEW OF LITERATURE

Although a lot of introductory and general type of literature is available about the open access movement and open access sources of information (OASI) across globe, not much research seems to have been conducted to assess the awareness of users about such resources and the quantum at which the OASI are used. The investigator could collect only a few relevant studies, which are reviewed as follows.

Nikam and Kumar, (2013) explored that the faculty members and research scholars

of Mysore University were aware about the open access journals and directories, but the awareness level is quite low. While examining the use of open access (OA) resources by science and social science scholars at the University of Kashmir, **Gul, Shah & Baghwan (2010)** inferred that respondents were using OA resources to a considerable extent as they used OA resources for research (60 percent) and for publishing their work (30 percent). In his study **Gupta (2011)** also found that more than 95% of the users at Kurukshetra University use open access journals available on the internet. **Prasad (2015)** found that 60%-80% of his study where aware about open access sources of information (OASI) ranging from a moderate to high level. Majority of them (70%-100%) use OASI for one or the other purpose. The author analysed that the students (70%-100%) use them for examination and study purpose, (70%-100%)research scholars use them for study and research purpose and 70% of teachers use them for preparing their research publications& teaching assignments. "Users of professional education systems mostly depend on Internet resources (96%), among whom 58% find freely available e-resources of their utmost utility" **(Dhuri, 2017). Seetha-ram-chander-rao (2013)** in his study found that 91.4% students and 77.3% teachers did not know about the electronic journals/ portals that provide free of cost access to information. **Hapase (2013)** observed that 74.80% of the respondents of his study did use open source e-resources; and found that open source e-articles (72.00%) were more popular than open source e-journals (48.00%), e-books (32.40%).

STATEMENT OF PROBLEM

A lot of information is now available as open access sources of information (OASI). Some of them have been started by some scholarly volunteers or voluntary organisations and others by commercial publishers through specially designed access models. It is a prime need of time to assess the level of awareness of users regarding the available OASI and measure the actual quantum of use. It will be quite beneficial to know up to what magnitude the users are able to meet their information needs through this newly emerging channel of information & communication.

SCOPE

Four out of seven states of northern India, viz. Delhi, Himachal Pradesh (HP), Jammu & Kashmir (J&K) and Punjab were selected randomly as a cluster for investigation. Seven well established agricultural universities/deemed to be universities existing in the sampled-out states were considered for investigation. These are:1. Indian Agricultural Research Institute (IARI), New Delhi; 2. Chowdhury Sarwan Kumar Himachal Pradesh Krishi Vishwavidyalaya (CSKHPKV), Himachal Pradesh; 3. Dr. Y.S. Parmar University of Horticulture and Forestry (DYSPUH&F), Himachal Pradesh; 4. Sher-e-Kashmir University of Agricultural Science & Technology of Jammu (SKUAST-J), Jammu & Kashmir; 5. Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K), Jammu & Kashmir; 6. Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana (GADVASU), Punjab; and 7. Punjab Agricultural University (PAU), Punjab. Response of

only three categories of users, viz. Scientists (Faculty Members), PhD Scholars and Masters' degree students were collected and analysed to consolidate the facts and findings.

OBJECTIVES

The main objectives of the study are:

1. To assess the level of awareness about open access sources of information among users of agricultural libraries of northern India;
2. To work out the proportion of users for each of the commonly used open access sources of information and to explore whether the users like to use a single or more than one OASI simultaneously;
3. To reveal the magnitude up to which the users are able to meet their information needs through open access sources of information.

METHODOLOGY

A survey was conducted across the universities under scope of present study during 2015 while using questionnaireas a data collection tool. The investigator also interacted with the respondents through telephone and also availed the e-mail service for ascertaining timely response and clearing the doubts about the collected responses.

The data collected through the survey has been processed with the help of Statistical Package for Social Science (SPSS). In order to convert the data into meaningful information and draw necessary inferences on scientific grounds the data about each entity was codified into meaningful numerical and alphabetical codes. The values were entered in the form of standardized codes to avoid misinterpretation and spelling errors. The collected data was analysed to be of nominal type, the variables were judged to be independent in nature as opposite to paired type and it is also evident that more than two groups are under investigations. Moreover, the application of Shapiro Wilk's Normality Distribution Test indicated that the data is not normally distributed. Keeping these facts in view, Chi Squared ($\chi 2$) Test was found appropriate and applicable for substantiating the level of significance of the derived facts and determine the association among the variables on scientific grounds.

DATA ANALYSIS AND INTERPRETATION

Open access sources of information (OASI) have gained so much importance that even the commercial publishers have opened doors to the peer-reviewed information through so called golden and green routes to information. Domain specific surveys of electronic information to adjudicate the awareness, usage, use patterns and the utility of OASI is a prime need of time. In order to arrive at empirical findings regarding this aspect in northern Indian agricultural universities, the data collected from Faculty Members and Students has been analysed under three sub-headings as follows:

AWARENESS ABOUT OPEN ACCESS SOURCES OF INFORMATION

While assessing the level of awareness among users regarding the availability of Open Access Sources of Information, total of 1200 responses were analysed as presented in Table 1.

Table 1. Awareness about Open Access Sources of Information (N=1200)

S. No.	Statement	Yes	No
(i)	Do you know that some sources of information are available free of cost over Internet?	1080 (90.00) *	120 (10.00)
(ii)	Do you ever use these free of cost sources of information?	872 (72.66)	328 (27.33)
χ^2=118.74; df=1; p<0.01			

** Figures in parentheses indicate percentage*

It is evident from Table 1 that the majority of the respondents (90%) are aware of the availability of the open access sources of information on the Internet, but only 72.66% of respondents are actually recorded to use these sources.

USAGE OF OPEN ACCESS SOURCES OF INFORMATION

Response of users was sought about six commonly used open access sources of information (OASI), selected for study on the basis of their popularity adjudged from the findings of the pilot study. The data collected in this regard is presented in Table 2.

Table 2. Usage of Open Access Sources of Information (N=1200)

S. No.	Open Access Source of Information	Frequency	Rank
(i)	Universal Digital Library	496*(41.33)	1
(ii)	Online Books Page	394(32.83) **	2
(iii)	DOAJ	155(12.92)	3
(iv)	DOAB	62(5.17)	4
(v)	Project Gutenberg	40(3.33)	5
(vi)	DOAR	33(2.75)	6
(vii)	None of these	328(27.33)	…
χ2=995.81; df=6; p<0.01			

**Respondents have opted for more than one option*

*** Figures in parentheses indicate percentage*

Table 2 indicates that the *'Universal Digital Library', 'Online Books Page'* and *'Directory of Open Access Journals (DOAJ)'* with 496*(41.33%)*, 394*(32.83%)* and

155*(12.92%)*, respectively, prove to be 1st, 2nd and *3rd* most popular OASI. Directory of Open Access Repositories (DOAR) with only 33 (2.75%) user indication turns out to be least popular OASI. Once again, the overall percentage in each of the cases implies that majority of users (more than 59%) do not use the OASI. This along with the fact that some 27.33% of users do not use any of open access sources of information is a matter of concern that needs to be redressed by the concerned authorities. *The p-value of the Table 2 confirms a statistically significant difference in inclination of users w.r.t. use of open access sources of information ($p<0.01$).*

Deeper analysis of data reveals that 53% of users are seen to use a single OASI, 27% do not use any OASI at all and some 20% use a combination of more than one OASI simultaneously. Out of these 20% of users, majority 15% use a combination of two sources, 4% use three and 1% use four or more sources simultaneously. Data about most popular combinations is given in Table 3.

Table 3. Combinations about usage Of OASI (N=1200)

S. No.	Combinations of OASI	Frequency	Percentage**
(i)	Single OASI	631	52.6
(ii)	None	328	27.3
(iii)	4*& 5	115	9.6
(iv)	1 & 3	16	1.3
(v)	1 & 5	14	1.2
(vi)	1, 4 & 5	13	1.1
(vii)	1 & 4	10	0.8
(viii)	Other Combinations	73	6.1
Total		**1200**	**100**

**1=DOAJ;*	*2=DOAR;*	*3=DOAB;*
4=Online Books Page;	*5=Universal Digital Library;*	*6=Project Gutenberg*
***Respondents have opted for more than one option*		

It is clear from Table 3 that the combination '4 & 5' i.e. 'Online Books Page' & 'Universal Digital Library' used by 9.6% of users ranks as number one combination and is followed by the combination '1 & 3' i.e. 'DOAJ' & 'DOAB' used by 1.3% of users and '1 & 5' i.e. 'DOAJ' & 'Universal Digital Library' used by 1.2% of users as 2nd and 3rd best combination, so far as the use of open access sources of information is concerned.

UTILITY OF OPEN ACCESS SOURCES OF INFORMATION

Figure1displays the response regarding utility of open access sources of information

for satisfying information needs. It reveals that the users of north Indian agricultural libraries yet do not rely comprehensively on the use of open access sources of information (OASI), as majority of them (73.58%) revealed that they are in a position to satisfy their information needs only up to the magnitude of 20-25%, from this type of information resources and only 15.42% of respondents were seen to satisfy their needs to the magnitude of 45-50% at the maximum.

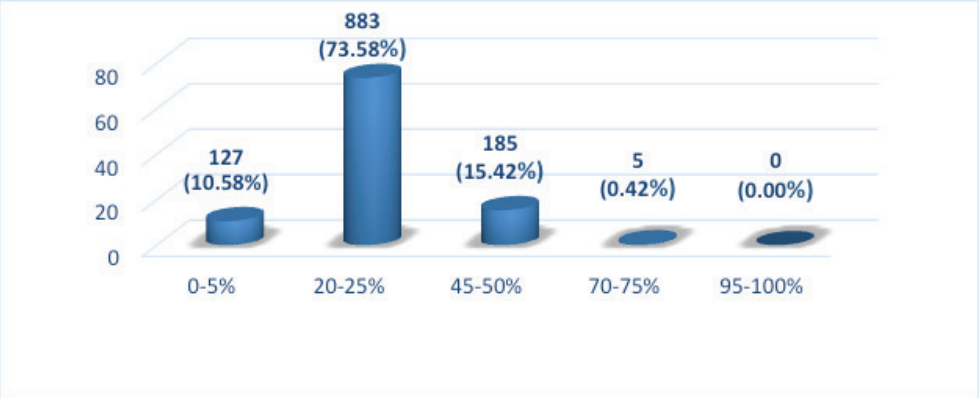


Figure 1. Magnitude to which the open access sources of information satisfy the information needs of users

FINDINGS

Majority (90%) of Scientists, Research Scholars and PG Students of north Indian agricultural universities claim to be aware about the availability of open access sources of information (OASI) on Internet and a good proportion (72.66%) of them claim to use one or the other OASI. However, through a cross check it is revealed that the users of north Indian agricultural libraries are not much interested about the use of individual open access sources of information, among the ones under investigation. It is also evident from the collected responses that the majority of respondents (73.58%) are in a position to satisfy only up to a small magnitude (20%-25%) of their actual information needs from this type of information source.

CONCLUSION AND SUGGESTIONS

The Scientists, Research Scholars and PG Students of north Indian agricultural universities are not much aware about the utility of open access sources of information as they are not seen to use them to a desired magnitude. However, it is also concluded that the users cannot rely completely on OASI to satisfy their information needs. The library staff should make adequate efforts to ensure maximum usage of open access sources of information by enhancing their visibility on the platforms commonly used by users for accessing the Library subscribed resources. The advocates of open access movement need to take more pains to attract more and more sources of information over the open access platforms, but at the same time need to

enhance the reliability and improve the standard of the publicly available content.

REFERENCES

Anbu, K. J. P. (2013). Open access electronic publications: a boost for academic libraries. In: M. Conteh-Morgan and B. Dione (Eds.): *Scholarly communication in Africa in the digital era.* Dakar: CODESRIA. Retrieved from: https://www.codesria.org/IMG/pdf/John_Paul _Anbu_K-.pdf?1568/...

Dhuri, K. R. (2017). *Use and user study of e resources in medical and engineering college libraries in Goa* (Unpublished doctoral dissertation). Maharashtra (India): Department of Library & Information Science, Tilak Maharashtra Vidyapeeth. Retrieved from: http://shodhganga.inflibnet.ac.in/handle/10603/166485

Gul, S., Shah, T. A. & Baghwan, T. A. (2010). Culture of open access in the University of Kashmir: a researcher's viewpoint. *ASLIB Journal of Information Management, 67*(4), 458-468. DOI: 10.1108/00012531011035008

Gupta, D. K. (2011). Use pattern of print and electronic journals at the Kurukshetra university, India. *Program: electronic library and information systems, 45*(2), 213-230. DOI: 10.1108 /00330331111129741

Hapase, S. S. (2013). *Use of resources by the students and researchers of Pravara Institute of Medical Sciences, Loni (Deemed university)*, (Unpublished doctoral dissertation). Rajasthan (India): Department of Library and Information Science, Shri Jagdishprasad Jhabarmal Tibarewala University. Retrieved from: http://shodhganga.inflibnet.ac.in/handle /10603/17569

Nikam, K. & Kumar, D. (2013). Evaluating the effective use of electronic journals by the academia: A study. *DESIDOC Journal of Library & Information Technology, 33*(2), 125–130. DOI: 10.14429/djlit.33.2.4200

Poynder, R. (2004a). Ten year after. *Information Today, 21*(9), 1. Retrieved on 21 Nov 2016 from: http://www.infotoday.com/

Poynder, R. (2004b). No gain without pain. *Information Today.* 21(10), 1. Retrieved on 21 Nov 2016 http://www.infotoday.com/

Prasad, N. N. (2015). Awareness and attitude towards open access sources and services among students research scholars and faculty of management colleges in Karnataka a study (Unpublished doctoral dissertation). Karnataka (India): Department of Library and Information Science, University of Mysore. Retrieved from: http://shodhganga.inflibnet.ac .in/handle/10603 /134581

Sathyanarayana, N. (2008). Open access and open J-Gate. *DESIDOC Journal of Library and Information Technology*, 28(1), 57-60. DOI: 10.14429/djlit.28.1.153

Seetha-ram-chander-rao, S. (2013). Use patterns of e resources in engineering college libraries in Andhra Pradesh a study (Unpublished doctoral dissertation).

Andhra Pradesh (India): Department of Library and Information Science, Manonmaniam Sundaranar University. Retrieved from: http://shodhganga.inflibnet.ac.in/handle/10603/44562

AUTHOR BIOGRAPHIES

Nazir Ahmad Bhat

Nazir Ahmad Bhat is a Doctorate in Library and Information Science from University of Kashmir. He started his career as Library and Information Assistant in All India Radio (Prasar Bharati) and has also worked as college librarian. He is currently working as an Assistant Librarian at Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir (SKUAST-K). He has published a number of research articles in National and International peer reviewed journals and conference proceedings. He has also designed and developed a soft solution for storage, indexing, retrieval and delivery of information about research articles available in print only format of journals in SKUAST-K Library System. He has also developed the Institutional Repository at SKUAST-K.

*Dr Nazir Ahmad Bhat is the **corresponding author** and can be reached at **bhatnazeerahmad@gmail.com***

Shabir Ahmad Ganaie

Dr Shabir Ahmad Ganaie is Associate Professor & Head, Department of Library and Information Science, University of Kashmir, India. His research interests include knowledge management, library networking, public libraries and Agriculture Information Systems. He has published a number of research papers in National and International journals. He has also presented a number of papers in National and International Conferences.