

# USE OF OPEN ACCESS RESOURCES AMONG PG STUDENTS, RESEARCH SCHOLARS AND FACULTY OF AGRICULTURAL UNIVERSITIES OF HARYANA PUNJAB AND HIMACHAL PRADESH

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## Abstract:

Presently, enormous e-resources related to agricultural and allied are available in open access mode. These resources are very useful for the students, researchers and faculty of agricultural universities. The present study is aimed to study the awareness and use of open access resources by the PG students, research scholars and faculty in agricultural universities of Haryana, Punjab and Himachal. It is intended to assess use of some important open access resources related to agricultural and allied sciences. The study also assesses efforts made the agricultural libraries to promote use of open access resources and provides viable suggestions to enhance the use of open access resources.

**Key Words:** Open Access Resources, Use of Open Access Resources, Agricultural Libraries and University Libraries.

## Introduction

Advent of web technology has given unprecedented opportunities to scholarly communities to share fruits of their research globally without payment, for the sake of knowledge by enabling them to publish their work in open access resources. These open access resources are composed of free, online peer-reviewed journal, conference papers, technical reports, theses, databases, working papers, institutional repositories, e-Portals, etc. In most cases there are no licensing restrictions on their use by readers. They can therefore be used freely for teaching, research, and academic purposes.

Initially, open access initiatives was taken by some organizations like Open Society Institute later on most of the national and international organizations, government organizations, societies, association, commercial publishers framed their open access policies and put their publications in open access mode. Now open access resources are available in almost all the disciplines and libraries can make use of these resources to strengthen their collection without spending money and can provide latest information to their users, thus can make their services more effective.

Presently, enormous e-resources related to agricultural and allied sciences published by national and international organizations, government agencies, and commercial publishers are available in open access mode. These resources are very useful for the students, researchers and faculty of agricultural universities. Hence, by promoting the users to make use of these resources agricultural libraries can not only serve their users in better way in the time of shrinking budget and increasing cost of literature but they can also satisfy growing information needs of their clientele.

**Objectives**

- To know methods used to aware the user about open access resources by the Agricultural University Libraries.
- To assess awareness of e-resources and open access resources among the PG students, research scholars and faculty in Agricultural Universities.
- To find the comparison between awareness of e-Resources and Open Access Resources.
- To identify the use of open access resources among PG students research scholar and faculty of agricultural universities.
- To suggest measures to enhance the use of open access resources.

**Scope**

The scope of the present study is limited to PG students, research scholars and faculty of Chaudhary CCS Haryana Agricultural University, Hisar (Haryana), National Dairy Research Institute, Karnal (Haryana), Punjab Agricultural University, Ludhiana (Punjab), Guru Angad Dev Veterinary & Animal Science University, Ludhiana (Punjab), CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur (Himachal Pradesh), Dr Yashwant Singh Parmar University of Horticulture & Forestry, Solan(Himachal Pradesh). Out of these 6 agricultural university only NDRI, Karnal is Deemed Agricultural University (DAU) rest of 5 universities are State Agricultural Universities.

**Methodology**

The data used in the present the study was collected through the survey conducted in 2011. Questionnaire method was used to collect the responses of the users regarding awareness and use of open access resources while data related to efforts made by the libraries to promote use of open access resources was collected from the universities websites and through telephonic discussions with librarians. For the statistical analysis of user data the software package “Statistical Package for Social Reviews (SPSS)” was used.

**Data Analysis and Presentation**

The data collected through the users’ questionnaire, university websites and librarians has been well presented in tabular form. The data from librarian questionnaires has been analysed manually while users’ data has been analysed by using SPSS package (16th version). Mainly chi-square test has been used for drawing inference. Yates correction has also used wherever required.

**Table 1-Methods used to aware the user about open access resources**

Option	CCSHAU	NDRI	PAU	GADVASU	CSKHPKV	YSPUHF
Link to open access resources on library portal	√	-	-	-	√	-
Orientation programme	-	√	-	-	-	-
Notices	√	-	-	-	-	-
Library brochure	-	-	-	-	-	-
Trainings	√	√	-	-	-	-
Teaching course	√	√	-	-	-	-
Day to day suggestions during literature search.	√	√	√	√	√	√

Table 1 shows different methods used to aware the users about open access resources by agricultural libraries. It is clear from the above table that different methods were applied in different libraries to make aware the users about open access resources. To make aware the users about open access resources, trainings, teaching courses in CCSHAU and NDRI, link to open access resources on library portal in CCSHAU and NDRI, orientation programme in NDRI, notices in CCSHAU were used while day to day suggestions during literature search was only the method adopted by all agricultural university libraries.

**Table 2- Awareness of e-resources**

Awareness	Status (N= 511)			Total N (%)	$\chi^2$ , d.f.
	PG N (%)	RS N (%)	Faculty N (%)		
Yes	113 (56.2)	78 (92.9)	195 (86.3)	386 (75.5)	68.356*, 2
No	88 (43.8)	6 (7.1)	31 (13.7)	125 (24.5)	
Total	201 (100.0)	84 (100.0)	226 (100.0)	511 (100.0)	

Table 2 shows the awareness of e-resources among different category of users. Out of total respondents (N=514) 511 respondents responded to this question. It is revealed in the table that more research scholars (92.9 percent) and faculty (86.3 percent) were aware of e-resources than PG students (56.2 percent).

When the response was statistically tested it was found significantly different that indicates that different type of users were aware of e-resources differently. This may be due to the less involvement of PG students in research work if compare with research scholars and faculty and another reason may be due to the lack of training /orientation programmes/ workshops to get aware of e-resources in libraries.

**Table 3 -Awareness of open access resources**

Awareness	Status (N= 386)			Total N (%)	$\chi^2$ , d.f.
	PG N (%)	RS N (%)	Faculty N (%)		
Yes	36 (31.9)	53 (67.9)	99 (50.8)	188 (48.7)	24.731*, 2
No	77 (68.1)	25 (32.1)	96 (49.2)	198 (51.3)	
Total	113 (100.0)	78 (100.0)	195 (100.0)	386 (100.0)	

Table 3 shows the awareness of open access resources by different type of users in agricultural universities. Out of total respondents (N=386), only 48.7 percent respondents were aware of open access resources. Among all category of users, research scholars (67.9 percent) were aware of open access resources the most followed by faculty (50.8 percent) while only 31.9 percent PG students were aware of these resources.

When the response of awareness of open access resources was statistically tested it was found significantly different indicating that level of awareness was different among all category of users in selected agricultural university libraries. The reason again may be due to less involvement of PG students in research work if compare with research scholars and faculty members and another reason may be due to the lack of trainings /orientation programmes/ workshops to get aware of e-resources in libraries.

**Table 3 Comparison of awareness of e-resources with open access resources**

Option	Status (N= 511)			Total N (%)
	PG N (%)	RS N (%)	Faculty N (%)	
e-Resources	113 (56.2)	78 (92.9)	195 (86.3)	386 (75.5)
Open Access Resources	36 (17.9)	53 (63.1)	99 (43.8)	188 (36.8)

Table 3 show the comparison between users who were awareness of e-resources and open access resources. It is very clear from the table that overall out of total respondents almost three-fourth (75.5 percent) of the respondents

were aware of e-resources while more than one-fourth (36.8 percent) of the respondents were aware of open access resources. It is also clear that out of total research scholar respondents 92.8 percent were aware of e-resources while 63.1 percent were aware of open access resources. Similarly 86.3 percent faculty out of total faculty respondents were aware of e-resources while less than half of the faculty (43.8 percent) were aware of open access resources. In the case of PG students, out of total students a little more than half (56.21 percent) were aware of e-resources while a little less than one-fourth (17.09 percent) of PG students were aware of open access resource.

**Table 4 -Use of open access resources**

Use	Status (N= 188)			Total N (%)	$\chi^2$ , d.f.
	PG N (%)	RS N (%)	Faculty N (%)		
Yes	29 (80.6)	51 (96.2)	81 (81.8)	161 (85.7)	8.336, 2
No	7 (19.4)	2 (3.8)	18 (18.2)	27 (14.3)	
Total	36 (100.0)	53 (100.0)	99 (100.0)	188 (100.0)	

Table 4 shows the use of open access resources by different categories of users in agricultural universities. Out of total respondents who were aware of these resources (N=188), 85.7 percent respondents made use of them. Among all categories of users, majority of research scholars (96.2 percent) used open access resources followed by faculty (81.8 percent) and PG students (80.6 percent).

When the response of use of open access resources was statistically tested, it was found significantly not different indicating that open access resources were similarly used by research scholars, faculty and PG students in agricultural university libraries.

**Table 5 -Use of different open access resources**

Open access resource	Status (N=161)						Total N (%)		$\chi^2$ , d.f
	PG N (%)		RS N (%)		Faculty N (%)		Yes	No	
	Yes	No	Yes	No	Yes	No			
DOAJ	6 (20.7)	23 (79.3)	31 (60.8)	20 (39.2)	41 (50.6)	40 (49.4)	78 (48.4)	83 (51.6)	12.207*, 2
FAO publication	9 (31.0)	20 (69.0)	23 (45.1)	28 (54.9)	27 (33.3)	54 (66.7)	59 (36.6)	102 (63.4)	2.903, 2
AGRIS	6 (20.7)	23 (79.3)	15 (29.4)	36 (70.6)	22 (27.2)	59 (72.8)	43 (26.7)	118 (73.3)	.736, 2
Pubmed	5 (17.2)	24 (82.8)	12 23.5	39 (76.5)	15 (18.5)	66 (81.5)	32 (19.2)	129 (80.1)	.648, 2
HighWire Press	2 (6.9)	27 (93.1)	12 (23.5)	39 (76.5)	15 (18.5)	66 (81.5)	29 (18.0)	132 (82.0)	4.018, 2
African Journals Online (AJOL)	1 (3.4)	28 (96.6)	8 (15.7)	43 (84.3)	16 (19.8)	65 (80.2)	25 (15.5)	136 (84.5)	5.507, 2
Free Medical Journals	2 (6.9)	27 (93.1)	6 (11.8)	45 (88.2)	12 (14.8)	69 (85.2)	20 (12.4)	141 (87.6)	1.375, 2
Electronic Journals Library	2 (6.9)	27 (93.10)	5 (9.8)	46 (90.2)	12 (14.8)	69 (85.2)	19 (11.8)	142 (88.2)	1.640, 2
AgriFor	2 (6.9)	27 (93.1)	11 (21.6)	40 (78.4)	4 (4.9)	77 (95.1)	17 (10.6)	144 (89.4)	8.975, 2

AgNIC	2 (6.9)	27 (93.1)	5 (9.8)	46 (90.2)	9 (11.1)	72 (88.9)	16 (9.9)	145 (90.1)	.454, 2
AgZines	0 (0.0)	29 (100.0)	6 (11.8)	45 (88.2)	7 (8.6)	74 (91.4)	13 (8.1)	148 (91.9)	5.747, 2
Any Other (a)PERii	0 (0.0)	29 (100.0)	4 (7.8)	47 (92.2)	4 (4.9)	77 (95.5)	8 (5.0)	153 (95.0)	3.721, 2
(b) SciELO	0 (0.0)	(100.0)	3 (5.9)	48 (94.1)	3 (3.7)	78 (96.3)	6 (3.7)	155 (96.3)	2.768, 2

Table 5 indicates the use of various open access resources used by different type of users in agricultural universities. Among all open access resources, 25 percent to 50 percent users used DOAJ, FAO publication and AGRIS as 48.4 percent users used DOAJ followed by FAO publications (36.6 percent), AGRIS (26.7 percent). 10-20 percent users used Pubmed, HighWire Press, African Journals Online, Free Medical Journals and Electronic Journals Library as 19.2 percent users used Pubmed followed by HighWire Press (18.0 percent), African Journals Online (15.5 percent), Free Medical Journals (12.4 percent) and Electronic Journals Library (11.8 percent). Rest of the open access resources i.e AgriFor, AgNIC, AgZines, any other (PERii and SciELO) were used by less than 10 percent of the users.

The table also reflects that out of all open access resources, three most used resources by all the three category of users were DOAJ (20.7 percent PG students, 60.8 percent research scholars and 50.6 percent faculty), FAO publication (31.0 percent PG students, 45.1 percent research scholars and 33.3 percent faculty) and AGRIS (20.7 percent PG students, 29.4 percent research scholars and 27.2 percent faculty). Pub med and High Wire press each were used by 23.5 percent research scholars and 18.5 percent faculty members but Pubmed was relatively highly used (17.2 percent) than HighWire Press (6.9 percent) by PG students.

It is apparent from the above table that among all open access resources, not even a single open access resource was used by half of the users who were aware of open access resources. Still, more than half of research scholars and half the faculty used DOAJ for their academic and research purposes.

When the response of use of DOAJ was statistically tested it was found significantly different indicating that different type of users uses this open access resource differently while the response of other open access resources was found not significantly different indicates toward the similar use of these open access resources by different category of users.

## **Conclusion**

A large number of publications whether it is journal, book, government, theses, publication, statistical databases, institutional repositories, etc related to agricultural sciences are now accessible in open access mode through Internet. These important information sources should be optimally utilized for the development of agriculture in India. But findings of the study reveal that awareness and use of open access resources in agricultural universities of Haryana, Punjab and Himachal Pradesh is very less. Users of agricultural libraries are using a few limited open access resources viz. DOAJ, FAO, AGRIS, Pubmed.

Agricultural librarians being responsible to cater the information need of the users should put more efforts to aware their users with important open access resources related the agricultural sciences. The one of the best way to enhance to promote the use of open access resources is to identify such type of important resources regularly and provide their links with brief description about the utility of resources in specific discipline on the library portal. Some other methods viz. orientation/training, users' manual, teaching of library & information services, notices, charts, etc could also be applied to increase the awareness of these resources.

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