

A STUDY OF OPEN ACCESS RESOURCES USE BY RESEARCHERS IN AGRICULTURAL UNIVERSITIES AT GUJARAT STATE

BHARAT KUMAR D. PATEL

Librarian, LDRP-ITR, Sector-15, Gandhinagar
Bharatd_1970@yahoo.com

ABSTRACT

In the 21st century, due to the internet usage, it is possible to collect the valuable information without spent time in the world. Today open access resources easy available in all discipline but lack of information about open access resources, the researcher cannot maximum used in research study.

KEYWORD: Open Access Resource, CeRA, ICAR, Gujarat State

1. INTRODUCTION:

In ancient time, Harappan - Chalcolithic culture started Cultivation of wheat, barley, grams and peas in Indus Valley. A person used poultry, buffalo and elephant as domestics' animals. Time to time needs an agricultural education and research for development of agriculture system in India. Era on the British educational system and on the recommendation of university education commission headed by Dr. Radhakrishnan and Indo-American joint visit it had developed on the pattern of the US Land Grant Colleges. The available records show that the earliest agriculture college was established at Saidapet in 1877. According to Singh, K.P. (2012) there were only 17 agricultural colleges, three veterinary colleges and one agricultural engineering college in 1950 in India. These colleges were affiliated to the general universities. On the recommendation of Kothari commission ICAR draft a model agricultural university act which was passed by Indian Parliament and agricultural universities were established in the different states of India. At present there are 56 SAUs, 5 DUs and 1 CAU, 4 Central Universities with Agricultural Faculty in India. ICAR has established 17 NRC, 51 ICAR research institutes, 6 National Bureaux, 22 Project Directorate and 60 AICRP in the country for enhancing the agricultural research in the various fields. It has launched National Agricultural Technology Project (NATP), National Agricultural Innovation Project (NAIP), KrishiPrabha, and Consortium for e-resource (CeRA), e-Grantha Consortium etc, for the agricultural research. KrishiPrabha, Consortium for e-resource (CeRA), e-Grantha Consortium are the innovative project sponsored by ICAR for the agricultural information dissemination in the country.

In Gujarat there are 4 state agricultural universities which have 6 Agricultural Colleges, 4 Veterinary & AH, 2 Horticultural, 2 Home Science & Nutrition, 1 Basic Sc. & Humanities, 7 Agri. Eng./Bio. Tech/Agri. Inf. Tech, 4 Agri-business, 2 Dairy Sc & Food Tech, 1 Forestry, 1 Fisheries,

14 Polytechnic in various subjects, 1 E-PG Courses. In these institutes there are numbers of the scientist, teachers, researchers, research scholar, decision makers and students – both UG & PG. They are engaged in their educational and research activities. For the requirement of agricultural information the universities have their university library in the campus. The university library provide information using their own resources and online resources available through KrishiPrabha, Consortium for e-resource (CeRA), e-Grantha Consortium and open access resources etc.

2. OBJECTIVES OF STUDY:

1. To explore the quantity of different kind of library and information resources / document available to the agricultural research community in Gujarat.
2. To investigate which kind of different information resources are used by the agricultural researchers.
3. To study the problems use of open access resources faced by agricultural researchers.
4. Evaluate the pattern of access and use of digital resources by the PG and doctoral students.

3. REVIEW OF LITERATURE:

Review of literature is an early step for conducting research. It enables for researchers to avoid the duplication of research work and broadens the understanding of the research problem. The researcher used some research papers and website in literature review. (1) Jain, Arun and Dr. K. Veeranjanyulu. "Repository of Indian National Agricultural Research & Education System (Nares) - Open Access to Institutional Knowledge". This paper provides information on krishikosh repository. (2) Li Yuan, Sheila Maceill and Wilbert Kraan. "Open Educational Resources -

Opportunities and Challenges for Higher Education." The authors briefly provides the background to the current development of and future trends around OER aimed at adding to our understanding, stimulating ongoing debate among the JISC community and developing a research agenda.(3) Shukla Paraj and Singh Anand P. "Open access initiatives for agricultural information transfer systems in India."The authors mention that study attempts to review the need and current status of Open Access and its evolving equation with respect to Agricultural Information Transfer Systems in India. It also presents the facts collected through an Internet-based study of various organizations involved in the process of amelioration of agricultural information transfer system. (4) Okare,N.E and Anaehobi, E.S. "Level of Awareness of Open Access Electronic Resources by Scientists in Agricultural Research Institutes in Edo State, Nigeria."This study provides the information about level of awareness of open access electronic resources (OAER) by scientists in agricultural research institutes in Edo State, South geopolitical zone of Nigeria. (5) <http://ageconsearch.umn.edu/> AgEcon Search is a free, open access repository of full-text scholarly literature in agricultural and applied economics, including: working papers, conference papers, and journal articles (6) <http://agricola.nal.usda.gov/help/aboutagricola.html> Agricola means agricultural online access of National Agricultural Library catalogue. NAL catalogue provide the books and citation on various agricultural subjects. (7) <https://doaj.org/> provides the 490 journals on agricultural science. These journals cover the 121918 article regarding agricultural science and Technology.

4. RESEARCH METHODOLOGY:

In the research study, the researcher used a survey research method. This method is most useful in the research study. The researcher used questionnaire as a data collection tool. Total 502 questionnaires send to

respondent and received back 276 questionnaires with feedback. SPSS-16 (Software package for Social Science) for data analysis.

5. OPEN ACCESS RESOURCES IN AGRICULTURAL SCIENCE

Today higher education institute used ICT Technology in their teaching and learning system. In the digital era, day to day increases the usage of Open Access Resources in the higher education. Open Access means something that is free. However, it is not only free but, available online and in an unrestricted manner. In other words, when research literature, like peer-reviewed journal articles, conference papers, technical reports, working papers, theses or dissertations are available free and online with no legal restrictions on their use, they are called OA literature. Following open access resources available in agricultural science.

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|--------------------------------|-----------------------------------|
| (1) AgCom Search | (2) Core Horticultural Literature |
| (3) Dendrome (Forest Database) | (4) Agricola |
| (5) Livestock Library | (6) Agricat |
| (7) CeRA | (8) Agris Database |
| (9) Krishikosh | (10) Krishiprabha |
| (11) DOAJ | (12) E-Granth |

6. DATA ANALYSIS & INTERPRETATION:

In the research study, data analysis and interpretation is very valuable part for find out the answer of research problems/question. Here the investigator has used the survey research method and collect the primary data from the respondents using the data collection tool like a questionnaire. Primary data mention as under.

Table-1: College and Research Center

Sr. No	Name of University	College	Research Station
1	Anand Agricultural University	14	28
2	Navsari Agricultural University	14	21
3	Junagadh Agricultural University	9	25
4	SardarKrishinagar Agricultural University	8	29

Above table indicate that the number of colleges and research centers affiliated with agricultural universities. Anand agricultural university has 14 colleges and 28 research stations, Navsari Agricultural universities has 14 colleges and 21 research station, Junagadh agricultural university has 9 colleges and 25 research station and SardarKrishinagar Dantiwada agricultural university has 8 colleges and 29 research stations in North Gujarat.

Table-2: Category-wise Users

Sr. No	Type of Users	AAU	NAU	JAU	SDAU	Total	Average
1.	PG Students	507 (25.5%)	560 (28.17%)	540 (27.16%)	381 (19.17%)	1988	497
2.	Research Scholars	94 (30.23%)	83 (26.69%)	80 (25.72%)	54 (17.36%)	311	77.75
3.	Academic Staff	92 (21.5%)	136 (31.78%)	88 (20.56%)	112 (26.16%)	428	107
4.	Technical/ Clerical Staff	17 (33.33%)	12 (23.53%)	9 (17.65%)	13 (25.49%)	51	12.75

Above table reveals that among users PG Student 25.50%, 28.17%, 27.16% and 19.17% are found in AAU,NAU, JAU and SDAU respectively. Whereas among Research Scholar 30.23%,26.69%,25.72% and 17.36% are found in AAU,NAU,JAU and SDAU respectively. Among academic staff 21.50%, 31.78%, 20.56% and 26.16% are found in AAU, NAU, JAU and SDAU respectively. Technical and Clerical staff 33.33%, 23.53%, 17.65% and 25.49% are found in AAU, NAU, JAU and SDAU respectively.

Table-3: University wise Library Collection

Sr. No	Name of Collection	AAU	NAU	JAU	SDAU
1	Book Collection	53400	49300	42700	45600
2	Research Reports.	5287	4514	3277	5440
3	Theses	1478	1564	652	5650
4	National Journal	78	57	150	177
5	Int. National Journal	45	36	42	78
6	Bound Volume	8770	9926	14000	4150

Above table mention that Dr. M. D. Patel library hold maximum books compared of other agricultural library, highest library book collection is 53400 in Anand Agriculture University. The highest collection of report is 5440 and thesis collection is 5650 show in SDAU,150 National journal subscribe in JAU and 177 National journal subscribe in SDAU.78 International journal subscribed in SDAU,45 International journals subscribed in AAU.14000 bound held by JAU and 9926 bound volume held by NAU. It also shows that almost Library collection of entire agriculture universities is very good.

Table-4: ICT Equipment

Sr. No	Name of equipment	AAU	NAU	JAU	SDAU	Average
1	Computer	20	16	18	25	19.75
2	Computer with Internet connectivity	18	16	17	23	18.5
3	Telephone/Intercom	1	1	1	1	1
4	Photocopier	1	1	1	1	1
5	Laptop	1	0	0	0	0.25
6	Scanner	1	1	1	1	1
8	Printer	2	1	1	2	1.5

Above table reflects that computer available in the library varies from 16 to 25 whereas computer with internet connectivity varies from 16 to

23. The table also reflects that average 19.75 computers, 18.5 computers with internet and 1.5 printers are available at university library but fax machine is not available in any agricultural university library. One photocopier and one scanner are available in each university library.

Table-5: Open Access Resources

Details	Never Row N %	Rarely Row N %	Sometime Row N %	Often Row N %	Frequently Row N %	Total Row N %
e-Grantha	0.4%	12.0%	30.8%	40.9%	15.9%	100.0%
Agrovoc	11.6%	61.2%	19.6%	4.7%	2.9%	100.0%
AGRIS Database	6.9%	29.7%	42.4%	17.4%	3.6%	100.0%
Agricola	30.4%	52.2%	13.0%	4.0%	0.4%	100.0%
Krishikosh	8.0%	32.6%	46.0%	13.0%	0.4%	100.0%
Doaj	29.3%	58.7%	9.1%	2.9%	.0%	100.0%
Krishiprabha	11.4%	44.7%	18.3%	16.0%	9.6%	100.0%
Agricat	27.6%	33.6%	19.0%	8.2%	11.6%	100.0%
AgCom Search	37.4%	15.9%	21.8%	14.2%	10.7%	100.0%

Above table shows that more than 25% respondents never used open resources like Agricola, DOAJ, Agricat and AgCom Search and more than 20% respondents sometime used e-Grantha, Agris Database, Krishikosh and AgCom Search. Less than 10% respondents frequently used open access resource like Krishiprabha, AgCom Search, Krishikosh, Agricola, Agrovoc and Agris Database.

6. FINDINGS AND SUGGESTION:

Investigator has collected the primary data from four agricultural university libraries in Gujarat regarding personnel, collection, infrastructure, services provided by them. He analyzed the data using SPSS software and statistical methods and interpreted using some standards and specification. He further drawn some findings from the interpretation which is mention herewith

1. All agricultural universities in Gujarat have their constituent colleges and research station. The constituent colleges vary from 8 to 14 whereas research stations vary from 21 to 29.
2. Agriculture Science, Veterinary & AH Science, Agri-Business Management, Agri-Engineering, and Horticultural Science education offered in all four agricultural universities whereas education of agricultural Information Technology, Fisheries Science, Co-operative & Banking are offer in AAU, JAU and SDAU respectively. Home Science & Nutrition education is available in 3 agricultural universities except NAU.
3. Several e-books of different publisher and e-journal consortia like Science Direct, EBSCO, CAB abstracts are also subscribe by different library.
4. Average 19.75 computers, 18.5 computers with internet and 1.5 printers are available at university library but fax machine is not available in any agricultural university library. Photocopier and scanner are also available in all university libraries.
5. 75% libraries have completed partially automation whereas 50% library are marching towards the fully automation. Only 25% libraries have started digitization of the document whereas 75% libraries have not started it.
6. More than 30% respondent rarely used open access resources and less than 20% respondents sometime used open resources.

7.1 SUGGESTION:

1. The researcher should be motivated to use AGRIS service, the feedback survey should be conducted and result of the survey should be sent to nodal agency.

2. University should provide fund for library digitization and Institutional repository.
3. All the agricultural university should started the social Networking on their Web.
4. The library professional should be aware about ICT application use into the library and to make their library globally competent.
5. Library personnel should start the digitization and institutional repository with the aims of ICAR.

8. CONCLUSION:

India is the agricultural base country and major share of agricultural in the GDP. So give the priority to agricultural education, research and extension activity for development of agriculture sector. Recently valuable open access resources available in agricultural science but lack of information, researcher can't maximum used the open access resources.

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