

RESEARCH PAPER

Access and use of e-resources by the faculty of University of Agricultural Sciences, Dharwad

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Abstract: The study was conducted during 2015-16 in UAS, Dharwad as complete enumeration method covering all the faculty members working in teaching, research and extension. An ex-post facto research design was used to collect data from the total population of 335 faculty members of which 182 completed questionnaires were able to be collected. The results on frequent use of e-resources revealed that majority of faculty (78.0%) found to use e-mail daily, followed by use of websites and e-portals (31.9%) and e-journals/e-research papers (20.3%). Majority expressed the very usefulness of e-mail (85.2%) followed by e-journals/e-research papers (59.3%), websites and e-portals (58.2%). The results on source and place of accessibility of e-resources indicated that majority of faculty accessed e-resources to a greater extent through "search engines" (61.0%) and at the "department or office premises" (76.4%). In accessing e-resources, faculty experienced slow internet access speed (31.9%), lack of knowledge on search engine and less subscription of e-journals (22% each) as the major problems in effective use of e-resources.

Key words: Accessibility, Faculty, Frequent, Usefulness

Introduction

Agricultural education is the basic foundation for developing manpower for research, education, extension and other allied sectors. In the fast emerging of information explosion, e-resources have the great potential in facilitating the search of required information easily and quickly. e-resources are the electronic information resources that users can access electronically via a computing network (Bashorun *et al.*, 2011). The major types of e-resources are e-journals, e-books, e-research papers, e-mails, e-library catalogues, online databases, e-magazines, e-news papers, CD-ROM and other portable computer databases. In the present scenario, the development of mastery on utilization of e-resources is one of vital requirements for the faculty for better performance in their role of education, research and extension. In this direction various efforts have been initiated by Indian Council of Agricultural Research (ICAR) and University of Agricultural Sciences (UAS), Dharwad for strengthening the usage of e-resources amongst the faculty. Keeping this in view, the present study has been undertaken to explore the present scenario of e-resources usage pattern, accessibility to e-resources, skills in accessing e-resources and elicit problems faced in accessing e-resources among the faculty to satisfy their information needs at optimal level.

Material and methods

The study was conducted during 2015 - 2016 at UAS, Dharwad covering all the teaching campuses, research stations and extension centers coming under the jurisdiction. An ex-post facto research design was used for the study and complete enumeration method was followed to collect the required information. All the 335 faculty members coming under the Directorates of education, research and extension were considered as the study population. Operationalization and measurement of the variables was done by employing the procedures developed by Mulla (2011), Umme and Salma

(2012), Alexander *et al.* (2014), Chandra *et al.* (2014), Krishnadass and Jayaraman (2014), Kumbar *et al.* (2014), Mohammad and Shahabat (2014) and Rachael (2014). Questionnaire was prepared and it was finalized by making necessary corrections, additions and deletions based on pre-testing results and experts' opinions. The data were collected by using questionnaire through personal contact, sending by-post and e-mails. Finally 182 completed questionnaires comprising 112 teachers, 49 researches and 21 extension staff were received. The collected data were scored, tabulated and analyzed by using suitable statistical tools such as frequency, percentage, mean and standard deviation.

Results and discussion

Frequent use of e-resources by the faculty

The results presented in the Table 1 revealed that majority of faculty (78.0%) used "e-mail" daily, followed by daily use of "websites and e-portals" (31.9%). Further the daily use of "e-journals/e-research papers" and "e-magazines/e-newspapers" was noticed with 20.3 per cent and 18.7 per cent of faculty respectively. Whereas daily use of "e-dictionaries", "e-audios/videos/images" and "online-databases" was observed with 9.3 and 8.8 per cent of faculty respectively.

The scope for contacting the other researchers and the need for referring e-resources for research purposes, communication and up-dating the subject knowledge favoured for the situation. The similar distribution in the frequent use of e-resources was also highlighted in the research studies of Manoj and Anupam (2014).

Perceived usefulness of e-resources by the faculty

A perusal of data presented in Table 2 indicated that majority (85.2%) of faculty perceived "e-mails" were very useful followed by usefulness of "e-journals/e-research papers" (59.3%),

Table 1. Distribution of the faculty based on frequent use of e-resources

(n = 182)

Sl. No	Type of e-resources	Frequent of use e-resources									
		Daily		1- 2 time / Weekly		Monthly/ Occasionally		Rarely		Never	
		f	%	f	%	f	%	f	%	f	%
1	e-Journals/ e-Research papers/ reports	37	20.3	86	47.2	50	27.4	9	4.9	0	0
2	e-Books	7	3.8	56	30.8	92	50.6	27	14.8	0	0
3	Websites and e-portals	58	31.9	66	35.3	49	26.9	9	4.9	0	0
4	e-Thesis / dissertations	5	2.7	40	21.9	97	53.3	34	18.7	6	3.3
5	e-Lecture notes/ppt	8	4.4	61	33.5	77	42.3	36	19.8		
6	e-Conference proceedings	3	1.6	23	12.6	83	45.6	50	27.5	23	12.6
7	Online databases	16	8.8	49	26.9	79	43.4	27	14.8	11	6.0
8	CD-ROM databases	6	3.3	17	9.3	64	35.2	52	28.6	46	23.6
9	e-Library catalogs(OPAC) e-Bibliographic databases	4	2.2	18	9.9	70	38.5	46	25.3	44	24.2
10	e-Indexes and abstracts	6	3.3	15	8.2	79	43.4	48	26.4	34	18.7
11	e-Mails	142	78.0	32	17.6	8	4.4	0	0	0	0
12	e-Magazines/Newspapers	34	18.7	58	31.9	53	29.1	26	14.3	11	6.0
13	e-Audios / Videos/Images	16	8.8	63	34.6	71	39	26	14.3	6	3.3
14	e-Encyclopedias	11	6.0	61	33.5	70	38.5	24	13.2	16	8.8
15	e-Dictionaries	17	9.3	69	37.9	66	36.2	21	11.5	9	4.9
16	Print on demand (POD)	2	1.1	4	2.1	44	24.2	35	19.2	97	53.3

f – Frequency

Table 2. Distribution of the faculty based on perceived usefulness of e-resources

(n = 182)

Sl. No.	Type of e-resources	Extent of usefulness							
		Very useful		Useful		Average		Not useful	
		f	%	f	%	f	%	f	%
1	e-Journals/e-Research papers	108	59.3	66	36.3	7	3.8	1	0.5
2	e-Books	65	35.7	86	47.3	30	16.5	0	0
3	Websites and e-portals	106	58.2	61	33.5	14	7.7	1	0.5
4	e-Theses/dissertations	61	33.5	74	40.7	45	24.7	2	1.1
5	e-Lecture notes/ppt	65	35.7	63	34.6	48	26.4	4	2.2
6	e-Conference proceedings	37	20.3	70	38.5	55	30.2	20	11.0
7	Online databases	74	40.7	64	35.2	33	18.1	11	6.0
8	CD-ROM databases	38	20.9	63	34.6	51	28.0	30	16.5
9	e-Library catalog (OPAC)/ e-Bibliographic databases	36	19.8	57	31.3	59	32.4	30	16.5
10	e-Indexes and abstracts	43	23.6	63	34.6	56	30.8	20	11.0
11	e-Mails	155	85.2	27	14.8	0	0	0	0
12	e-Magazines/Newspapers	77	42.3	60	33.0	36	19.8	9	4.9
13	e-Audios /Videos/Images	69	37.9	76	41.8	33	18.1	4	2.2
14	e-Encyclopedias	70	38.5	66	36.3	35	19.2	11	6.0
15	e-Dictionaries	83	45.6	67	36.8	27	14.8	5	2.7
16	Print on demand (POD)	25	13.7	43	23.6	57	31.3	56	30.8

f – Frequency

“websites/ e-portals” (58.2%), e-dictionaries (45.6%) and “e-magazines/ e-newspapers” (42.3%). Similarly very usefulness of “e-dictionaries”, “online databases”, “e-encyclopedias” and “e-audios/videos/images” was reported by 40.7, 38.5 and 37.9 per cent of faculty respectively.

Similarly the research studies conducted by Chandra *et al.* (2014), Ekta (2014), Puttaswamy and Krishnamurthy (2014) and Raghunadha (2014) on usefulness of e-resources by the faculty reported that majority of faculty of academic and research institutions expressed the very usefulness of e-resources in their academic and research activities.

Purpose of using e-resources by the faculty

The results on different purposes of using e-resources by the faculty (Table 3) revealed that majority of faculty (78.0%) preferred to use e-resources for “research purpose”, followed by 61.5 per cent each preferred for the purposes of “keeping up-to-date subject knowledge” and “getting current and general information”. Similarly the purpose of “writing research papers and article” was noticed with 57.1 per cent of faculty, followed by preferred use of “preparing teaching/training materials” (47.3%), whereas 40.1 per cent each of faculty preferred to use e-resources for “seminar/workshop presentation” and

Table 3 Distribution of the faculty based on purposes of using e-resources

(n = 182)

Type of e-resources	Extent of purpose met							
	Greater extent		Moderate extent		Average extent		Less extent	
	f	%	f	%	f	%	f	%
For research purpose	142	78.0	27	14.8	10	5.5	3	1.6
For keeping up-to-date subject knowledge	112	61.5	54	29.7	14	7.7	2	1.1
For writing research papers/articles/books	104	57.1	53	29.1	17	9.3	8	4.4
To gain current and general information	112	61.5	51	28.1	17	9.3	2	1.1
For preparing teaching/ training materials	86	47.3	69	37.9	24	13.2	3	1.6
For seminar/workshop presentation	73	40.1	66	36.3	32	17.6	11	6.0
For communication /routine purposes	73	40.1	59	32.4	35	19.2	14	8.3

f – Frequency

“communication/ routine purposes”. The need to exposed to recent development of particular subject information, research paper writing, current and general information as well as the inclination to develop competency in research, teaching and extension were favored for the situation. The results of the present study are in agreement with the findings of Shailendra and Manisha (2011), Pravin and Prasad (2013), Kumbar *et al.* (2014) and Seema (2014), who also reported that majority of scientists and research faculty were found to use e-resources for research activities, followed by the use of updating subject information, literature searching in subject specialized, finding relevant information in related fields and publishing.

Source and place of accessibility of e-resources

The data on source and place for accessing e-resources as depicted in Table 4 inferred that “search engines” was used by majority of faculty (61.0%) to access e-resources to a greater extent followed by use of “university website” (33.5%) and “publisher website” (22.5%). Whereas use of “library website (CeRA)” was found to be not accessed by majority of faculty (37.4%). The advantages of simple to use, open and free accessibility resulted for the situation. Similarly the research study conducted by Mohammad and Shahabat (2014) also reported that majority (66.66 %) of faculty accessed e-resources through search engine, followed by library website (61.9 %), publisher website (38.09 %) and online journals (23.8 %).

The place of accessibility of e-resources as shown in Table 4 highlighted that majority of faculty (76.4 %) accessed

e-resources to a greater extent at the “department or office premises”, followed by accessing at “residence or home” (26.4%). Whereas high per cent of not accessing was observed at “internet café” (87.9%) and “university library” (69.2%). The need for more time to be spent at their working place, besides favorable advantages of economy and convenience favoured the situation. Similarly Bashorun *et al.* (2011) reported that majority (72 %) of faculty accessed e-resources at their office, followed by home / residence (20 %) and cyber café (8 %).

Skills in accessing e-resources

The results on the distribution of faculty according to their skill levels as presented in Table 5 witnessed that majority of faculty were very familiar with “basic internet operational skills” (72.5%) followed by “online search engine operational skills” (65.4%) and “informational internet skills” (57.1%). Whereas “advance internet operational skills” was very familiar with 29.1 per cent faculty. The existence of higher education level, favorable situation for e-resources accessibility, competitive advantages of using e-resources for their increased work performance and peer pressure motivation have been resulted for the situation. The research study conducted by Abinew and Vuda (2013) also reported the possession of average level of skills among the faculty.

Problems in accessing e-resources

It is observed from the Table 6 that high percent of faculty expressed “slow internet access speed”(31.9 %), and “lack of

Table 4. Distribution of the faculty based on source and place wise accessibility to e-resources

(n = 182)

Sl. No	E-resources accessing Sources/Places	Extent of accessibility							
		Great extent		Average extent		Less extent		Not access	
		f	%	f	%	f	%	f	%
A	Sources of access								
1	University website	61	33.5	82	45.1	14	7.7	25	13.7
2	Publisher website	41	22.5	72	39.6	23	12.6	46	25.3
3	Search Engines	111	61.0	52	28.6	8	4.0	11	6.0
4	Library website	31	17.0	63	34.6	20	11.0	68	37.4
B	Place of access								
1	Department/ Office	139	76.4	34	18.7	6	3.3	3	1.6
2	University library	14	7.7	26	14.3	16	8.8	126	69.2
3	Residence/ Home	48	26.4	67	36.8	16	8.8	51	28.0
4	Internet cafe	1	0.5	7	3.8	14	7.7	160	87.9
5	Travelling/ Mobile	6	3.3	2	1.1	0	0	0	0

f - Frequency

Table 5. Distribution of the faculty based on Skills in accessing e-resources

(n = 182)

Type of skills	Extent of skills in accessing e-resources							
	Very familiar		Somewhat familiar		Not familiar		Undecided	
	f	%	f	%	f	%	f	%
Basic internet operational skills	132	72.5	41	22.5	4	2.2	5	2.8
Advance internet operational skills	53	29.1	63	34.6	38	20.9	28	15.4
Online search engine operational skills	119	65.4	52	28.6	3	1.6	8	4.4
Informational internet skills	104	57.1	61	33.5	7	3.9	10	5.5

f - Frequency

Table 6. Problems faced in accessing e-resources by the faculty

(n = 182)

Sl. No.	Problems	Extent of problem faced					
		Always		Some times		Never	
		f	%	f	%	f	%
A	Technical problems						
1	Lack of awareness about e-resources	6	3.3	134	73.6	42	23.1
2	Lack of training opportunity	28	15.4	125	68.7	29	15.9
3	Lack of knowledge on search strategies	40	22.0	110	60.4	32	17.6
4	Slow internet access speed	58	31.9	117	64.3	7	3.8
5	Overload of information	28	15.4	104	57.1	28	27.5
6	Lack of confidence	6	3.3	92	50.6	84	46.1
7	Non friendly user interface	6	3.3	123	67.6	53	29.1
B	Non technical problems						
1	Lack of ICT infrastructure	19	10.4	92	50.5	71	39.0
2	Lack of time	21	11.5	120	65.9	41	22.5
3	Lack of subscription e-journals	40	22.0	117	64.3	25	13.7
4	Payment based e-resources	36	19.8	120	65.9	26	14.3
5	Frequent power failure	31	17.0	133	73.1	18	9.9
6	Less or not required for job	4	2.2	79	43.4	99	54.4
7	Physiological disorders	5	2.7	73	40.1	104	57.1

f - Frequency

knowledge and skills about search strategies" (22.0 %) as the most experienced problems. Whereas problems of "lack of relevant ICT training opportunity" and "overload of information" were highlighted by 15.4 per cent faculty each.

With regard to non technical problems (Table 6) majority expressed "less subscription of e-journals" was the always faced major problem by the faculty (22.0%), followed by "payment based e-resources" (19.8%), and "frequent power failure" (17.0%). Similar problems in accessing e-resources were also highlighted in the studies of Bansode (2013) and Kumbar *et al.* (2014).

Conclusion

The existence of moderate use of e-resources among the faculty with the available e-resources accessibility highlight that the concerned administration should make utmost efforts in updating knowledge of e-resource application among the faculty through conducting good number of trainings in the University and also deputing the faculty outside for strengthening application of e-resources. Further lack of e-resource facilities also highlight the need for subscribing good number of e-resources in all the disciplines to create congenial academic and research environment for increased application of e-resources.

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