Utilization Pattern of E-resources by the Post-Graduate Students of RVSKVV, Gwalior (Madhya Pradesh): Problems and Suggestions for Improvement

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

In this digitalized world, e-resources have become the most functional tool for higher educational institutes. It is advantageous in improving search speed, provides more access points, the ability to access information that would otherwise be unavailable, and an increasing amount of information is electronic form. Whereas, the old library system consumes a lot of valuable time for the scholars. The present study was carried out in the College of Agriculture, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior (M.P.) to realize the utilization pattern of e-resources by the students the problems experienced and their suggestions while using e-resources. A total of 104 respondents were selected on the based on a proportionate random sampling method. The primary data was collected using a well-structured questionnaire that was circulated to the students through online mode using Google forms. An exploratory research design was used for the purpose of the study. A majority (n=89) of respondents (85.58%) had medium to high utilization of e-resources and maximum (n=92) of respondents (88.46%) reported a lack of proper training in using e-resources whereas, a high percentage (82.69%) of the respondents (n=86) suggested that the institution ensures the availability of training staffs to the students.

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1. INTRODUCTION

The term e-resources stand for electronic resources which are also known as online information database. Many of the items that a library provides via a computer network are referred to as e-resources. In this age of information and communication technology (ICT), computers are being used in the day-to-day activity of the library, which saves the time of the end-users and library professionals and also at the same time avoids duplication of work and make the library service smooth and effective. Over the past few decades, the emergence of e-resources has completely changed the status of all libraries and information hubs around the world [1]. Electronic resources are generally available on both platforms i.e. online and offline platforms. Such type of e-resources requires ICT devices like laptop, mobile phone, tablet and desktop [2]. Now-a-days, e-resources are the most functional tools for most of the universities, colleges and schools. According to Sharma [3], the electronic representation of information is referred to as an electronic resource. Electronic books, digital libraries, online periodical articles, e-learning tutors, and online assessments are just a few examples. Electronic resources are user-friendly and make research much easier. Because of the usage of computers, they make it possible to search for information more quickly.

The utilization of e-resources is very frequent in many college libraries in various technological disciplines. The students and researchers in the field of agricultural sciences use a variety of e-resources, including CeRA, Krishikosh, Krishiprabha, Sodhganga, CABI, CD-ROM database (Agris, Agricola, Crop CD, Hort CD), WEL (World e-book Library), e-Krishishiksha, Agricultural Census of India, Agricultural Statistics, Agridaksh, etc. The traditional library system is increasingly moving towards an e-library system because it consumes a lot of valuable time and saves the time for everyone. These e-resources are easily accessible everywhere through ICT tools (Smart phone, Laptop, Tablet and Desktop). In the pandemic situation, due to Covid-19, e-resources played an important role as a useful medium for communicating important information to students who could not attend regular classes and did not have access to libraries.

A study by Ram et al. [4] reported the constraints in utilization of e-resources by postgraduate students of Rajuvas, Bikaner was lack of subscription to more standard journals, lack of professional and skilled persons in the library, paid e-resources not feasible to access by students, lack of publicity of e-resource content by the institute, lack of facility of experts help and support. Shashikala and Srinivasaragavan [5] in their study on the usage of e-resources by the faculty members and PG students of Kempegowda Institute of Medical Sciences Hospital and Research Centre (KIMS), Bangalore, Karnataka reported that a high percentage of the students and faculties (44.44%) had slow connectivity in using of e-resources. Another study on the use and awareness of e-resources among research scholars of literature subjects at Banaras Hindu University revealed that the majority (79.27%) of the respondents lacked technical knowledge [6]. It was also found that the university library of Ibadan frequently conducts an orientation programme for students on how to disseminate information on the obtained e-resources because the information provided through e-resources could be used for project writing, theses writing and assignments among others [7].

Singh and Singh [8] stated that e-resources, mainly open access resources were the only source for gather information during the Covid-19 pandemic lockdown period in the years 2020 and 2021. The study was based on the Ph.D. student of the G.B. Pant University of Agriculture and Technology, Pantnagar. The study observed that majority (87.22%) of the students were aware about the availability of e-resources and they used them for various purposes and the use of institutional repositories, consortium based e-resources and open access resources were growing day by day. Also, a study by Singh and Gupta [9] was conducted to assess the impact of e-resources on use of print resources by university teachers in North India. A questionnaire based survey was conducted among teachers of universities selected for the study. The study found that majority of the university teachers are aware about the e-resources subscribed by their libraries and some were totally ignorant about it. E-resources were used extensively by faculty and research scholars. Majority of teachers and students accessed e-resources from their work stations through Google and other similar web browsers. Though every university library under study had

subscribed to one or more e-resource database, more than 15% of the users were not aware about it. Kavitha ES [10] noted that e-resources were increasingly important to all aspects of education – from teaching and learning, through to the collection of student data, administration and marketing activities the institutions engaged in. It was found that the satisfaction levels on various e-resources were highly satisfactory but the practical uses of e-resources were not up-to the worth in comparison to investments made in acquiring these resources.

Scope and Limitations of the study: The study was designed to know about post-graduate students' utilization pattern of e-resources and the problems faced by them and also the suggestions to ensure the effective usages of e-resources. It may be useful for those organizations who are working on it to enhance the agricultural education as well as in other fields through the use of e-resources or ICT. Students may serve as feedback to developmental authority agencies in order to develop more appropriate ICT services. However, there were few limitations of the present study such as the study was confined only to the post-graduate students (M.Sc. & Ph.D. of all subject disciplines) of College of Agriculture, RVSKVV, Gwalior (M.P) and focused only on virtual responses of selected respondents.

In this modern technological world where now everything is on the verge of being digitalized, the students in India must have have proper access and utilization of e-resources with the help of the ICT tools provided by their institutions to be at par with the students globally. Scanty research focused studies on the usage, constraints experienced and suggestions perceived by the students in the state of Madhya Pradesh regarding e-resources. Realizing the importance, the present study was undertaken in RVSKVV, Gwalior, Madhya Pradesh with the the following objectives:

i. To study the utilization pattern of e-resources by the post graduate students
ii. To find out the problems faced and suggestions to overcome them.

2. METHODOLOGY

The study was conducted at the College of Agriculture, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior, Madhya Pradesh in the year 2021. There were a total of 20 post-graduate disciplines (11 M.Sc. and 9 Ph.D. disciplines) in which the number of students in M.Sc. was 177 (95 previous years & 82 final year) and in Ph.D. there were 83 (38 first year, 26 second year and 19 third year) students respectively. From each year of post-graduate degree Programmes (M.Sc. & Ph.D.), only 40% of the students were taken from the total number of the students in each discipline based on a proportionate random sampling method. Thus, a total of 104 respondents were selected for this study. To avoid gender bias, every third student on the list was selected from each department (enrolment number wise). The primary data was collected using a well-structured questionnaire prepared following the objectives of the study. The questionnaire was prepared and circulated to the respondents only via the online mode (Google forms) for the collection of data. The secondary data was collected from the Academic office and Library office of RVSKVV, Gwalior (M.P) and IT cell office JNKVV, Jabalpur (M.P). The research study was investigated using an exploratory research design. Appropriate statistical tools like frequency, percentage, mean and standard deviation were subjected to analyse and interpret the obtained data. To study the utilization pattern of e-resources, different response was recorded with three-point continuum like mostly, sometime, and never with scores value 3, 2 and 1 respectively. Further, utilization pattern of e-resources was classified into three categories i.e., 'low', 'medium' and 'high' based on the mean and standard deviation with scores assigned to each one.

3. RESULTS AND DISCUSSIONS

3.1 Utilization Pattern of E-resources by the Respondents

Table 1. represents the data in the categories of low, medium, and high, classified on the basis of the utilization pattern of e-resource. It reveals that majority number of respondents (68.27%, f=71) belonged to the category of medium utilization, followed by high utilization (17.31%, f=18) and low utilization (14.42%, f=15) of e-resources. Thus, it indicates that the maximum respondents (85.58%, f=89) were having medium to high utilization of e-resources. These findings are in support of the work of Yadav [11], where it was found that 57.50 percent of the respondents had a medium use of e-resources. Furthermore, Mishra [12] found in a study that

65.00 percent of the respondents had a medium utilization followed by high (18.89 percent), and low (16.11 percent) utilization of e-resources. The students mostly utilize the e-resources for their access to learning, gain current information, teaching, academics as well as research purposes. As the educational institutions provide computers with internet access it is feasible for the students to have increased usage of electronic resources.

Furthermore, a perusal of Table 2. depicts that majority (69.23%, f=72) of the respondents mostly used online types of e-resources for the gathering of knowledge. Mostly they preferred the usage of e-resources like CeRA resources (59.62%, f=62), Krishikosh (48.08%, f=50), e-Magazines (58.66%, f=61), ICAR library (56.73%, f=59) and Annals of Agricultural Research (46.16%, f=48). Further, for the purpose of using e-resources, the respondents were found to use e-resources mostly for writing subject assignments (80.77%, f=84), preparing for competitive examinations (78.85%, f=82) and for preparing the content for masters' research work (68.27%, f=71). PDF (Portable Document Format) format (89.42%, f=93) and Printed copies (75.00%, f=78) were mostly used for reading e-resources by the respondents. It was

also observed that the respondents mostly preferred the Whatsapp application (70.19%, f=73), Telegram application (66.35 %, f=69), University experts (63.46%, f=66) and Agricultural university website (50.00%, f=52) as source of information of e-resources. The respondents mostly used the text (88.46%, f=92) form for reading e-resources. These findings are similar to the findings of Kashyap [2] which revealed that university faculty members in Chhattisgarh used e-resources such as e-books, e-journals, and e-thesis substantially more than university faculty members in Madhya Pradesh. Arun Kumar and Anjaiah [13] in their study found that the majority of respondents (62.00%) used e-resources for project-reporting, followed by 18.00 percent were using for self- improvement, 18.00 percent respondents were using for subject knowledge, 17.00 percent respondents were using for examination purposes, and 8.00 percent were using for self-improvement. While, Sritharan [14] observed that the majority of respondents (98.60%) were using electronic tools for learning and reviewing their knowledge, 71.60 percent were using electronic resources for their study work and 70.50 percent of respondents were using them for collecting general information.

Table 1. Overall distribution of respondents according to their utilization pattern of e-resources (N=104)

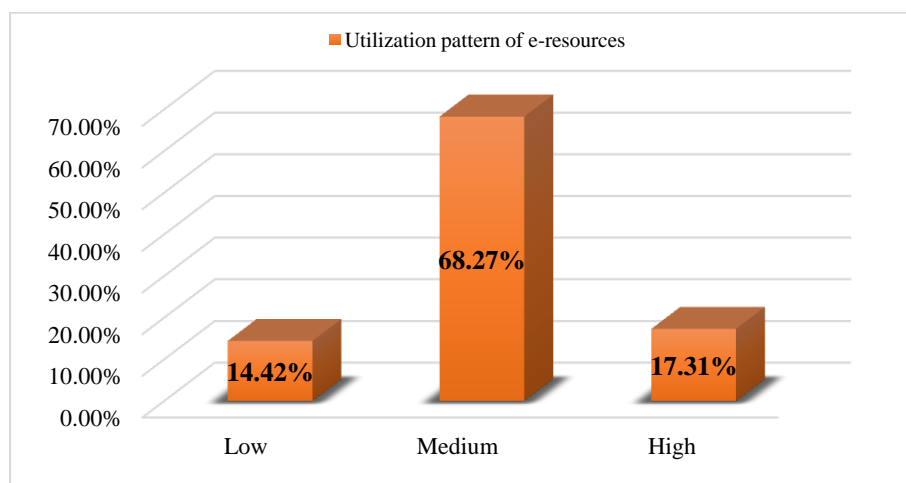| S. No.	Utilization pattern	Frequency	Percentage (%)
1.	Low (Below 87)	15	14.42
2.	Medium (87 to 106)	71	68.27
3.	High (Above 106)	18	17.31
Total		104	100.00

Fig. 1. Overall distribution of respondents according to their utilization pattern of e-resources

Table 2. Distribution of respondents according to their utilization pattern of e-resources (N=104)

S. No.	Utilization pattern of e-resources	Mostly F	Mostly P (%)	Sometime F	Sometime P (%)	Never F	Never P (%)
A.	**Type of e-resources used for knowledge gathering**						
1.	Online	72	69.23	30	28.85	02	1.92
2.	Offline	41	39.42	56	53.85	07	6.73
B.	**Preference in use of e-resources**						
1.	CeRA resources	62	59.62	34	32.69	08	7.69
2.	Krishikosh	50	48.08	27	25.96	27	25.96
3.	Krishiprabha	36	34.62	26	25.00	42	40.38
4.	Sodhganga	30	28.84	37	35.58	37	35.58
5.	CABI e-books	31	29.81	33	31.73	40	38.46
6.	CD-ROM database	25	24.03	36	34.62	43	41.35
7.	e-Krishishiksha	27	25.96	21	20.19	56	53.85
8.	Springerlink	25	24.04	45	43.27	34	32.69
9.	Wiley & Black	25	24.04	38	36.54	41	39.42
10.	Krishiworld	39	37.50	27	25.96	38	36.54
11.	agMOOCs	36	34.61	56	53.85	12	11.54
12.	e-Magazines	61	58.66	29	27.88	14	13.46
13.	Annals of Agricultural Research	48	46.16	27	25.96	29	27.88
14.	ICAR library	59	56.73	23	22.12	22	21.15
15.	e-Journals	32	30.77	55	52.88	17	16.35
16.	Digital Book Index	23	22.11	32	30.77	49	47.12
17.	Mahindra Kisan website	23	22.11	37	35.58	44	42.31
18.	Other	17	16.35	13	12.50	74	71.15
C.	**Purpose of using e-resources**						
1.	To prepare the content for masters' research work	71	68.27	24	23.08	09	8.65
2.	For writing subject assignments	84	80.77	20	19.23	00	0.00
3.	To prepare for competitive examinations	82	78.85	15	14.42	07	6.73
4.	To prepare the notes for midterm, practical & final theory examinations	51	49.04	29	27.88	24	23.08
5.	To prepare the content for doctoral research work	57	54.81	39	37.50	08	7.69
D.	**Format used for reading e-resources**						
1.	PDF (Portable Document Format)	93	89.42	11	10.58	00	0.00
2.	PPT (PowerPoint Presentation)	34	32.70	68	65.38	02	1.92
3.	HTML (Hypertext Markup Language)	12	11.53	36	34.62	56	53.85
4.	Printed copy	78	75.00	22	21.15	04	3.85
E.	**Preference of information source for e-resources**						
1.	Agricultural university website	52	50.00	37	35.58	15	14.42
2.	Agri-publisher website	39	37.50	50	48.08	15	14.42
3.	International website	24	23.07	63	60.58	17	16.35
4.	University experts	66	63.46	25	24.04	13	12.50
5.	National website	40	38.46	52	50.00	12	11.54
6.	WhatsApp	73	70.19	27	25.96	04	3.85
7.	Blog	33	31.73	50	48.08	21	20.19
8.	Facebook	40	38.46	53	50.96	11	10.58
9.	Instagram	37	35.58	48	46.15	19	18.27
10.	Telegram	69	66.35	26	25.00	09	8.65
11.	Others	32	30.77	52	50.00	20	19.23
F.	**Form used for reading e-resources**						
1.	Text	92	88.46	12	11.54	00	0.00
2.	Video	58	55.77	39	37.50	07	6.73
3.	Picture	34	32.69	60	57.69	10	9.62

(F=frequency, P=percentage)

3.2 Problems Faced by the Respondents in Utilization of E-resources

The perusal of Table 3. reveals the distribution of respondents according to their problems faced in the utilization pattern of e-resources. It is observed that the majority of the respondents had reported the problems of the lack of proper training (88.46%, f=92), followed by unawareness of software & website (83.65%, f=87), poor internet speed (77.88%, f=81), unavailability of the latest data (75.96%, f=79), irrelevant information (71.15%, f=74), lack of finance for taking foreign subscription (25.00%, f=26), electricity problem (19.23%, f=20) and language problem (17.31%, f=18). Similar findings were reported by Sethi and Panda [15], Alagu and Thanuskodi [16]. From the above findings, it can be inferred that students generally face problems like lack of training and less knowledge regarding the usage of software and websites. Proper training facilities in the educational institutes along with their course curriculum would be beneficial for them in proper understanding and utilization of e-resources.

There should be a provision of proper electricity facilities and fast internet connectivity for uninterrupted usage and interest among the students. The available data must be revised regularly for the students to be updated regarding any new information.

3.3 Suggestions given by the Respondents to Overcome the Problems in the Utilization Pattern of E-resources

Table 4. reveals the suggestions given by respondents to overcome the problems in utilization of e-resources. The majority of the respondents i.e, 86 out of 104 (82.69%) suggested that college must ensure that the training staff should be made available for the students, followed by conducting of awareness programmes by the institution (75.96%, f=79), improvement in the network speed (73.08%, f=76), regular updation in the recent e-resources (67.31%, f=70), provision of Wi-Fi facility from the institution (59.62%, f=62), availability of

Table 3. Distribution of respondents according to their problems faced in utilization of e-resources (N=104)

S. No.	Problems	Frequency	Percentage (%)	Rank
1.	Lack of proper training	92	88.46	I
2.	Unawareness about software & website	87	83.65	II
3.	Poor internet speed	81	77.88	III
4.	Unavailability of latest data	79	75.96	IV
5.	Irrelevant information	74	71.15	V
6.	Lack of finance for taking foreign subscription	26	25.00	VI
7.	Electricity problem	20	19.23	VII
8.	Language problem	18	17.31	VIII

Table 4. Distribution of respondents according to their suggestions given by respondents (N=104)

S. No.	Suggestions	Frequency	Percentage (%)	Rank
1.	Network speed should be improved	76	73.08	III
2.	Provision of downloadable e-resources	16	15.38	VIII
3.	Subscription of e-resources should be made available for students at reasonable price.	19	18.27	VI
4.	Awareness programme must be conducted by the institution	79	75.96	II
5.	Wi-fi facility must be provided by college institution	62	59.62	V
6.	College institution must ensure that training staff should be made available for students	86	82.69	I
7.	Constant power supply should be maintained	18	17.31	VII
8.	Recent e-resources data should be regularly updated	70	67.31	IV

subscription of e-resources for students at a reasonable price (18.27%, f=19), constant power supply (17.31%, f=18), provision of downloadable e-resources (15.38%, f=16). This finding is in line with the findings of Mishra [12] where it was found that the majority (mean percent score 96.77) of the respondents suggested strengthening the library by employing professional and technical staff by the university.

4. CONCLUSION

From this study it can be concluded that majority of the respondents (85.58%) belonged to the category of medium to high utilization of e-resources. Among the problems faced by the respondents, lack of proper training, unawareness about software & website and poor internet speed were the top three crucial problems faced by the respondents while utilization of e-resources. It was found that the least reported problem was the language problem. Further, it was reported in the present study, that the respondents had suggested that the college must ensure the availability of the training staff for the students and awareness programme must be conducted by the institution regarding the utilization of e-resources. Overall, it may be concluded from this research that as per the utilization pattern, constraints and suggestions by the post-graduate students of RVSKVV, Gwalior, there should be a provision of training and availability of training staff for the students regarding utilization of e-resources in the institution, awareness programmes should be conducted and internet connectivity speed should be improved.

5. RECOMMENDATIONS

This research indicated that e-resources have a medium to high utilization pattern by post-graduate students which determine their utmost importance in their academics and research-related work. The provision for a proper e-resources facility is a basic requirement in any higher educational institution. It was observed that the post-graduate students felt the need for training facilities and awareness programmes regarding utilization of e-resources. It is recommended that RVSKVV, Gwalior and the other government, as well as private higher educational institutes in Madhya Pradesh, must be well equipped with e-resources facilities to improve the utilization of e-resources by the students.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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