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Awareness of research scholars towards use of e-resources in agriculture

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ABSTRACT

Electronic resources are becoming increasingly popular as a result of their features and benefits. Present study was carried out during 2019 for exploring the awareness of research scholars towards the use of e-resources of selected agriculture universities in Rajasthan. The structured questionnaire method was used to elicit data from the 180 research scholars of three agricultural universities, representing 60 from each of them. The research scholars were classified into four groups: low, average, above average and high based on an arbitrary method of the awareness score obtained by them. The overall distribution of awareness shows that the majority of the research scholars (52.22%) of agriculture universities in Rajasthan belonged to above-average to a high category of awareness followed by 34.44% of them with the average category of awareness and rest 13.34% of them were with low category of awareness. To assess the awareness of research scholars, 25 items related to e-resources were identified. To know the extent of awareness mean percent score (MPS) for each item was calculated, and ranks were assigned. Research scholars awareness regarding mobile apps was 92.40 MPS and ranked first by the respondents. The awareness regarding wikipedia and e-payment was 90.92 and 89.81 MPS and ranked second and third, respectively. Further, found out the difference in awareness among the research scholars towards e-resources in agriculture with the help of ANOVA; the result showed that the calculated F value 0.707 was less than the tabulated value, which is statistically non-significant.

Keywords: Awareness, E-resources, Mobile app, Research scholars, Wikipedia

Users have a variety of options for meeting their information needs in this electronic and internet era. The deadly and infectious disease Coronavirus also known as Covid-19, has deeply affected the global economy. This tragedy has also shaken up the education sector, and this fear is likely to resonate across the education sector globally. In this pandemic situation, most users spend most of their time with computers and use internet facilities for reading and learning in their daily lives. The popularity and use of electronic resources have skyrocketed. They enable innovation in teaching and increase research timeliness and the discovery and creation of new fields of inquiry (Henderson and Machewan 1997). India has a strong research and development base in science and technology, both in the governmental and private sectors. This has led to an impressive quantity of research publications. Awareness is the current understanding of a situation or subject based on information or experience (Ani and Ahiauzu 2008). It can also be defined as knowledge or perception of a situation, fact, consciousness, recognition, realization, grasp, acknowledgment of concern and well-informed interest or familiarity with a specific situation or development. Research students must be aware of and use electronic information resources (EIRs) to keep themselves informed of the available media through which they can access needed information.

Prangya and Rabindra (2013) opined that awareness is core to the usage of electronic information resources. Where materials are in closed access, users ease of access to such e-resources is by far reduced. But while they are in open access (not subscription-based), research students find them and make do with them for whatever reasons they need them for. The usage of EIRs in recent years has yielded positive results in the area of teaching and research and that through the use of electronic information resources, research, academic and students now have access to global information resources, particularly the internet for their scholarly intercourse (Ellis and Oldman 2005, Egberongbe 2011). Waldman (2003) reported high usage of the library's OPAC by students at City University of New York. It is important to note that when research students are aware of e-resources, they use them effectively for academic and research purposes. It is also essential for students to be skilled in information and communication technologies (ICTs) applications to gain independent use of various electronic information resources worldwide.

MATERIALS AND METHODS

An ex-post-facto research design was used in the present

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study. According to Robinson (1976), an Ex-post-facto design is a systematic empirical inquiry. The independent variables have not been directly managed because they have already occurred or are inherently not manageable. Further, he stated that Ex-post-facto studies are based on deducing theories and an identified behavioral phenomenon in explored conditions under which a phenomenon occurs.

Rajasthan state comprises of five Agricultural Universities, out of which three Agricultural Universities namely Swami Keshwanad Rajasthan Agriculture University, Bikaner; Maharana Pratap University of Agriculture and Technology, Udaipur and Sri Karan Narendra Agriculture University, Jobner were selected based on post-graduate programmes (M.Sc. and Ph.D. in Agriculture) are running for more than 20 years in various disciplines during June 2019. 60 research scholars were selected from each identified college with the help of a random selection technique. Thus, a total of 180 research students were included in the sample of the study. The maximum score amounted was 75, and the minimum score was 25. The total awareness score of each respondent was obtained by adding all the scores of their responses to all the statements. After that, the scores of each individual were calculated and categorized into four categories using an arbitrary method of classification, viz. low (25–37.5 score), average (37.5–50 score), above-average (50–62.5 score) and high (62.5–75 score) level of awareness towards e-resources. Further, for knowing the extent of awareness of respondents mean percent score for each statement was calculated and ranked accordingly.

To find out the significant difference between the respondents of selected universities about awareness towards the use of e-resources, the Analysis of Variance-One-way method was applied, and interpretations were done accordingly.

RESULTS AND DISCUSSION

According to answer.com, "Awareness is the state or ability to perceive, feel, or be conscious of events, objects or sensory patterns". In this context, it is essential to know the extent of awareness possessed by the respondents about various e-resources. Hence, keeping this in mind, efforts have been made to mention the existing awareness about various important e-resources. The data collected from respondents were analyzed and presented in Table 1.

Data shows that (Table 1) the majority of the research scholars (58.34%) studying in MPUAT, Udaipur belonged to above-average to a high category of awareness, followed by 51.68% of the research scholars of SKNAU, Jobner which had above-average to a high category of awareness and 46.66% of the research scholars of SKRAU, Bikaner possessed above average to a high category of awareness. The overall distribution of awareness shows that the majority of the research scholars (52.22%) of agriculture universities in Rajasthan belonged to above-average to a high category of awareness followed by 34.44% of them with the average category of awareness and rest 13.34% of them were with low category of awareness. The reason for above-average to a high category of awareness among the research scholars might be easy accessibility of excellent library and internet facilities made available at university to the scholars as well as the efforts from the faculty and personal internet facility received by scholars to collect useful information on their laptop and modern high-tech mobiles.

The present findings are supported by the findings of Mani *et al.* (2019), who reported that the majority (78.3%) of the respondents were aware of e-resources, followed by 17.5% respondents were aware but not used and 4.20% respondents were not aware towards e-resources. Similar findings have been reported by Meena (2013) that the highest number of respondents aware about e-resources were aware of CD/DVD, pen drive, website, but no one was aware about e-patents and hence, overall awareness about e-resources ended to be medium.

E-resources wise awareness of research scholars: To assess the awareness of research scholars, 25 items related to e-resources were identified. To know the extent of awareness mean percent score for each item was calculated, and ranks were assigned (Table 2). Data shows that the extent of awareness possessed by research scholars regarding mobile apps was 92.40 MPS and ranked first by the respondents. The awareness regarding the wikipedia and e-payment was 90.92 and 89.81 MPS and ranked second and third, respectively. The awareness of e-resources about offline portable computer database (CD/DVD Pendrive, harddisk), e-shopping, e-chat, e-map, e-banking, websites related to agriculture, and e-ticket was recorded to be 88.51, 88.33, 87.92, 87.40, 87.03, 86.66, and 86.48 MPS, respectively. Further analysis of the table clearly shows that respondents were aware of web portals, e-journals in agriculture/CeRA, e-books in agriculture, ETDs (electronic theses dissertation)

Table 1 Distribution of research scholars according to their awareness

Awareness category	MPUAT, Udaipur		SKNAU, Jobner		SKRAU, Bikaner		Total	
	f	%	f	%	f	%	f	%
Low (25–37.5 score)	9	15.00	7	11.66	8	13.34	24	13.34
Average (37.5–50 score)	16	26.66	22	36.66	24	40.00	62	34.44
Above-average (50–62.5 score)	23	38.34	20	33.34	18	30.00	61	33.88
High (62.5–75 score)	12	20.00	11	18.34	10	16.66	33	18.34
Total	60	100	60	100	60	100	180	100

n=180; F, frequency; %, percent.

krishikosh, and e-newspaper with the extent of 84.80, 83.88, 82.40, 81.10, and 80.73 MPS, respectively. Likewise, the extent of awareness of e-magazines, e-library, touch screen kiosk, anti-plagiarism, and presentation software was 79.62, 78.51, 75.37, 72.77 and 72.03%, respectively. Table also shows that respondents had comparatively low awareness about e-analysis of data, e-resources sensitization workshop, e-reprints, e-patents and RFID technology, which were 69.81, 61.88, 61.84 60.18 and 50.74 MPS, respectively.

Thus, from the above discussion, it can be concluded that the extent of awareness in research scholars of MPUAT, Udaipur was from 50–95%. Whereas, in the case of research scholars of SKNAU, Jobner the extent of awareness was found to be from 51.66–95.55%, and the extent of awareness of respondents of SKRAU, Bikaner, was recorded to be from 50.55–90.00 MPS in all the e-resources. Further, it was inferred that the majority of research scholars of all the identified agriculture universities of Rajasthan, possessed good awareness about various e-resources. Similar findings have been reported by Aina (2014) indicating that the majority of respondents were aware of Academic Journal (69.40%), followed by JSTOR (56.50%), and Dissertation and Theses Ebscohost (54.10% and 50.60%), respectively. They also reported that the majority of respondents were not aware of Bookboon, World Bank Open Knowledge Repository, and National Virtual Library with 25.90%, 32.90%, and 29.40%, respectively. He further concluded that nine out of thirteen databases under consideration were averagely aware by respondents. This implies that there is a need to increase awareness to cover all electronic resources the library is subscribed to Akpojotor (2016) also reported that library and information science research students were highly aware of electronic information resources. A similar agreement was concluded with the findings of Ayele and Sreenivasarao (2013).

Comparison between respondents of selected agriculture universities according to the awareness about e-resources: To find out the difference in awareness among the research

Table 2 Awareness of research scholars about various E-resources

E-resource	MPUAT, Udaipur		SKNAU, Jobner		SKRAU, Bikaner		Total	
	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank
Web portals	83.88	XIII	88.88	V	81.66	XIII	84.80	XI
Websites related to agriculture	88.33	IX	85.55	X	86.11	VII	86.66	IX
E-journals in agriculture/CeRA	82.22	XV	86.11	VIII	83.33	XI	83.88	XII
E-books in agriculture	83.33	XIV	85.00	XII	78.88	XV	82.40	XIII
E-newspaper	88.88	VIIII	72.22	XVIII	81.11	XIV	80.73	XV
E-reprints	63.33	XXIII	61.66	XXIII	60.55	XXIII	61.84	XXIII
ETD's (electronic theses dissertation) krishikosh	84.44	XII	76.66	XVII	82.22	XII	81.10	XIV
E-patents	63.88	XXII	58.88	XXIV	57.77	XXIV	60.18	XXIV
E-magazines	81.66	XVI	82.77	XV	74.44	XIX	79.62	XVI
Touch screen kiosk	68.88	XXI	83.88	XIII	73.33	XX	75.37	XVIII
Mobile apps	91.66	III	95.55	I	90.00	I	92.40	I
Offline portable computer database (CD/ DVD, pendrive)	85.55	XI	93.33	II	85.88	VI	88.51	IV
E-analysis of data	73.33	XX	63.33	XXI	72.77	XXI	69.81	XXI
Presentation software	74.44	XIX	62.77	XXII	78.88	XIV	72.03	XX
E-payment	93.33	II	89.44	IV	86.66	IV	89.81	III
E-chat	89.44	VII	88.33	VI	86.00	V	87.92	VI
Wikipedia	95.00	I	90.55	III	87.22	III	90.92	II
E-map	90.55	V	87.77	VII	85.55	VIII	87.40	VII
E-ticket	91.11	IV	83.33	XIV	85.00	IX	86.48	X
E-shopping	90.00	VI	86.66	IX	88.33	II	88.33	V
E-banking	87.77	X	85.88	XI	84.44	X	87.03	VIII
E-library	81.11	XVII	78.33	XVI	76.11	XVIII	78.51	XVII
E-resources sensitization workshop	58.88	XXIV	64.44	XIX	62.33	XXII	61.88	XXII
Anti-plagiarism	76.66	XVIII	63.88	XX	77.77	XVII	72.77	XIX
RFID technology	50.00	XXIV	51.66	XXV	50.55	XXV	50.74	XXV

n=180; MPS, Mean Percent Score.

scholars towards e-resources in agriculture. Analysis of Variance-One-way test was used.

NH_{01}: There is no significant difference among the research scholars of selected agriculture universities about awareness of e-resources.

RH_1: There is a significant difference among the research scholars of selected agriculture universities about awareness of e-resources.

Data shows that the calculated F value 0.707 was less than the tabulated value, which is statistically non-significant. So the null hypothesis (NH_{01}) of no significant difference among the research scholars of selected agriculture universities about awareness of e-resources was accepted, and the research hypothesis (RH_1) was rejected. There was no significant difference among the research scholars towards awareness of e-resources among the students of selected campuses. A similar awareness among the research scholars may be because almost a similar grant is received from the ICAR for the development of e-resources in the agriculture universities of Rajasthan.These findings were in accordance with Mwantimwa and Elia (2017), in which it was revealed that there are minor differences between institutions in terms of awareness of e-resources. A similar agreement was reached with the findings of Kwadzo (2015).

It can be concluded that the majority of research scholars were aware of e-resources. They were more focused on their academic and research purposes and understood the scope of ICT/e-resources for the upcoming era to develop their career. E-resources provide the quick and right information in every field. This study could be considered a step in that direction. The research scholars should be informed and updated on the various e-resources available in the respective parent library system. Thus, it can be further concluded that awareness can be created by arranging different programmes for the research scholars to educate them about e-resources.

REFERENCES

Agaba D M, Kigongo-Bukenya I M N and Nyumba J B. 2005. Utilization of electronic information resources by academic staff at Makerere University in Uganda. *University of Dares Salaam Library Journal* **6**(1): 18–28.

Aina R F. 2014. Awareness, accessibility and use of electronic databases among academic staff of Babcock University. *Business School and Management.* http://arabianjbmr.com/pdfs/kd.

Akpojotor L O. 2016. Awareness and Usage of Electronic Information Resources among research students of Library and Information Science in Southern Nigeria. *Library Philosophy and Practice (e-journal)*. 1408.

Ani O E and Ahiauzu B. 2008. Towards effective development of electronic information resources in Nigerian University Libraries. *Library Management* **29**(6/7): 504–14.

Ayele A A and Sreenivasarao V. 2013. A Case Study of Acceptance and Use of Electronic Library Services in Universities Based on SO-UTAUT Model. *International Journal of Innovative Research in Computer and Communication Engineering* **1**(4): 903–10.

Bar-llan J, Peritz B C and Wolman Y. 2003. A survey on the use of electronic databases andelectronic journals accessed through the web by the academic staff of Israeli Universities. *The Journal of Academic Librarianship* **29**(6): 346–61.

Egberongbe H S. 2011. The use and impact of electronic resources at the University of Lagos. *Library Philosophy and Practice*.

Ellis D and Oldman H. 2005. The english literature research in the age of internet. *Journal of Information Science* **31**(1): 123–30.

Henderson T and Machewan B. 1997. Electronic collections and wired faculty, *Library Trends* **45**(3): 488–98.

Kwadzo G. 2015. Awareness and Use of Electronic Databases by Geography and Resource Development Information Studies Graduate Students in University of Ghana. *Library Philosophy and Practice (e-journal)*. Accessed July 12, 2015. http://digital commons.unl.edu/libphilprac/1210.

Mani M, Thirumagal A, Vijayalakshmi B and Priyadharshini E. 2019. Usage of e-resources among the students of South Tamil Nadu with the special reference of manonmaniam Sundaranar University, Tirunelveli–A Study. *Library Philosophy and Practice (e-journal).*

Meena R S. 2013. 'A Study on e-resources among the students of extension education IAS' BHU Unpublished MSc thesis IAS BHU.

Mwantimwa K and Elia E. 2017. Utilisation of E-Resources to Support Teaching and Research in Higher Learning Institutions, Tanzania. *University of Dares Salaam Library Journal* **12**(2): 98–123.

Obuh A O. 2009. Use of electronic resources by research students of the Department of Library and Information Science of Delta State University, Abraka, Nigeria. *Library Philosophy and Practice*. Retrieved from: http://www.webpages.uidaho.edu/~mbolin/obuh-alex.htm

Prangya D and Rabindra K. 2013. Access, awareness and use of electronic information resources by research scholars of Berhampur University: A study. *American International Journal of Research in Humanities, Arts and Social Sciences* **3**(2).

Robinson F R. 1976. Housing crisis or opportunity. *Extension Service Review* **41**: 46.

Waldman M. 2003. Freshmans user of library electronic resources and self-efficiency. *Information Research* **8**(2): 12–27.