



Usability of e-resources by Research scholars and Faculty members in selected Universities of Haryana: a Comparative study

Sandhya Rani
Dept. of LIS, Punjabi University
Patiala
Email:sandhyabbel@gmail.com

Abstract

E-Resources rose in significance throughout the world during COVID-19 pandemic as these were used extensively in teaching, learning and research. Present study was conducted to know about the usability of e-resources by the research scholars and faculty members of three state universities of Haryana, their purpose of using e-resources, levels of satisfaction and problems faced by them. For collecting primary data a self-designed questionnaire was used. It was found that all respondents were aware about e-resources and majority of respondents were using e-resources. The study found that respondents of CDLU have frequently using e-theses/e-dissertations, e-magazines, e-newspapers, e-standards/e-patents, e-newsletters, e-databases (Bibliographic), full text databases, CD ROMs/DVDs, anti-plagiarism software, institutional/digital repository and library OPAC/ Web-OPAC e-resources followed by respondents from MDU and KUK. It was also found that respondents from CDLU were more satisfaction with regard to e-theses/e-dissertations, e-magazines, e-newspapers and e-standards/e-patents e-resources, followed by respondents from MDU and KUK. It is also observed that the respondents from all three universities were facing problems of Inadequate library resources in their subject; poor Internet connectivity; lack of library orientation; information scattered in too many sources; lack of time for searching; lack of knowledge in using the library catalogue/OPAC/Web-OPAC; lack of ICT skills in information searching; lack of technical support in library while they were accessing the relevant Information.

Keywords: E-Resources, Faculty Members, Research Scholars, State Universities of Haryana



1 introduction

The technological advances have led to drastic revolutions in the entire process of information storage, retrieval and usage. In this electronic era, the requirements of users probably cannot be completely met out through printed sources of information, thus necessitating the supplementation with electronic resources (e-resources). According to the International Federation of Library Associations and Institutions, “electronic resources are those requiring access to any form of computer or similar electronic device. These resources are basically computer controlled, the information is stored in files and as and when required, it can be retrieved as such from the same device. It can be multiplied, modified, updated and transmitted as per requirement”.

2 Objectives

1. To know the usability of electronic resources among research scholars and faculty members cover under study.
2. To know which type of electronic resources are used by the research scholars and faculty members under reference.
3. To know the satisfaction level regarding electronic resources by research scholars and faculty members under investigation.
4. To identify the problems regarding use of electronic resources by research scholars and faculty members under reference.
5. How to increase the use of electronic resources by research scholars and faculty members covered under study.

3 Review of literature

The studies related to use of electronic resources by the different types of users such as faculty members, research scholars, PG students/UG students, etc. conducted from 2015 to 2022 were reviewed and these are discussed below:

Bajpai and Sharma (2015) undertook a study on the use of e-resources by the faculty members of the YMCA University of Science & Technology, Faridabad (Haryana). The result



of this study showed that the faculty members of YMCA University of Science & Technology were fully aware about the electronic resources. It was revealed that 95% respondents were using e-journals for their research work, preparing lectures/assignments whereas 75% were using for writing research articles. But the slow speed of Internet was the major obstacle in the use the e-resources, so the speed of Internet/Wi-Fi needed to be improved. All the faculty members felt that there should be training programmes for the optimum utilization of e-resources. Akpojotor (2016) studied the awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria. The study was a descriptive research that adopted the survey method. It was found in the study that the awareness level of students and their knowledge of electronic information resources and their usage of the resources were directly correlated. It was also found that most of the students of library and information science had ample knowledge of electronic information resources. Postgraduate students of library and information science used the e-resources to a very large extent, and they were found to be highly skilled in the use of electronic information resources. The study further concluded that electronic information resources were important for empowering postgraduate students of library and information science in Southern Nigeria. In an article entitled "Use of e-resources by the researchers of Chaudhary Charan Singh Haryana Agriculture University, Hisar, Preeti (2017) explored the use of electronic resources by the research scholars. The survey method was adopted in this study and questionnaire was used to obtain data from the researchers. It was discovered that majority of researchers i.e. 98% were using e-resources. 88% researchers were accessing e-resources for their research purpose where as 49% for writing papers/articles/books, and projects and majority of the respondents were accessing these e-resources in the university library. 62% researchers faced slow access speed problem while accessing the e-resources and inadequate ICT infrastructure (39%). But majority of the researchers 58% were satisfied with the e-resources, 24% of the researchers were average and 15% of the researchers were highly satisfied with the e-resources. The study recommended that library should improve the Internet speed and provide the Wi-Fi facilities for better access of e-resources. Mehla (2018) studied the use of electronic resources by research scholars of Science Faculty of Kurukshetra University, Kurukshetra. Questionnaire was administered to elicit the data and total 100 questionnaires were distributed among the research scholars and responses were obtained from 80 research scholars. The data was analyzed and it was found that maximum respondents used electronic resources



daily their departments for research purposes. A large number of respondents got acquainted to access electronic resources by themselves from social networking sites and other online resources. It was recorded that 43.75% respondents were not satisfied with the e-resources due to the slow access speed and non availability of needed e-resources in the library of Kurukshetra University, Kurukshetra. It was revealed that the role of library in providing training for use of e-resources is not satisfactory as only 6.25% of respondents were trained by university library. Some respondents suggested that there was need to subscribe of more new journals in the library. It was also suggested by the respondents that the university library should provide the facility of anti-plagiarism software free of cost to all the university students. Reddy and Reddy (2019) conducted a study on “Use of e-sources by the students of Acharya Nagarjuna University Engineering College: A survey”. Data was collected from a random sample of 500 students (298 male and 202 female students) through questionnaire and SPSS was adopted to analyse the data. The result of the study indicated that 31.60% students visited the library twice/thrice a week and 44.20% respondents visited library only for electronic uses, i.e. checking mails/chat/e-books/e-journals/e-references. More than half the respondents i.e. 51.80% were satisfied with the computer facility. Almost all the respondents (95.40%) replied that their college has a Wi-Fi facility. It was found that 68% respondents faced various problems in using e-sources in the library like 39.10% respondents recorded electrical power cuts and non-air-conditioning of the library as a problem. 79.40% reported that orientation programs are required to create awareness about use of e-sources. Nair and Nanda Lal (2020) conducted a study on the “Awareness and use of domain specific electronic resources among research scholars in University of Kerala”. For the purpose, a questionnaire based study was conducted. Data analysis suggested that 96% of the researchers were aware of e-resources, whereas in humanities 7.84% were unaware. In science disciplines, a good number of the respondents (52.04%) were satisfied with journal title search method, where as social science scholars preferred subject search method and humanities scholars preferred author search method. Interestingly, date of publication was the least used search method by researchers of all the disciplines. Most of the respondents of every discipline liked to download the e-resources of their requirement. The science discipline scholars found ‘lack of guidance’ as major problem in using the resources, social science scholars listed ‘difficult to search for the right information’ as main problem whereas in humanities discipline, foremost problem was listed to be ‘unfamiliarity to use e-resources’ as obstacle in using



electronic resources. Maximum users in social science discipline (78.31%) were satisfied with the electronic resources, followed by science (76.53%) and humanities scholars (76.47%). Kundu (2021) conducted a study entitled “Usage of e-resources among law students in National University of Juridical Sciences, Kolkata (NUJS) Library”. Questionnaire based survey method was adopted for data collection. 100 questionnaires were distributed randomly to the NUJS users and 90 were received back. The study found that most of the respondents i.e. 55% used web search engines to find appropriate e-resources on the Internet. 48% users admitted that they used e-resources for learning. 49% users preferred to use e-journals. Most of the users (52%) reported that they preferred to use e-resources for getting up-to-date information. It was also found that limited access of e-resources was the main problem faced by respondents. Dwivedi and Verma (2022) studied entitled “Use of electronic resources by users of the Gautam Buddha Central library at the B.B.A.U, Lucknow, Uttar Pradesh: A study”. 120 questionnaires were sent to the Undergraduate, Postgraduate and Research Scholar through Google forms and 97 were received back with 80.3% response rate. It is found that all the respondents were aware about e-resources and only two respondents were unaware of their availability. Maximum e-resources were used for study/ personal assignment purpose by the UG (51.21%) and PG (45.9%) students. It is also found that majority of the respondents were preferred PDF as a file format. Maximum users of UG (78.04%), PG (81.08%) and research scholars (84.21%) were satisfied with the available information. Majority of respondents (51.21%) faced problem due to lack of subject knowledge whereas 26.31% research scholars responded too much information is retrieved.

4 Scope of study

The present study covered following three well established and multidisciplinary state universities of Haryana:

1. Kurukshetra University, Kurukshetra (1956) (known as KUK in text),
2. Maharshi Dayanand University, Rohtak (1975) (referred as MDU in text)
3. Chaudhary Devi Lal University, Sirsa (2003) (cited as CDLU).



5 Research methodology

The stratified random sampling technique was used for the present survey for collecting data from the respondents. A well-structured questionnaire was designed and distributed among 576 respondents in which 219 from Kurukshetra University, 252 from Maharshi Dayanand University and 105 from Chaudhary Devi Lal University. The questionnaires were sent to the respondents by personally and Google forms. Out of these 542 were received back and 500 questionnaires were found valid for study.

6 Data analysis

Data collected from the respondents using questionnaire have been analyzed through descriptive statistics with the help of SPSS 23rd edition and MS Excel using appropriate statistical techniques viz. Percentage, Mean, Standard Deviation, ANOVA test, etc. The collected data is presented in tables and discussed below:

Table 1
Awareness about E-Resources

Responses	Faculty Members N (%)	Research Scholars N (%)	Total N (%)
Yes	129 (25.80)	371 (74.20)	500 (100.00)
No	0 (0.00)	0 (0.00)	0 (0.00)
Total	129 (25.80)	371(74.20)	500 (100.00)

The entire world is facing pandemic of COVID-19. In these turbulent times, e-resources have played an important role because during the lockdown period all the teaching learning works were done through electronic resources only. Table 1 shows that all the faculty members and researchers covered under the study are aware about the electronic resources.



Table 2
Use of E-Resources by the Respondents

Responses	Faculty Members N (%)	Research Scholars N (%)	Total N (%)
Yes	128 (25.60)	362 (72.40)	490 (98.00)
No	1 (0.20)	9 (1.80)	10 (2.00)
Total	129 (25.80)	371(74.20)	500 (100.00)

The respondents were asked about the use of e-resources and Table 2 shows that majority of respondents (98%) use e-resources and only 2.00% reported not using e-resources which include 0.20% faculty members and 1.80% researchers.

Table 3
Reasons for Using E-Resources

Reasons	Universities	Mean	Std. Deviation	Source of variance	Sum of Squares	df	Mean Square	F	Sig.	Remarks
Easy to search	KUK	4.71	0.760	Between Groups	1.330	2	0.67	0.96	0.38	Not Significant
	MDU	4.61	0.986	Within Groups	345.220	497	0.69			
	CDLU	4.73	0.518	Total	346.550	499	0.00			
	Total	4.67	0.833							
Easy to access	KUK	4.60	0.822	Between Groups	1.682	2	0.84	1.18	0.31	Not Significant
	MDU	4.55	0.972	Within Groups	354.318	497	0.71			
	CDLU	4.71	0.478	Total	356.000	499	0.00			
	Total	4.60	0.845							
Easy to store	KUK	4.65	0.877	Between Groups	0.919	2	0.46	0.59	0.56	Not Significant
	MDU	4.58	1.003	Within Groups	388.639	497	0.78			
	CDLU	4.68	0.514	Total	389.558	499	0.00			
	Total	4.62	0.884							
Easy to print	KUK	4.60	0.866	Between Groups	3.115	2	1.56	1.90	0.15	Not Significant
	MDU	4.47	1.059	Within Groups	406.533	497	0.82			
	CDLU	4.66	0.477	Total	409.648	499	0.00			
	Total	4.55	0.906							
Time saving	KUK	4.64	0.872	Between Groups	4.766	2	2.38	2.92	0.06	Not Significant
	MDU	4.52	1.055	Within Groups	405.962	497	0.82			



	CDLU	4.78	0.467	Total	410.728	499	0.00			
	Total	4.61	0.907							
24 X 7 accessibility	KUK	4.64	0.860	Between Groups	2.369	2	1.18	1.41	0.24	Not Significant
	MDU	4.54	1.067	Within Groups	416.133	497	0.84			
	CDLU	4.73	0.559	Total	418.502	499	0.00			
	Total	4.61	0.916							
Less costly	KUK	4.36	1.053	Between Groups	2.047	2	1.02	1.01	0.37	Not Significant
	MDU	4.37	1.051	Within Groups	505.121	497	1.02			
	CDLU	4.53	0.779	Total	507.168	499	0.00			
	Total	4.39	1.008							
Portable	KUK	4.49	0.985	Between Groups	3.152	2	1.58	1.63	0.20	Not Significant

Table 3 shows the reason for using e-recourses by respondents in universities under study and the significant reasons are: are easy to search, easy to access, easy to store, easy to print, time saving, 24X7 accessibility, less costly and portable. When the responses were statistically tested, it has been found that there is no significant difference for using of e-resources by the researchers and faculty members in the different universities under study because the p-value is greater than value of analysis of variance i.e. 0.05. It reveals that respondents from different universities have same reasons for using e-resources.

Table 4
Frequency of Using E-Resources

E-Resources	Universities	Mean	Std. Deviation	Source of variance	Sum of Squares	df	Mean Square	F	Sig.	Remarks
E-journals	KUK	4.99	1.251	Between Groups	4.175	2	2.09	1.48	0.23	Not Significant
	MDU	5.19	1.195	Within Groups	701.127	497	1.41			
	CDLU	5.04	1.021	Total	705.302	499	0.00			
	Total	5.09	1.189							
E-books	KUK	4.69	1.366	Between Groups	5.582	2	2.79	1.62	0.20	Not Significant
	MDU	4.90	1.334	Within Groups	854.930	497	1.72			
	CDLU	4.92	1.128	Total	860.512	499	0.00			
	Total	4.82	1.313							
E-theses/E-dissertations	KUK	4.16	1.629	Between Groups	21.786	2	10.89	5.00	0.01	Significant
	MDU	4.52	1.479	Within Groups	1083.342	497	2.18			
	CDLU	4.69	1.082	Total	1105.128	499	0.00			



	Total	4.41	1.488							
E-magazines	KUK	4.15	1.675	Between Groups	23.683	2	11.84	5.00	0.01	Significant
	MDU	4.51	1.563	Within Groups	1177.445	497	2.37			
	CDLU	4.73	1.126	Total	1201.128	499	0.00			
	Total	4.41	1.551							
E-newspapers	KUK	4.48	1.778	Between Groups	36.361	2	18.18	7.12	0.00	Significant
	MDU	4.82	1.611	Within Groups	1268.189	497	2.55			
	CDLU	5.24	1.078	Total	1304.550	499	0.00			
	Total	4.77	1.617							
E-standards/E-patents	KUK	2.91	1.839	Between Groups	94.909	2	47.45	15.97	0.00	Significant
	MDU	3.68	1.757	Within Groups	1476.739	497	2.97			
	CDLU	4.00	1.350	Total	1571.648	499	0.00			
	Total	3.45	1.775							
E-newsletters	KUK	3.25	1.834	Between Groups	50.887	2	25.44	8.20	0.00	Significant
	MDU	3.75	1.849	Within Groups	1542.671	497	3.10			
	CDLU	4.10	1.342	Total	1593.558	499	0.00			
	Total	3.62	1.787							
E-databases (Bibliographic)	KUK	3.28	1.782	Between Groups	39.411	2	19.71	6.93	0.00	Significant
	MDU	3.78	1.734	Within Groups	1413.651	497	2.84			
	CDLU	3.98	1.325	Total	1453.062	499	0.00			
	Total	3.63	1.706							
Full text databases	KUK	3.28	1.843	Between Groups	33.418	2	16.71	5.70	0.00	Significant
	MDU	3.65	1.740	Within Groups	1457.132	497	2.93			
	CDLU	3.99	1.312	Total	1490.550	499	0.00			
	Total	3.57	1.728							
CD ROMs/DVDs	KUK	2.51	1.563	Between Groups	45.925	2	22.96	8.89	0.00	Significant
	MDU	2.92	1.670	Within Groups	1283.907	497	2.58			
	CDLU	3.35	1.545	Total	1329.832	499	0.00			
	Total	2.84	1.632							
Subject Specific Portals	KUK	4.12	1.655	Between Groups	11.111	2	5.56	1.94	0.14	Not Significant
	MDU	4.01	1.871	Within Groups	1422.697	497	2.86			
	CDLU	4.43	1.257	Total	1433.808	499	0.00			
	Total	4.13	1.695							
Anti-plagiarism Software	KUK	2.69	1.594	Between Groups	44.220	2	22.11	8.39	0.00	Significant
	MDU	3.13	1.647	Within Groups	1310.202	497	2.64			
	CDLU	3.51	1.629	Total	1354.422	499	0.00			
	Total	3.03	1.648							
Search Engines like Google	KUK	5.65	0.969	Between Groups	4.920	2	2.46	2.10	0.12	Not Significant
	MDU	5.44	1.256	Within Groups	582.830	497	1.17			
	CDLU	5.62	0.827	Total	587.750	499	0.00			



	Total	5.55	1.085							
Institutional/Digital Repository	KUK	3.70	1.843	Between Groups	33.393	2	16.70	5.72	0.00	Significant
	MDU	4.05	1.743	Within Groups	1450.479	497	2.92			
	CDLU	4.42	1.274	Total	1483.872	499	0.00			
	Total	3.98	1.724							
Library OPAC/ Web-OPAC	KUK	3.10	1.884	Between Groups	61.284	2	30.64	10.24	0.00	Significant
	MDU	3.62	1.706	Within Groups	1481.214	495	2.99			
	CDLU	4.05	1.425	Total	1542.498	497	0.00			
	Total	3.50	1.762							

Comparisons made among the respondents of Kurukshetra University, Maharshi Dayanand University and Chaudhary Devi Lal University have been listed in Table 4, which shows that respondents from different universities have significant difference towards frequency of using e-resources because the p-value is less than value of analysis of variance i.e.0.05 except e-journals, e-books, subject specific portals and search engines like Google. The table reveals that respondents of CDLU have given higher priority to e-theses/e-dissertations, e-magazines, e-newspapers, e-standards/e-patents, e-newsletters, e-databases (Bibliographic), full text databases, CD ROMs/DVDs, anti-plagiarism software, institutional/digital repository and library OPAC/ Web-OPACe-resources, followed by respondents from MDU and KUK.

Table 5
Satisfaction Level Regarding E-Resources

E-Resources	Universities	Mean	Std. Deviation	Source of variance	Sum of Squares	df	Mean Square	F	Sig.	Remarks
E-journals	KUK	4.56	0.529	Between Groups	0.533	2	0.27	0.91	0.40	Not Significant
	MDU	4.60	0.552	Within Groups	146.049	497	0.29			
	CDLU	4.65	0.545	Total	146.582	499	0.00			
	Total	4.59	0.542							
E-books	KUK	4.37	0.628	Between Groups	1.502	2	0.75	1.89	0.15	Not Significant
	MDU	4.44	0.643	Within Groups	197.186	497	0.40			
	CDLU	4.53	0.603	Total	198.688	499	0.00			
	Total	4.43	0.631							
E-theses/E-dissertations	KUK	4.17	0.827	Between Groups	9.048	2	4.52	8.86	0.00	Significant
	MDU	4.43	0.642	Within Groups	253.784	497	0.51			
	CDLU	4.48	0.621	Total	262.832	499	0.00			
	Total	4.34	0.726							



E-Resources	Universities	Mean	Std. Deviation	Source of variance	Sum of Squares	df	Mean Square	F	Sig.	Remarks
E-magazines	KUK	4.11	0.783	Between Groups	3.617	2	1.81	3.24	0.04	Significant
	MDU	4.26	0.759	Within Groups	277.333	497	0.56			
	CDLU	4.32	0.630	Total	280.950	499	0.00			
	Total	4.21	0.750							
E-newspapers	KUK	4.19	0.783	Between Groups	5.977	2	2.99	5.11	0.01	Significant
	MDU	4.28	0.796	Within Groups	290.551	497	0.58			
	CDLU	4.51	0.639	Total	296.528	499	0.00			
	Total	4.29	0.771							
E-standards/E-patents	KUK	3.73	0.841	Between Groups	7.737	2	3.87	6.18	0.00	Significant
	MDU	3.93	0.809	Within Groups	311.325	497	0.63			
	CDLU	4.05	0.621	Total	319.062	499	0.00			
	Total	3.87	0.800							
E-newsletters	KUK	3.82	0.790	Between Groups	4.054	2	2.03	3.32	0.04	Significant
	MDU	4.01	0.801	Within Groups	303.898	497	0.61			
	CDLU	4.00	0.715	Total	307.952	499	0.00			
	Total	3.94	0.786							
E-databases (Bibliographic)	KUK	3.91	0.798	Between Groups	0.582	2	0.29	0.50	0.61	Not Significant
	MDU	3.87	0.785	Within Groups	289.616	497	0.58			
	CDLU	3.97	0.623	Total	290.198	499	0.00			
	Total	3.90	0.763							
Full text databases	KUK	3.96	0.769	Between Groups	0.371	2	0.19	0.34	0.71	Not Significant
	MDU	3.97	0.769	Within Groups	271.341	497	0.55			
	CDLU	4.03	0.586	Total	271.712	499	0.00			
	Total	3.98	0.738							
CD ROMs/DVDs	KUK	3.74	0.875	Between Groups	3.821	2	1.91	2.59	0.08	Not Significant
	MDU	3.66	0.902	Within Groups	366.267	497	0.74			
	CDLU	3.90	0.700	Total	370.088	499	0.00			
	Total	3.73	0.861							
Subject Specific Portals	KUK	4.09	0.808	Between Groups	0.942	2	0.47	0.70	0.50	Not Significant
	MDU	4.11	0.885	Within Groups	335.096	497	0.67			
	CDLU	4.21	0.675	Total	336.038	499	0.00			
	Total	4.12	0.821							
Anti-plagiarism Software	KUK	4.01	0.929	Between Groups	1.535	2	0.77	0.96	0.39	Not Significant
	MDU	4.12	0.901	Within Groups	398.897	497	0.80			
	CDLU	4.01	0.810	Total	400.432	499	0.00			
	Total	4.06	0.896							
Search Engines like Google	KUK	4.64	0.571	Between Groups	0.932	2	0.47	1.13	0.32	Not Significant
	MDU	4.56	0.710	Within Groups	204.196	497	0.41			



E-Resources	Universities	Mean	Std. Deviation	Source of variance	Sum of Squares	df	Mean Square	F	Sig.	Remarks
	CDLU	4.54	0.602	Total	205.128	499	0.00			
	Total	4.59	0.641							
Institutional/Digital Repository	KUK	4.00	0.770	Between Groups	0.415	2	0.21	0.39	0.68	Not Significant
	MDU	4.00	0.757	Within Groups	263.457	497	0.53			
	CDLU	4.08	0.542	Total	263.872	499	0.00			
	Total	4.02	0.727							
Library OPAC	KUK	3.82	0.792	Between Groups	7.696	2	3.85	6.99	0.00	Significant
	MDU	4.07	0.760	Within Groups	273.712	497	0.55			
	CDLU	3.82	0.569	Total	281.408	499	0.00			
	Total	3.93	0.751							
Social Media Tools	KUK	4.14	0.807	Between Groups	1.862	2	0.93	1.47	0.23	Not Significant
	MDU	4.10	0.821	Within Groups	313.749	496	0.63			
	CDLU	4.27	0.700	Total	315.611	498	0.00			
	Total	4.14	0.796							

Table 5 reveals that satisfaction level of respondents from different universities. When the responses are statistically tested, it is found that there is no significant difference in satisfaction level among the respondents of different universities because the p-value is greater than value of analysis of variance i.e. 0.05 except e-theses/e-dissertations, e-magazines, e-newspapers, e-standards/e-patents, e-newsletters and library OPAC.

The data revealed that respondents from CDLU have shown more satisfaction with regard to e-theses/e-dissertations, e-magazines, e-newspapers and e-standards/e-patentse-resources, followed by respondents from MDU and KUK. But in case of e-newsletters and library OPAC, respondents seemed to be from MDU respondents more satisfied by these e-resources as compared to respondents from CDLU and KUK.

Table 6
Problems Faced While Accessing Relevant Information

Problems	Universities	Mean	Std. Deviation	Source of variance	Sum of Squares	df	Mean Square	F	Sig.	Remarks
Inadequate library resources in your subject	KUK	2.67	1.251	Between Groups	13.993	2	7.00	4.18	0.02	Significant
	MDU	2.50	1.308	Within Groups	830.957	497	1.67			
	CDLU	2.20	1.343	Total	844.950	499	0.00			



	Total	2.51	1.301							
Non-availability of e-resources in your subject	KUK	2.42	1.165	Between Groups	3.127	2	1.56	1.10	0.33	Not Significant
	MDU	2.25	1.151	Within Groups	706.385	497	1.42			
	CDLU	2.31	1.339	Total	709.512	499	0.00			
	Total	2.32	1.192							
Inadequate library infrastructure	KUK	2.04	1.090	Between Groups	0.013	2	0.01	0.01	0.99	Not Significant
	MDU	2.05	1.176	Within Groups	639.187	497	1.29			
	CDLU	2.03	1.120	Total	639.200	499	0.00			
	Total	2.04	1.132							
Inadequate lab infrastructure	KUK	2.13	1.221	Between Groups	2.370	2	1.18	0.89	0.41	Not Significant
	MDU	2.00	1.103	Within Groups	658.662	497	1.33			
	CDLU	1.98	1.115	Total	661.032	499	0.00			
	Total	2.04	1.151							
Poor Internet Connectivity	KUK	2.73	1.279	Between Groups	43.468	2	21.73	15.64	0.00	Significant
	MDU	2.08	1.037	Within Groups	690.820	497	1.39			
	CDLU	2.30	1.278	Total	734.288	499	0.00			
	Total	2.37	1.213							
Lack of library orientation	KUK	2.39	1.237	Between Groups	13.350	2	6.68	4.48	0.01	Significant
	MDU	2.03	1.161	Within Groups	740.048	497	1.49			
	CDLU	2.21	1.321	Total	753.398	499	0.00			
	Total	2.20	1.229							
Information scattered in too many sources	KUK	2.46	1.166	Between Groups	17.874	2	8.94	6.50	0.00	Significant
	MDU	2.24	1.184	Within Groups	683.278	497	1.37			
	CDLU	1.92	1.157	Total	701.152	499	0.00			
	Total	2.26	1.185							
Lack of time for searching	KUK	2.53	1.082	Between Groups	14.607	2	7.30	5.70	0.00	Significant
	MDU	2.20	1.143	Within Groups	636.343	497	1.28			
	CDLU	2.13	1.204	Total	650.950	499	0.00			
	Total	2.31	1.142							
Lack of knowledge in using the library catalogue/OPAC/Web-OPAC	KUK	2.40	1.255	Between Groups	17.417	2	8.71	6.06	0.00	Significant
	MDU	2.24	1.161	Within Groups	713.671	497	1.44			
	CDLU	1.87	1.166	Total	731.088	499	0.00			
	Total	2.23	1.210							
Lack of ICT skills in information searching	KUK	2.17	1.198	Between Groups	10.356	2	5.18	3.93	0.02	Significant
	MDU	2.09	1.142	Within Groups	655.596	497	1.32			
	CDLU	1.77	1.055	Total	665.952	499	0.00			
	Total	2.06	1.155							
Strict library rules	KUK	2.04	1.163	Between Groups	2.468	2	1.23	0.91	0.40	Not Significant
	MDU	2.04	1.180	Within Groups	676.514	497	1.36			
	CDLU	1.86	1.141	Total	678.982	499	0.00			
	Total	2.01	1.166							



Lack of technical support in library	KUK	2.24	1.205	Between Groups	9.668	2	4.83	3.56	0.03	Significant
	MDU	1.94	1.118	Within Groups	671.729	495	1.36			
	CDLU	2.04	1.192	Total	681.398	497	0.00			
	Total	2.07	1.171							

Table 6 reveals that the responses, when statistically tested, provide that there is a significant difference in frequency of problems faced while accessing relevant information among respondent of different universities cover under study, because the p-value is less than 0.05 of analysis of variance. This further shows that respondents from the KUK, MDU and CDLU universities have different opinions towards the problem faced except non-availability of e-resources in your subject, inadequate library infrastructure, inadequate lab infrastructure and strict library rules. Respondents from KUK are facing more problems in case of poor Internet connectivity, lack of library orientation, and lack of technical support in library in accessing library resources as compared to respondents from CDLU and MDU. Similarly, respondents from KUK are facing more problems as inadequate library resources in your subject, information scattered in too many sources, lack of time for searching, lack of knowledge in using the library catalogue/OPAC/Web-OPAC and lack of ICT skills in information searching as compared to respondents from MDU and CDLU.

Table 7
Suggestions Regarding Increasing the Use of E-Resources

Suggestions	Count	No response	Responses of Faculty Members and Research Scholars						Max. Rank
Organizing workshops/training programmes frequently	N	0	265	57	43	30	24	81	6
	%	0	53.00	11.40	8.60	6.00	4.80	16.20	
Increasing the time of accessing e-resources in the library	N	44	133	98	49	96	43	37	4
	%	8.80	26.60	19.60	9.80	19.20	8.60	7.40	
Expert staff assistance in accessing/using e-resources	N	37	164	141	55	45	35	23	2
	%	7.40	32.80	28.20	11.00	9.00	7.00	4.60	
Online tutorials	N	31	159	84	60	49	88	29	5
	%	6.20	31.80	16.80	12.00	9.80	17.60	5.80	
Circulating list of subscribed e-resources on monthly basis	N	42	131	126	105	28	41	27	3
	%	8.40	26.20	25.20	21.00	5.60	8.20	5.40	
Email alert from university library about subscribed e-resources	N	32	285	59	27	40	25	32	1
	%	6.40	57.00	11.80	5.40	8.00	5.00	6.40	



Suggestions were invited from the respondents for the various sources and functioning of library and it was found that majority of the respondents (i.e. 57%) suggested that an e-mail alert service is needed to be started for library subscribed e-resources and this demand gets first rank. The second rank is got by the “expert staff assistance in accessing/using e-resource” which is suggested by 28.20% respondents. Circulating list of subscribed e-resources on monthly basis placed at third rank as it is suggested by 21% respondents. Increasing the time of accessing e-resources in the library is the next (fourth) rank as it is suggested by the 19.20% respondents. Online tutorials is on the fifth rank as it is suggested by 17.60% respondents and organizing workshops/ training programmes frequently is on sixth rank as it is suggested by 16.20% respondents.

7 Findings of the study

1. It is observed that all the research scholars and faculty members were aware about the electronic resources.
2. E-resources were used by 98% respondents.
3. It is found that respondents from all universities responded the same reasons (i.e. easy to search, easy to access, easy to store, easy to print, time saving, 24X7 accessibility, less costly and portable) for using e-resources.
4. Respondents of CDLU were frequently using e-theses/e-dissertations, e-magazines, e-newspapers, e-standards/e-patents, e-newsletters, e-databases (Bibliographic), full text databases, CD ROMs/DVDs, anti-plagiarism software, institutional/digital repository and library OPAC/ Web-OPAC e-resources followed by respondents from MDU and KUK.
5. It is found that respondents from CDLU were more satisfied in using e-resources as compare to respondents of MDU and KUK.
6. It is observed that the respondents from all three universities were facing problems of Inadequate library resources in their subject; Poor Internet Connectivity; Lack of library orientation; Information scattered in too many sources; Lack of time for searching; Lack of knowledge in using the library catalogue/OPAC/Web-OPAC; Lack of ICT skills in information searching; Lack of technical support in library while they were accessing the relevant Information.
7. Majority of the respondents (57%) suggested that for increasing the use of e-resources in library an e-mail alert service should be started for the same.



8 Conclusion and Suggestions

During COVID-19 pandemic, usage of e-resources increased many-fold, and hitherto unaware people have now learned to use the electronic resources in ways which they never could. The study concluded that some respondents admitted that they face difficulty in finding relevant information while accessing e-resources. The libraries should try to reduce this problem by imparting information literacy skills among users.

References

- Akpojotor, L. O. (2016). Awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria. *Library Philosophy and Practice*. <http://digitalcommons.unl.edu/libphilprac/1408>
- Bajpai, P. N., & Sharma, S. (2015). *Use of e-resources by the faculty members of the YMCA University of Science and Technology*. In *Library Automation: Issues and Remedies in Present Scenario* (pp. 202-207). Department of Library & Information Science, Aggarwal College Ballabgarh, Faridabad.
- Chaudhary Devi Lal University, Sirsa Haryana*. (2022, April 10). <https://www.cdlu.ac.in>
- Gautam, A. S., & Sinha, M. K. (2017). *A study on use of electronic resources by the post-graduate students and research scholars of Aligarh Muslim University, Aligarh, Uttar Pradesh, India*. In *Sustainable Development of Library and Information Science Profession* (pp. 495-531). Indian Library Association.
- Kundu, A. (2021). Usage of e-resources among law students in NUJS library. *Journal of Advances in Library and Information Science*, 10(1), 44-50.
- Kurukshetra University, Kurukshetra*. (2022, April 10). <https://www.kuk.ac.in>
- Maharshi Dayanand University, Rohtak*. (2022, April 10). <https://www.mdu.ac.in>
- Mehla. (2018). Use of electronic resources by research scholars of science faculty: A study of Kurukshetra University, Kurukshetra. *Journal of Advancements in Library Sciences*, 5(1), 68-72.
- Nair, A. S., & Nanda Lal, T. N. (2020). Awareness and use of domain specific electronic resources among research scholars in University of Kerala. *International Journal of Information Movement*, 4(9), 16-27.



- Preeti. (2017). *Use of e-resources by the researchers of Chaudhary Charan Singh Haryana Agriculture University, Hisar: A survey. In Knowledge Organization in Academic Libraries (I-Koal-2017)* (pp. 330-334).
- Rajender Kumar. (2016). Use of e-resources by the medical students of M.M. University, Ambala: A case study. *DESIDOC Journal of Library and Information Technology*, 36(1), 10-16. <https://doi.org/10.14429/djlit.36.1.8959>
- Reddy, A. H., & Reddy, V. P. (2019). Use of e-sources by the students of Acharya Nagarjuna University engineering college: A survey. *International Journal of Information Dissemination and Technology*, 9(4), 182. <https://doi.org/10.5958/2249-5576.2019.00035.9>.
- Dwivedi, S.K. & Verma, S. (2022). Use of electronic resources by users of the Gautam Buddha Central library at the B.B.A.U., Lucknow, Uttar Pradesh: A study. *Library Philosophy and Practice*. <https://digitalcommons.unl.edu/libphilprac/6968>