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Ms. Saddiqa

Department of LIS, Khushal Khan Khattak University Karak, Khyber Paktunkhwa, Pakistan,
saddiqaktk92@gmail.com

Mohammad Hussain

Department of LIS, Khushal Khan Khattak University Karak, Khyber Paktunkhwa, Pakistan,
mhustb@gmail.com

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Electronic Information Resources: An Overview of Problems Faced by the Faculty Members

Ms. Saddiqa, M. Phil Scholar,

Department of LIS, Khushal Khan Khattak University Karak, Pakistan

Mohammad Hussain, Lecturer

Department of LIS, Khushal Khan Khattak University Karak, Pakistan

Abstract

Purpose: This study is an attempt to investigate the problems faced by respondents while accessing electronic information resources. The study's specific objectives were to examine the demographic information, to probe the problems faced by the faculty members and to examine the difference of opinion between male and female faculty members regarding problems concerned with the electronic information resource.

Research Design and Methodology: The survey research method was used, and data was collected from the respondents through the structured questionnaire. The stratified sampling technique was used, and 340 faculty members were selected from the total population of 661. The collected data were analyzed using Statistical Package for Social Sciences version 22 (SPSS), and descriptive and inferential statistics were applied to obtain the results.

Results: The data was collected from the four faculties of the surveyed universities and found that most respondents (34.4%) were from the faculty of social sciences. The lecture comprised the major portion of the sample, while the proportion of male respondents was higher than female respondents. The major problems identified by the faculty members were the low speed of the internet, inadequate IT infrastructure, lack of internet, non-availability of full-text access to most of the e-journals, lack of awareness of e-resources, lack of cooperation of library and computer labs staff and lack of printing facility.

Implications: The results help the university administration frame policies and plan about the procurement and subscription of e-resources. The findings will guide the authorities to organize training for teachers, researchers, and students to increase their awareness about e-resources.

Originality: This is the first study of its kind in Pakistan to investigate the issues and problems encountered by faculty members while accessing electronic information resources.

Keywords: Electronic Information Resources, Problems of Electronic Information Resources, e-resources, Pakistan, Khyber Pakhtunkhwa

1. Introduction

Man has always used different writing materials to preserve their knowledge and ideas for the next generations. The material journey began with clay tablets and took a number of

forms and stages, from papyrus, parchment, vellum, paper and today's form and shape to digital and e-forms. The emergence of databases and semantic web have changed the creation, acquisition, management, and delivery of information to researchers and information seekers. Online sources of information are available in different forms, which includes “databases, books, journals, newspapers, magazines, archives, theses, conference papers, examination papers, government papers, research reports, scripts and monographs in an electronic form” (Moyo, 2004; Nicholas et al., 2007).

An electronic resource is defined as a “resource that requires a computer or any electronic gadget for its accessibility including full text databases, electronic journals, image collections, multimedia products, numerical, graphic, and other digit content” (Kenchakkanavar, 2014; Suresh & Ravi, 2020; Zibani & Kalusopa, 2019). These resources are information mines accessed by means of ICT devices. These assets can be optimized, updated, and stored more frequently in cyber space in the most concrete and compact form and are instantly accessible from unlimited points by many people (Bajpai, 2014). Electronic resources are representation of knowledge and information electronically, accessible in several ways, including “e-books, digital databases, online journals, e-learning tutorials and online exams” (Thanuskodi & Ravi, 2011).

E-resources are incredibly useful for all organizations and individuals to get knowledge quickly, appropriately, and comprehensively at doorways. The important advantages of e-resources are that they have a global reach; consumers can access e-resources any time and from anywhere; they can be quickly copied, processed, and disseminated; easy to review, manipulate, and merge (Jegan & Jayaprakash, 2019).

Singh and Khan (2012); Kumari (2015) highlighted the e-resource features, including access to material at anytime, anywhere, easy to use, additional e-journals connection facility, fast and quick access to desired content, access to multimedia material (video, animation, sound, graphic type, etc.), time saving, cheaper than print materials, give multiple access points to users, help to reduce the burden on library staff, reduce storage space, user privileges, accuracy, less errors and confidentiality.

2. Literature Review

Girakaduwa (2019) stated that lack of infrastructure facilities, lack of user education and user awareness programs, English language barrier, and lack of IT skills and knowledge were the major problems and issues confronted by the respondents while accessing and retrieving electronic resources and services. Hussain and Saddiqa (2019) investigated hindrances faced by respondents while accessing electronic information resources. The result

reveals that low speed of internet, inadequate IT infrastructure, energy crisis low speed and non-availability of internet facility, lack of workshops and instructions were the major problems identified by the participants of the survey.

Jestin and Surnam (2019) reported the scarcity of e-books and e-journal in the libraries. The respondents identified the major barriers in using e-resources, including poor bandwidth, fewer computers, lack of needed titles, issues of viruses in the computer, and lack of time to access the resources. It was suggested that the administration of the colleges should work to overcome these problems. As expressed by Jan, Hussain, Ibrahim and Saeed (2018) the problems mentioned by the survey respondents were power failure, lack of training and orientation sessions. The recommendations include uninterrupted power supply, periodic and proper training, allotment of sufficient funds and the provision of the latest workstations.

According to Lavanya and Santharooban (2018) the major barriers to access online resources among the users were slow internet speed and connectivity, lack of awareness about e-resources and virus-affected computers. It was also found there the University did not have any instructions about the use and access of e-resources. Therefore, it was recommended that university should introduce well-planned information literacy programs.

Abouelenein (2017) explored that “lack of workshops, lack of electronic information resource centers, lack of e-learning environment and lack of technical support” were the major problems faced by the respondents while accessing database and e-resources. It was recommended that universities should ensure the availability of electronic information resources to the faculty members and encourage them to use these effectively. Belay and Bramo (2017) examined the academic staff's challenges regarding e-resources. The authors identified that the respondents' major problems were lack of searching techniques among the respondents and skills to get needed information to satisfy their information needs. It was proposed that training on the acquisition and use of digital and online information resources should be provided to library staff.

Boakye (2017) pointed out the teachers' problems while accessing e-journals. The problems highlighted by the respondents were slow internet, regular power outages and unstable network. The study recommended proper marketing, regular training, and an uninterrupted power supply. Funmilola, Musa and Adam (2017) stated the problems faced by the faculty members of education. These problems were slow internet connectivity, inadequate access to the databases and power supply. It was recommended that training courses be organized regularly for teachers to use electronic resources. Mwantimwa and Elia (2017) identified “slow internet connectivity, inability to access full-text articles, unreliable power

supply, inaccessibility of e-resources outside university premises, inadequate ICT infrastructure, and inadequate skills & knowledge” were the major challenges of e-resources. The study recommended that there is a need to encourage e-resources through web technology to improve the quality of teaching and research.

Sohail and Ahmad (2017) discussed the faculty members' problem about e-resources at Fiji National University. The slow downloading speed and blocked sites were the respondents' major constraints. Islam and Habib (2015) found that students and faculty members of a private universities in Bangladesh faced numerous problems regarding the use of e-resources. These problems were limited access to computers and slow downloading speeds. Similarly, Bhatti, Chohan and Asghar (2014) assessed the teachers' problems while accessing the digital library. The major problems pointed out by the teachers were the limited number of computers, slow speed of internet, busy schedule of teachers and power supply.

Kwafoa, Imoro and Afful-Arthur (2014) assessed the use of electronic resources among administrators and faculty in the University of Cape Coast. The major barriers confronted by the respondents while accessing these information assets were charging of access fee, lack of assistance, low speed of internet, lack of knowledge and skills of searching techniques to retrieve the required information. Magoi and Gani (2014) reviewed the development of digital libraries in the universities of Nigeria. The paper highlighted that universities faced numerous challenges of funding, infrastructure, and technology application of digital libraries. Ansari and Zubari (2010) inspected “the use and problems related to electronic resources among the arts faculty at the University of Karachi”. It was found that some departments were equipped with computer facilities, while others had only a few systems. Some problems were also highlighted by the respondents, including lack of knowledge among the respondents and lack of facilities.

3. Objectives of the Study

The study was conducted with the following goals in mind: -

- To ascertain the demographic information of faculty members
- To probe the problems faced by the faculty members while accessing electronic information resources.
- To examine whether there is any significant difference of opinions between male and female faculty members regarding problems concerned with the electronic information resource.

4. Research Design and Methodology

The study adopted a descriptive survey using structured questionnaire to collect data. This research study is delimited to the faculty members of the six public sector universities situated in the southern regions of Khyber Pakhtunkhwa, Pakistan. There were 661 faculty members working in these six universities which constitute the study's population. According to Gay, Mills and Airasian (2011), for the quantitative study, if the population size is around 500, then 50% should be taken as a sample. Keeping in view, 340 faculty members were taken as sample of the study (See Table 3.1).

The stratified sampling technique was used to draw sample from the population. Based on their designation, the faculty members were categorized into three strata: 1. professors and associate professors, 2. assistant professors, and 3. lecturers. The sample size of each stratum was equal to the group's proportion in the whole population. The researcher was then randomly select the respondents from each stratum to achieve the desired sample size. The detail is given in Table 3.1. The data was analyzed using the Statistical Package for Social Sciences (SPSS version-23) and both descriptive and inferential statistics were applied to interpret the results.

Table 3.1

Details of Population and Sample

S. No.	Name of University	Professor & Associate Professor		Assistant Professor		Lecturer		Total	
		*Total	*Sample	*Total	*Sample	*Total	*Sample	*Total	*Sample
1.	Gomal University D I Khan (GU)	34	17	120	61	113	58	267	136
2.	Kohat University of Science and Technology, Kohat (KUST)	7	4	100	51	79	41	186	96
3.	University of Science and Technology, Bannu (USTB)	5	3	52	27	68	35	125	65
4.	Khushal Khan Khattak University Karak (KUST)	1	-	21	11	32	16	54	27
5.	*FATA University (FU)	1	-	6	4	11	6	18	10
6.	University of Lakki Marwat (ULM)	-	-	3	2	8	4	11	6
	Total	48	24	302	156	311	160	661	340

*FATA= Federally Administered Tribal Areas

5. Data Analysis and Interpretation

The collected data was analyzed according to the objectives of the study and the results are presented in graphs and tables with interpretation.

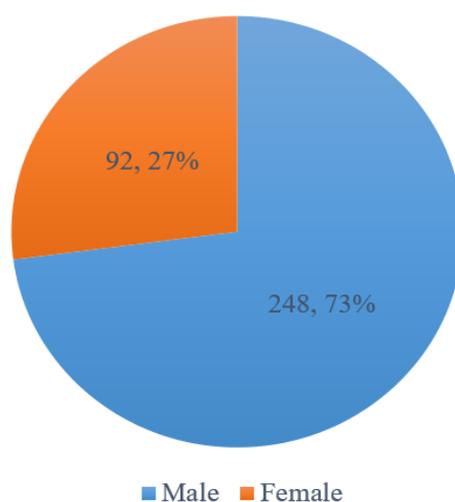
5.1 Demographic Information

This section presents the respondents' demographic details regarding gender, age, qualification, experience, and designation.

5.1.1 Gender Wise Distribution of Respondents

The data in Figure 5.1 indicates that there were 248 (73%) male and 92(27%) female faculty members out of 340 respondents. The data reveal that the male respondents were more than the female respondents. The study results are in line with the study of Soniya and Kavitha (2020). They reported that most respondents were male (56.65%) and 43.35% were female respondents. Moreover, Ogwuche and Nwokedi (2020) also found that 54.8% were male respondents, while the remaining 45.2% were female respondents of the study.

Figure 5.1 Gender Wise Distribution of Respondents



5.1.2 Age of the Respondents

Table 5.1 demonstrates information about the age of the respondents. The data reveals that 154(45.3%) respondents were of age groups ranged from 35-39 years followed by 103(30.3%) respondents with age 40-45 years, 44(12.9%) respondents were of age ranged from 45-49 years. There were 29(8.5%) respondents with age 30-35 years and only 10(2.9%) respondents were of the age group 25-30 years.

The findings were also supported by Ajuwon (2015) study, which reported that the majority (78.5%) of the respondents were between ages 30-39 years.

Table 5.1
Age of the Respondents

Age	Frequency	Percentage
25-29	10	2.9
30-34	29	8.5
35-39	154	45.3
40-45	103	30.3
46-49	44	12.9

5.1.3 Designation of the Respondents

The information gathered from the faculty members regarding their designation are displayed in Table 2. The data in the Table 2 shows that out of 340 faculty members, 160(47.1%) respondents were Lecturers, 156(45.9%) were Assistant Professors, 20(5.9%) were Professors and only 4(1.2%) respondents were Associate Professors.

It can be concluded that lecturers constitute the samples' major part. Hussain and Saddiqa (2019) also highlighted in their study that most respondents were Lecturers (61.01%) and 23.72% were Assistant Professors.

Table 5.2
Experience of the Respondents

Designation	Frequency	Percentage
Professors	20	5.9
Associate Professors	4	1.2
Assistant Professors	156	45.9
Lecturers	160	47.1

5.1.4 Faculties of the Respondents

The data for the research was gathered from different faculties of the universities, which is presented in Table 4.2. The data indicate that 117(34.4%) respondents were from the Faculty of Social Sciences, followed by Science Faculty with 114(33.5 %) respondents. The Faculties of Management & Economics and Engineering & Technology had the least number of respondents with 60 and 49 respectively. Natarajan, Suresh, Sivaraman and Sevukan (2010) also found in their study that the majority of respondents 42 and 36 were from Social Sciences and Science Faculties.

Table 5.3
Faculties of the Respondents

Name of Faculty/Department	Frequency	Percentage
Social Sciences	117	34.4
Science Faculty	114	33.5
Engineering & Technology	49	14.4
Management & Economics	60	17.6

5.1.5 Teaching Experience of Respondents

The participants of survey were questioned to indicate their teaching experience. Table 5.3 illustrates that 172(50.6%) faculty members had 6-10 years of teaching experience,

102(30.0%) faculty members had 11-15 years' experience, 62(18.2%) respondents with 1-5 years of teaching experience, whereas 4(1.2%) respondents had 16-20 years of experience. Mulla (2011) found that most of the faculty members (26.67 %) were identified with 6-10 year of teaching experience.

Table 5.4

Experience of Respondents

Experience (Years)	Frequency	Percentage
1-5	62	18.2
6-10	172	50.6
11-15	102	30.0
16-20	4	1.2

5.1.6 Affiliation of Respondents with Universities

The data was collected from the faculty members of various universities; Table 5.4 depicts the distribution of respondents by the universities. The data shows that out of 340 respondents, 136(40%) were from Gomal University D.I Khan, followed by Kohat University of Science and Technology with 96(28.2%) respondents and University of Science and Technology, Bannu with 65(19.1%) respondents, 27(7.9%) respondents were from Khushal Khan Khattak University Karak, whereas 10(2.9%) respondents were from FATA University and 6(1.8%) respondents belonged to University of Lakki Marwat.

Table 5.5

University wise Distribution of Respondents

Name of University	Frequency	Percentage
Gomal University D I Khan	136	40
Kohat University of Science and Technology, Kohat)	96	28.2
University of Science and Technology, Bannu	65	19.1
Khushal Khan Khattak University Karak	27	7.9
FATA University	6	1.8
University of Lakki Marwat	10	2.9

5.2 Problems Faced while Accessing Electronic Resources

Table 5.4 shows the opinions of faculty members on the barriers they faced while accessing electronic resources. The major problem identified by the faculty members were low speed of internet (Mean=4.55), followed by inadequate IT infrastructure (Mean=4.49), lack of internet (Mean=4.43), non-availability of full-text access to most of the e-journals (Mean=

4.05), “lack of awareness of e-resources” (Mean=4.05), “lack of cooperation from the staff of library/computer lab” (Mean=3.86), and lack of printing facility (Mean=3.80).

Other hindrances mentioned by the faculty members including energy crisis (Mean=3.79), lack of training/orientation (Mean=3.73), non-availability of VPN (Mean=3.5971), non-availability of latest computers (Mean=3.57), lack of expertise to search on internet (Mean=3.48). The results further illustrate some other barriers faced by respondents: the shortage of computer terminals (Mean=3.46) and short-time access to electronic resources in the library/computer lab. (Mean=3.28).

The findings of the study are similar to those reported by Rajan and Muruganatham (2019), Hanchinal (2019), Sawai and Chavan (2020). They identified that the major problems were low speed of internet, IT infrastructure and lack of internet facility.

Table 5.6

Problems faced by the Faculty members in Accessing E-Resources

Statement	Mean	Std. Deviation	Variiances
Low speed of internet	4.55	.96844	.938
Inadequate IT infrastructure	4.49	.97005	.941
Lack of access to internet facility	4.43	.87483	.765
Non-availability of full text access to most of journals	4.05	1.03897	1.079
Lack of awareness of electronic resources	4.05	.88755	.788
Lack of cooperation from the staff of library/computer lab.	3.86	1.19370	1.425
Lack of printing facility	3.80	1.19290	1.423
Load shedding/energy crisis	3.79	1.36062	1.851
Lack of training/ orientation to access and use of electronic resources	3.73	1.25818	1.583
Non-availability of VPN	3.59	1.34340	1.805
Non-availability of latest computers in library/computer lab.	3.57	1.28906	1.662
Lack of expertise to search on internet	3.48	1.28633	1.655
Shortage of computer terminals in the library/computer lab.	3.46	1.35960	1.849
Short time access to electronic resources in the library/computer lab.	3.28	1.34679	1.814

Note: Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5=Strongly Agree

5.2.1 Independent-samples' t-test results for gender differences

Independent-samples t-tests were used to determine if there is any difference in the opinions of male and female faculty members about the difficulties encountered when accessing e-resources. The 0.05 criterion was used to calculate the significant difference in

opinions. Table 5.7 represents the descriptive statistics of the problems faced by the faculty members, with the result of the t-test having means values, standard deviation and p values.

According to the data in the table, there was a significant ($p = .039$) difference in opinions between male ($M=4.57$) and female ($M=4.2967$) respondents on only one statement, "Inadequate IT infrastructure." The results suggest that the male faculty members said that it was the major problems compared to female faculty members. As far as the rest of the statements were concerned, the t-test results indicate no significant differences of opinions between male and female faculty members.

Table 5.7
Gender-based Descriptive Statistics along with the t-test

Statement	Gender	n	Mean	SD	Sig. (2-tailed)
Low speed of internet	Male	249	4.59	.92464	.226
	Female	91	4.45	1.07769	
Inadequate IT infrastructure	Male	249	4.57	.89582	.039*
	Female	91	4.29	1.13033	
Lack of access to internet facility	Male	249	4.46	.861263	.243
	Female	91	4.34	.909454	
Non-availability of full text access to most of journals	Male	249	4.06	1.04914	.806
	Female	91	4.03	1.01599	
Lack of awareness of electronic resources	Male	249	4.08	.88913	.224
	Female	91	3.95	.88081	
Lack of cooperation from the staff of library/computer lab.	Male	249	3.87	1.20547	.762
	Female	91	3.83	1.16680	
Lack of printing facility	Male	249	3.81	1.19728	.697
	Female	91	3.75	1.18641	
Load shedding/energy crisis	Male	249	3.81	1.31390	.702
	Female	91	3.74	1.48768	
Lack of training/orientation to access and use of electronic resources	Male	249	3.79	1.24942	.154
	Female	91	3.57	1.27491	
Non-availability of VPN	Male	249	3.60	1.35842	.904
	Female	91	3.58	1.30865	
Non-availability of latest computers in library/computer lab.	Male	249	3.59	1.28612	.641
	Female	91	3.51	1.30267	
Lack of expertise to search on internet	Male	249	3.53	1.29498	.211
	Female	91	3.34	1.25804	
Shortage of computer terminals in the library/computer lab.	Male	249	3.48	1.35331	.682
	Female	91	3.41	1.38296	
Short time access to electronic resources in the library/computer lab.	Male	249	3.32	1.34554	.288
	Female	91	3.15	1.34926	

Note: *statistically significant ($p < 0.05$)

6 Major Findings of the Study

- The findings show that the proportion of male respondents was higher than the proportion of female respondents.
- It was found that 45.3 % of faculty members were 35-39 years of age and 30.3% of faculty members were between 40-45 years of age.
- The statistics regarding respondents' designation indicate that 60.3% of 340 faculty members were Lecturers, while only 2.9% were Professors.
- The data were collected from the four faculties of the surveyed universities and found that most respondents (34.4%) were from the Faculty of Social Sciences.
- Out of 340 respondents, 40.4 % of faculty members were from Gomal University D.I. Khan and 28.2% from Kohat University of Science and Technology, Kohat.
- The major problem identified by the faculty members were “the low speed of internet” (Mean=4.55), inadequate IT infrastructure (Mean=4.4971), lack of internet (Mean=4.43), non-availability of full-text access to most of the e-journals (Mean=4.05), “lack of awareness of e-resources” (Mean=4.05), lack of cooperation from the staff of library/computer lab (Mean=3.86) and lack of printing facility (Mean= 3.80).
- There was a significant ($p = .039$) difference in opinions between male ($M=4.5703$) and female (4.2967) respondents on only one statement, "Inadequate IT infrastructure", while the rest of the statements had no significant differences of opinions between male and female faculty members.

7 Recommendations

Keeping in view the results of the research following are some of the recommendations to enhance the use of e-resources among the faculty members:

- The universities should provide fast internet facilities so that the users can access the electronic resource without any hindrance.
- The universities should build their IT infrastructure to enable the better use of e-resources.
- access to e-journals, e-books, etc. should be provided in full text by universities.
- The university libraries should provide the faculty members with free or subsidized printing facilities because they were eager to print the resources.
- The members of the faculty should improve their know-how to search for information to better use the available e-information resources.

- The universities administration and libraries authorities should create VPN for their users, including teachers, students and staff to enhance the usage of e-resources.
- In the computer laboratories and libraries, more computers with the latest specifications should be installed so that faculty members can use the electronic resources.
- For faculty members to use electronic resources to adequately trace relevant information, appropriate training programs and hand-on-practice should be chalked out.
- The libraries should allocate a regular fund for the acquisition of electronic resources according to the needs and requirements of their users.

References

- Abouelenein, Y. (2017). Using electronic information resources centers by faculty members at university education: Competencies, needs and challenges. *Turkish Online Journal of Educational Technology-TOJET*, 16(1), 219-245.
- Ajuwon, G. A. (2015). Internet accessibility and use of online health information resources by doctors in training healthcare institutions in Nigeria. *Library Philosophy and Practice (e-journal)*. Retrieved from. <http://digitalcommons.unl.edu/libphilprac/1258>
- Ansari, M. N., & Zuberi, B. A. (2010). Use of electronic resources among academics at the University of Karachi. *Library Philosophy and Practice*, 1. Retrieve from <http://digitalcommons.unl.edu/libphilprac/385>
- Bajpai, E. (2014). Use of e-resources by faculty members & research scholars in Indian institute of technology, Kanpur. *Journal of Advances in Library and Information Science*, 3(3), 169-178.
- Boakye, E. (2017). Faculty members and e-journals: the case of private universities in Kumasi, Ghana. *New Review of Academic Librarianship*, 23(4), 377-395.
- Chohan, T. M., Bhatti, R., & Naeem, S. B. (2017, September). Prediction of academic performance of the university students through their use of library electronic resources and their self-efficacy. In *European Conference on Information Literacy* (pp. 557- 567). Springer, Cham.
- Funmilola, M. M., Musa, H. U., & Dauda, I. A. (2017). Assessment of on-line databases use by academics of faculty of education Ahmadu Bello University, Zaria. *Samaru Journal of Information Studies*, 17(1), 1-13.
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2015). *Educational research: Competencies for analysis and applications*. India: Pearson India education services.
- Girakaduwa, S. (2019). Usage of electronic resources, services and challenges faced by the library users in university of the visual and performing arts (UVPA), Sri Lanka. *people: International Journal of Social Sciences*, 5(2).
- Hanchinal, V. B., & Campus, T. O. (2019). Awareness and usage of e-resources of N-List consortium: A study with reference to academic colleges of Mumbai. *Library Philosophy and Practice (e-journal)*, 2340.
- Hussain, M., & Saddiqa. (2019). Use of electronic information resources by teachers and students: A study of Khushal Khan Khattak University Karak, Pakistan. *The Journal of Information Management and Library Studies*, 2(1), 35-51. Retrieved from <https://jimls.kkkuk.edu.pk/jimls/index.php/jimls/article/view/20/15>

- Islam, M. M., & Habiba, U. (2015). Using Pattern of Internet and E-resources by the students and faculty members of a Private University in Bangladesh. *American Journal of Educational Research*, 3(5), 541-546.
- Jan, S., Hussain, A., Ibrahim, M., & Saeed, S. (2018). Use of internet by the teaching faculty of Peshawar medical college, Peshawar, Khyber Pakhtunkhwa, Pakistan. *JPMA. The Journal of the Pakistan Medical Association*, 68(3), 459-462.
- Jegan, P., & Jayaprakash, M. (2019). Use and impact of e-resources among the faculty members and students at Salem College of Engineering and Technology for Women, Salem, Tamilnadu, India: A study. *Library Philosophy and Practice*, 1-23.
- Jestin.J & Sornam, S. A. (2016) Use of e-resources by the faculty members of engineering colleges in Kerala: A survey. *International Journal of Digital Library Services*, 6(3).
- Kenchakkanavar, A. Y. (2014). Types of e-resources and its utilities in library. *International Journal of Information Sources and Services*, 1(2), 97-104.
- Singh, O. S. S., & Khan, M. T. M. (2012). *The relevance of electronic information resources in digital era*. Paper presented at the International Conference on Access to Legal Information & Research in Digital Age.
- Kwafoa, P. N. Y., Imoro, O., & Afful-Arthur, P. (2014). Assessment of the use of electronic resources among administrators and faculty in the University of Cape Coast. *Library Philosophy and Practice (e-journal)*. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1094>
- Kumari, P. (2015). Procurement, management and use of e-resources in current library trends: Common issues. *International Journal of Digital Library Services*, 5(2), 150-159.
- Lavanya, J., & Santharooban, S. (2018). Usage of online resources by the undergraduates attached to the faculty of agriculture, Eastern university, Sri Lanka. *Journal of the University Librarians Association of Sri Lanka*, 21(2).
- Magoi, J. S., & Gani, E. (2014). The emergence of digital libraries services in Northwest Nigerian universities: Challenges and prospects. *Library Philosophy and Practice*, 0_1.
- Moyo, L.M. (2004). Digital libraries and the emergence of new service paradigms. *The Digital Library*, (9)22, 220-30.
- Belay, M., & Bramo, S. S. (2017). Investigation of electronic information literacy level and challenges among academic staff to support teaching and learning in Addis Ababa and

- Jimma University, Ethiopia: cross sectional survey method. *International Journal of Information Science*, 7(1), 1-11.
- Mulla, K. R. (2011). Use of electronic resources by faculty members in HKBK College of Engineering: A survey. *Library philosophy and practice*, 7.
- Mwantimwa, K., & Elia, E. (2017). Utilisation of e-resources to support teaching and research in higher learning institutions, Tanzania. *University of Dar es Salaam Library Journal*, 12(2), 98-123
- Natarajan, K., Suresh, B., Sivaraman, P., & Sevukan, R. (2010). Use and user perception of electronic resources in Annamalai University: A case study.
- Nicholas, D., Huntington, P., & Jamali, H. R. (2007). The use, users, and role of abstracts in the digital scholarly environment. *The Journal of Academic Librarianship*, 33(4), 446-453.
- Ogwuche, O. L., & Victor Chuks Nwokedi PhD, C. L. N. (2020). Use of Electronic Resources for Academic Activities among Undergraduates: A View into Faculty of Agriculture, University of Jos, Nigeria. *Library Philosophy and Practice*, 1-23.
- Rajan, S. S., & Muruganatham, T. (2019). Access of digital resources in KIMS college of nursing: A study. *Library Philosophy and Practice*, 1-10.
- Sawai, A. B., & Chavan, S. P. (2020). Awareness and use of e-resources in college libraries: A survey. *Library Philosophy and Practice*, 1-8.
- Sohail, M., & Ahmad, S. (2017). Use of electronic resources and services by faculty members and students of Fiji National University. *DESIDOC Journal of Library & Information Technology*, 37(3), 165-171.
- Soniya, R., & Kavitha, S. (2020). Gender difference in electronic resources usage among the faculty members of arts and science college libraries in Kumbakonam Taluk.
- Suresh, M., & Ravi, S. (2020). Online database use by science research scholars of Alagappa university, Karaikudi: A Study *Handbook of Research on Digital Content Management and Development in Modern Libraries* (pp. 86-102): IGI Global.
- Thanuskodi, S., & Ravi, S. (2011). Use of digital resources by faculty and research scholars of Manonmaniam Sundaranar University, Tirunelveli. *DESIDOC Journal of Library & Information Technology*, 31(1).
- Zibani, P., & Kalusopa, T. (2019). E-resources marketing in African academic libraries: contexts, challenges and prospects handbook of research on advocacy, promotion, and public programming for memory institutions (pp. 261-283): IGI Global.