

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

---

Spring 2-1-2022

## Relationship between Awareness and Use of Digital Information Resources among University Students of Southern Punjab

Rab Nawaz:

*University of Education Lahore, Vehari Campus*, [librarian.vehari@ue.edu.pk](mailto:librarian.vehari@ue.edu.pk)

Salman Bin Naeem

*IUB*

Muhammad Ramzan

*University of Kotli AJ&K*, [muhammadramzan346@gmail.com](mailto:muhammadramzan346@gmail.com)

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Arts and Humanities Commons](#)

---

Nawaz, Rab; Naeem, Salman Bin; and Ramzan, Muhammad, "Relationship between Awareness and Use of Digital Information Resources among University Students of Southern Punjab" (2022). *Library Philosophy and Practice (e-journal)*. 6907.

<https://digitalcommons.unl.edu/libphilprac/6907>

## **Relationship between Awareness and Use of Digital Information Resources among University Students of Southern Punjab**

Rab Nawaz: Librarian. University of Education Lahore, Vehari Campus.  
librarian.vehari@ue.edu.pk

Dr. Salman Bin-Naeem: Associate Prof. IUB, salmanbaluch@gmail.com

Muhammad Ramzan: Librarian UoK, muhammadramzan346@gmail.com

### **ABSTRACT**

The purpose of this study was to determine the relationship between awareness and use of digital information resources among students of universities in South Punjab. The researcher adopted survey research design and employed questionnaire as a research method to collect the data from respondents. The population of the study consisted on BS, Master, MS, M. Phil and PhD programs students of The Islamia University Bahawalpur and Bahauddin Zakariya University Multan. A convenience sampling technique was used to collect data from respondents. A statistical package for social science (SPSS-20) was used for the analysis of data. The result of the study found that majority of respondents used university library on occasionally basis and most of respondents give preference to digital information resources over printed materials. Most of the respondents agreed that they consult digital information resources for academic work, assignments and for the use of research purposes. Majority of the respondents had skills to used different database like HEC digital library, HEC Summon, Science Direct, JStore etc. A statistically it was found a strong relationship between awareness and use of digital information resources. The barriers faced by respondents while using digital information resources were; slow internet connectivity, respondents' low ICT skills and limited access to university information resources etc.

**Keywords:** Digital information, Electronic Resources, Awareness, Use

## **Introduction**

Library is an essential part of any academic institution, administered to meet the information and research needs of the students, faculty, and staff, as well as academic library supports the curriculum taught in an academic institution (Reitz, 2007). It is very imperative for the today's academic institutions to integrate and provide variety of services and resources to support their students and faculty for the purpose of research and curriculum needs.

Digital information resources have become the need of library collections in today's digital world; it provides efficient and updated information and help to support aforementioned aim of an academic institution. However, in the perspective of the eve, diverse sources of information are available in different electronic formats; therefore, it is a big challenge for the suppliers of digital information sources to know the multifarious users' needs, so that efficiency and quality of electronic resources and services may improve in accordance to the demands of diverse users (Zhang, Liu, 2011).

The role of academic libraries has changed; now academic libraries have shifted from store house to information resource center. The flood of information has forced libraries to increase the use of information and communication technology, electronic and digital information resources in libraries. The present-day age of information and communication technology demands new competencies to deal with electronic information resources (Aderibigbe and Ajiboye, 2013).

The digital environment has provided new opportunities for information professionals to support research activities. In fact, new technology creates new standards in library activities and services. Today accessibility of electronic information resources in a university library is very common and users are also using more electronic information resources than those of print resources. Students' information seeking behavior has moved toward online information resource as well (Esew et. al, 2014).

Today accessibility of electronic information resources in higher education institutions is very common, and users are also using electronic information resources more than print resources. According to Olle and Borrego (2010) the digital environment has positively impacted on the information-seeking behavior of research scholars, and electronic resources have become most accepted preferences for researchers to keep abreast with new information in their field of interest. The Purpose of this study is to determine the relationship between awareness and use of digital information resources among university students of southern Punjab

## **Objectives of the Study**

1. To determine the purpose of digital information resources used by university students of southern Punjab.
2. To identify the level of awareness about digital information resources among university students of southern Punjab.
3. To explore the frequency of digital information resources used by university students of southern Punjab.
4. To determine the satisfaction level of university students about digital information resources available in their university libraries.
5. To determine the relationship between the awareness and use of digital information resources among university students of southern Punjab.

6. To identify the barriers related to the usage and awareness of digital information resources among university students of southern Punjab.

### **Research Questions**

1. What is the purpose of digital information resources used by university students of southern Punjab?
2. What is the level of awareness about digital information resources among university students of southern Punjab?
3. What is the frequency of digital information resources used by university students of southern Punjab?
4. What is the satisfaction level of university students about digital information resources available in their university libraries?
5. What is the relationship between the awareness and use of digital information resources among university students of southern Punjab?
6. What are the barriers related to the usage and awareness of digital information resources among university students of southern Punjab?

### **Statement of the Problem**

Academic Libraries are the important part of its parent institution, provision of information to its entire user community is the core aim of any academic library, to achieve these objectives academic intuitions would acquire various information sources in print or digital formats. The information sources in digital formats have many benefits in today's digital age because these can be accessed from remote cities in multiple forms in an efficient and quick manner. Users of an academic library demands and rely on digitally available information source. The online databases, e-library services are considered as one of the important means of flourishing libraries within universities.

Generally, it is understood fact that awareness about electronic information resources and use of digital resources enhance the students' abilities to improve the research and academic work efficiently and skillfully within the ethical parameters. Relationship between awareness and use of digital resources among universities students of Islamia University of Bahawalpur and Bahauddin Zakariya University Multan is a unique research statement which fills the gap left by the previous researchers in this regard. Therefore, the present research is aimed at exploring the relationship between awareness and the use of digital information resources among university students and their impact on them.

### **Literature Review**

#### **Purpose of using Digital Information Resources**

Tella et al (2018) examined the use of e-resources among academic departments. Data was collected through questionnaire by using survey method of research. It was determined that the large number of participants use electronic information resources for research, educational assignments and course work. However, the electronic information resources provided a current, latest and growing amount of knowledgeable collection across multidimensional users in academic departments.

Another study, based on mixed method research approach carried out by Jabeen et al. (2017) with aim to explore the purpose, satisfaction level, and barriers in using the various resources of digital libraries among graduate and post-graduate students of five universities of Ningang-China. Findings of their study unveiled that majority of the respondents from all five participating universities used digital library resources to complete their course work, research articles, thesis, and dissertation.

Deans and Durrant (2016) carried out a quantitative survey to examine the “knowledge and use of online databases and the library’s OPAC by final-year business associate degree students in five selected Jamaican community colleges”. The study found that significant number of participants use internet to complete their assignments and the internet was preferred source of information among majority respondents. Furthermore, less usage of “online databases” by participants found.

Amjad et al. (2013) explored the purpose of using electronic resources among majority of the participants were to fulfill various educational tasks, for the research needs, and enhancing knowledge in their field. Swift and ease of the access, and the round the clock availability were the core reasons of using electronic sources among most of participants.

Mirza and Mehmood (2012) explored in their study that the core purpose of using library resources among most of participants were to study and completing their research projects.

Li’s (2012) study found the significant number of participants used various search engines to complete their assignments, and the most of participants were well aware about different techniques of searching online.

Gouseti (2017) investigated the use of various digital technologies by doctoral students through a qualitative method. It was found that the majority of the participants use the online databases, Google scholar, and emailing, for the purpose of research, besides this the usage of online books, journals which were accessible through their library, the information sources available in electronic forms were preferred choice among majority participating doctoral students.

Chen-Gaffey and Getsay’s (2016) case study, found the significant use of books in electronic formats as compared to books in printed forms found whilst one important reason of using E-books their current nature.

Raza and Upadhyay (2006) assessed the “use of electronic journals by the researchers of Aligarh Muslim University, India” the findings of their study revealed that most of the participants use electronic journals daily and when needed, for the purpose of research, enhancing knowledge, and studying.

Nisha and Ali (2012) found that majority of respondents know the worth of electronic journals and they were used for obtaining information, and collection building. Further, it was also explored that respondents use these journals with two purposes one for searching a relevant material and second for the research use. However, few of the respondents use only for retaining information which helps them in academic assignments.

Deng (2010) found that the use of electronic resources was higher in Australian universities; maximum respondents considered that e-resources are useful in their learning. They used these resources for different purposes, i.e., learning, research activities, up-dating the knowledge, etc. the main reasons influencing the use of these resources indicated by the respondents were cognizance and the quality of the information available through the use of electronic resources.

Urhiewhu (2014) analyzed the availability and use of electronic information resources among undergraduate students, the findings revealed that the university library subscribed various online/offline services through which the information source in electronic format made available in university library to serve their users.

Nagata, Kytomaki and Toda (2010) conducted a study to determine that students need of library use and value. It was found that the use of electronic libraries was identifying educational output are obtained according to need of library usage. It was found that the educational groups use the library for its material and research purposes.

Zhang et al. (2011) probed the use of electronic information resources among seven universities in China. It was found that various purposes for which e-resources were used are; for the research, for the teaching, and enhancing information.

Brophy (1993) explored the various benefits of electronic information sources that the facility of e-sources could be used by multiple users; the other advantage of the electronic resources is provision of current information in a swift and convenient manners.

Kelley and Orr (2003) investigated the use and access the electronic information resources among university students, to explore the usage, kind of information, modes and ways through which they had access and worth of that information. Findings revealed that the majority of the respondents obtain information through internet, and they prefer the use of electronic information resources, the students use the library for their research purpose. Moreover, the distance respondents obtain information from the university library.

Soni, et al. (2018) conducted a study to find the present status of access and usage among LIS professional and researchers like CD-ROM databases, online databases, online journals, OPAC etc. However, study highlights the challenges, benefits, and progress perceived by research scholars while using electronic collections. It is also found that research scholars obtain information about e-resources and databases in their departments through the library website and the Internet.

Ahmad and K. C. Panda (2013) conducted a study among academic staff on awareness and use of electronic information resources. Survey method of research was used in this study. A questionnaire was used as a data collection instruments from respondents. It was found that most of academic staff members were lack of skills relevant to use of library and specific information resources browsing for their need.

Chohan, Bhatti, and Naeem (2017) noted that the impact of usage, electronic information resources among students of Islamia university of Bahawalpur. It was found that the majority of respondents' ages were in the range of 20 to 25 years. The majority of respondents were female. Most of the respondents having BS degree education and only 20 percent of total population M. Phil and PHD students. The mean grade point average of respondents was found to be 3.43 and maximum 4. Further, it was found that Majority of respondents visit the library after one week. While among total population 42 respondents never use library. Moreover, it was investigated that the respondents whose visit to university library their usage of electronic information resources was high as compared to other.

Sinh and Nhung (2012) asses that users' behaviour are library to influence the usage of e-databases, and the parameter which affects the use of databases were; usage aim, preference, and the mechanism through which users search, Further it was found that full-text databases were preferred more than bibliographic databases.

## **Level of Awareness about Digital Information Resources**

Hussain and Jan (2018) in Pakistan, conducted a study with an aim to examine the electronic resources and services perception among library users of National Defense University (NDU) Islamabad, they explored that vast number of participating students were well aware about the different electronic services provided by NDU library i.e., NDU-Digital library, HEC databases, NDU-OPAC, and email services as well.

Akpojotor (2016) investigated the use of electronic information resources among postgraduate students; Researcher used descriptive research method for this study. It was found that respondents were very well conversant about the worth and value of e-resources. Most of the respondents have good skills about the usage of electronic information resources. Moreover, available information resources were the helpful for the students.

Adjoa and Dzokotoe (2017) conducted a study on academic libraries as hub of knowledge. It was found that 88% respondents use the library, 65% electronic collection presents in the library. Further, it was identified that respondents were very well familiar with the value of electronic collection, but they use rarely electronic information resources.

Tlakula and Fombad (2017) found that the level of usage of electronic information resources among undergraduate students were small and had limited access to SABINET and EBSCO databases. The level of understanding and awareness of undergraduate students were not good. They feel difficulties in browsing the electronic and online databases. The management of the school should have to develop computer and information literacy skill in their students and arranged seminar on electronic information resources in order to effectively utilize the information resources needed.

Sivathaasan et al (2014) probed the usage of electronic information resources and explored that there are minor differences between ages of respondents' language and experience of the use of electronic information resources. However, the average use of electronic information resources does not make difference among five faculties.

Ankrah and Atuase (2018) investigated the use of electronic resources among postgraduate university students in Cape Coast, findings unveiled that majority of respondents do not use Google, Google scholar as a search engine but instead of this they give priority to search library databases for information. Further, it is found that the respondents locate the problems of poor internet speed which was a major barrier and waste lot of time of the users.

## **2.4 Frequency of using Digital Information Resources**

Zhou et al. (2017) explored that most of students, enrolled in undergraduate studies frequently used the journals, dissertations, and full text online Chinese databases, majority participants preferred to use open-access online resources, whilst frequency of using online resources among majority undergraduate students were twice or more than twice in a month.

Khan et al. (2014) investigated the satisfaction of scholars with digital library in a perspective of Pakistan, the findings of their study revealed that the majority of participants use various digital resources in a week or 2-3 times in a week, and as per need, moreover, the majority of participants frequently use HEC digital library resource for the purpose of completing research articles, thesis, and dissertation. The Majority of the respondents found satisfied with the available digital resources and services.

Ahmad and Amjad (2014) highlighted in their study that most frequently used electronic sources were web-based resources, i.e., electronic books, journals and thesis, and HEC databases.

In Pakistan, Amjad et al. (2013) examined the usage of E-Resources by M.Phil. and Doctorate research scholars enrolled in various disciplines of the Arts faculty in the Islamia University of Bahawalpur, the findings of their study unveiled that participants “frequently” use emailing, Web-based resources, internet, various electronic resources i.e. “E-newspaper, E-books, and E-journals”, and the databases provided by higher education commission of Pakistan.

Khan and Ahmed (2013) conducted in a descriptive survey-based study on “impact of digital library resources on scholarly communication: challenges and opportunities for university libraries in Pakistan” the findings of their study unveiled that majority of the participants utilized various digital information sources in a week twice or more, and when they needed; for the purpose of completing their thesis, dissertations and research articles.

Shuling’s (2006) study found postgraduate students of the university were frequently used full-text online databases owned by the library.

### **Satisfaction level of Participants about the Digital Information Resources**

Jabeen et al. (2017) conducted a study with an aim to explore the purpose, satisfaction level, and barriers in using the various resources of digital libraries among graduate and post-graduate students of five universities of Ninjang-China, the findings of their study unveiled majority of the participants of all five universities found “satisfied” regarding the interface design of digital library, searching procedure, and information authenticity of the resources available in the digital library.

Delaney and Bates (2017) explored that most of the respondents frequently use various E-journals as a source of information, the satisfaction level among overall participants with the services provided by university library found as high, whilst the restricted access to online resources found as a major barrier.

Ahmad and Amjad (2014) found in their study that the majority of participants were satisfied and very satisfied with the electronic information sources, most frequently used electronic sources were web-based resources i.e., electronic books, journals and thesis, and HEC databases.

Khan and Ahmed (2013) found in their descriptive survey-based study on “impact of digital library resources on scholarly communication: challenges and opportunities for university libraries in Pakistan” that the significant portion of participants was “satisfied” with quality and reliability of information, and user-friendly interface as well as search results.

Javed and Bhatti (2013) conducted a study on usage pattern among students. It was found that the majority of the population prefers to use general books and library’s reference collection. Majority respondents found “satisfied” with the printed collection, and abstract and index services. Use of internet for the fulfilling educational needs also found among participating students and respondents’ skills related to browsing databases and services provided by library not hopeful.

Mirza and Mehmood (2012) carried out a study by employing survey approach to investigate the “effectiveness of electronic resources and services” in 8 public and private university libraries of Lahore and Islamabad, Pakistan. The findings of their study revealed that a notable number of participating students were satisfied with the diverse electronic sources.

Amjad et al. (2013) conducted a study in Pakistan; found that an overwhelming majority of the participants were satisfied with the resources available in diverse electronic formats. Another

study based on survey and questionnaire conducted by Holley and Powell (2004) to evaluate the “satisfaction of students with the available electronic library resources at Wayne State University” they explored that significant majority of participants found well aware about the available electronic resources; majority of the participating students found “satisfied” with the easy access and use of resources, help and co-operation of library staff.

Rafiq and Ameen (2012) explored that the respondents know the usefulness of electronic databases, and they preferred to use un-restricted online resources for their research needs; the majority respondents found satisfied with the authority of information.

### **Relationship between the Awareness and Use of Digital Information Resources**

Ukachi (2015) found in a survey-based study that electronic information resources were used inappropriate manners because of the dearth of information literacy skills. However, a strong positive association was found between information literacy skill and the use of electronic information resources.

Adeleke et al. (2016) assess the relationship between information literacy and the use of electronic information resources among postgraduate students, the study found that a large number of participants were not using e-resources, and dearth of searching skills were main hurdle in using e-resources.

Ahmed et al. (2017) conducted a study through survey questionnaire approach to examine the “relationship between e-resources usage and research productivity among the university scholars in Pakistan” the study population comprised on M.Phil. and PhD scholars enrolled in Arts and Humanities faculties of two universities “The Islamia University of Bahawalpur” and “Bahauddin Zakaria University Multan”. The findings of their study revealed that usage of e-resources has positive impact on participants’ research work and also research productivity.

Dadzie (2005) probed the use of electronic resources among students and faculty, It was determined that a notable number of respondents were high users of computer for the browsing of electronic collection. Further, it was studied that respondent’s internet usage is high as compared to scholarly collection. The low usage is due to poor awareness about the scholarly information resources.

Sinh and Nhung (2012) found that the behavior of users’ is likely to influence the usage of e-databases, and the parameters which affect the use of databases are; usage aim, preference, and the mechanism through which users search. Further it is found that full-text databases were preferred more than bibliographic databases.

Raza and Babar (2017) conducted a study on online resources among students among students of university of Punjab, the survey design approach was used in the study, and the questionnaire for the collection of data was used. It was found that electronic information resources were very important and have played a key role in academic work, assignments, and major use for research work by M.Phil. and PhD students. Further, it was found that access to online resources provided to students from university, they can easily access the digital library resources from their home and work places. However, it was determined that university provide free of cost HEC digital library resources access to their users at any time from everywhere through university VPN services login.

## **Barriers in using Digital Information Resources**

Recently, a study based on mixed method research approach carried out by Jabeen et al. (2017) with aim to explore the purpose, satisfaction level, and barriers in using the various resources of digital libraries among graduate and post-graduate students of five universities of Ninjang-China, findings of their study revealed the various problems such as; access of digital resources is restricted to only universities premises, dearth of frequent internet, and lack of training opportunities for the students about effective use of DL resources, the dearth of information literacy programs also highlighted as a barrier using diverse digital resources.

Lo et al. (2017) found in their study that restricted access, copyright issues, high cost of subscription, and other technical problems (error detection and trouble-shooting) are the various problems related to digital resources.

Delaney and Bates (2017) also found some barriers in their study that the restricted access for online resources found as a major barrier.

Ali (2016) highlighted the various constraints faced by the participating universities' students in using online resources that, majority of the participating students face difficulties in accessing the resources available in different electronic formats, feel uncomfortable in reading online constantly, and the high cost of printing required information.

Ahmad and Amjad (2014) explored problems in using electronic sources found as lack of user-friendly Interface and searching relevant information, dearth of internet connection, electricity problems, and feeling discomfort reading online.

Khan and Ahmed's (2014) study, found that restricted access to HEC digital library, infrequent internet, electricity short fall, dearth of searching skills, and scarcity of appropriate training for the students were the major constraints among students.

Amjad et al. (2013) highlighted the problems in using source of information available in different electronic formats were highlighted as lack of searching expertise, internet connection problems, authenticity and credibility of huge electronic information sources.

Achonna (2008) have found that a large number of students have skill to use electronic resources. They know the value of electronic collection. However, they faced some problems like lack of skill in the use of these collections, limited no. of computer, electricity problems, and close access to electronic data bases collection.

Togia and Tsigilis (2010) conducted a study on awareness of electronic resource among graduate students they explored that significant portion of respondents used various search engines and ERIC database for the research purpose; dearth of searching skills found as main problem in low usage of resources.

Adeyoyin et al. (2016) highlighted some barriers in their study that lack of specific knowledge, finance and specific software, create barrier for users to access the e-collection of libraries.

Adojoa and Dzakotoe (2017) found some problems in using electronic resources like internet speed, lack of expert staff. The library high authority should have to manage such types of hurdles to give a smooth service to their users.

Rehman and Ramzy (2004) explored in their study that library management do not provide a reasonable time to users so that they work properly, and second thing was lack of user's information literacy and computer skills.

Ajuwon and Titiloye (2016) examined the usage of computer among university students through survey research, it was found that large number of students were not computer users, only few students visit library and use electronic information resources for their academic work. Lack of acquaintance with information sources, dearth of access to computers, scarcity of training opportunities, and the high cost of electronic information resources reported as core problems.

Zabed (2013) highlighted various problems that lack of awareness about accessibility of electronic journal resources was also a problem

Gouseti (2017) found in his study that insufficient physical space with limited computers and internet connectivity and lack of technical skills to use digital sources efficiently highlighted as some constraints.

Boumarafi (2010) explored the various barriers in using e-resources found as dearth of skilled staff and computers, lack of searching skills among participants, and lack of relevant training.

Raza and Upadhyay (2006) find out that infrequent internet, restricted access of online resources, and dearth of training about using online resources were found as core problems in accessing electronic journals.

Nwabueze and Urhiewhu (2015) identified that barriers of electronic information resources are lack of power supply, non-availability of online databases, slow band width, insufficient computers, network problems, lack of ICT skills, lack of formal training, server slowness and the frequent breakdown.

## **Research Methodology**

A quantitative measure was the recommended and widely used method in the social sciences. Survey research design is the most popular research design in quantitative measures (Creswell, 2013). Therefore, this study adopted a survey research method to collect the data for this study. The purpose of this study was to determine the relationship between awareness and use

of digital information resources among university students of Southern Punjab i.e Islamia University of Bahawalpur and Bahauddin Zakariya University Multan.

## **Research Method**

In survey research design, the most commonly used data collection tool is questionnaire. In the present study, the researcher adopted survey research design and employed questionnaire as a research method to collect the data from respondents.

## **Population of the Study**

The populations of the study were included BS, Master, MS, M.Phil and PhD programs, students of The Islamia University Bahawalpur and Bahauddin Zakariya University Multan. The reasons for the selection of two university students were to compare the awareness and use of digital information between the students of two universities.

The population of the study was geographically scattered. Data was collected through convenience sampling. Convenience sampling is useful, especially when randomization is impossible like when the population is very large. It can be useful when the researcher has limited resources, time and workforce. Therefore, the researcher used convenience sampling techniques.

## **Data Analysis**

SPSS (statistical package for social sciences) software was used to coding and analyzing the collected data. The collected data was different in nature therefore, measured on different measurement scales. Demographic information of the respondents e.g., gender age group, faculty of education, use of university library, use of digital information resources and preference to use of digital information resources over traditional resources using nominal scale in SPSS. The questions related to purpose of using digital information resources, reasons for using, awareness about digital information resources, kind of digital information resources, usage frequency of HEC databases 'scaled' in SPSS. Various statistical tests were applied to analyze the data. The nominal data were analyzed and presented in frequency and percentage. However, the data which were interval or ratio and were measured on 'scale' was analyzed and presented in mean and standard deviation.

## **Data Analysis Interpretation**

### **Demographic Information of the Respondents**

Demographic analysis of the respondent is presented in (Table 4.1). It indicates that majority of the respondents were female 528 (55.1%), and 431 (44.9%) were male. Age of the respondents' shows that the majority (68.6%) of the respondents was between the age group of 21-25 years and 183 (19.1%) students were in the age group of < 20 years. While 82 (8.6%) respondents 26-30 years and only 36 (3.8%) respondents were in the age group more than 39 years of age.

The level of education the majority of the respondents 361 (37.6%) were BS programs, 313 (32.6%) were enrolled in the Master program, 246 (25.7%) were in the MS/M.Phil, and only 39(4.1%) respondents were in the PhD programs. Majority of the respondents 452 (47.1%) enrolled in faculty of science, 422 (44.0%) were in faculty of arts, and 85(8.9%) respondents from management sciences.

**Table.4.1. Demographic Information of the Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	431	44.9
Female	528	55.1
Total	959	100.0
<b>Age of the respondents</b>		
Less than 20 years	183	19.1
21-25 years	658	68.6
26-30 years	82	8.6
More than 39 years	36	3.8
<b>Level of education</b>		
BS	361	37.6
Master	313	32.6
MS/M.Phil	246	25.7
PhD	39	4.1
<b>Name of faculty</b>		
Faculty of Science	452	47.1
Faculty Arts	422	44.0

---

**Use of University Library**

The two hundred and seventy-six (28.8%) respondents reported that they use university library daily, 250 (26.1%) on weekly basis, 128 (13.3%) monthly basis, 281 (29.3%) use university library occasionally while 24 (2.5%) respondents reported that they do not use university library.

**Table.4.2 Use of University Library**

---

	<b>Frequency</b>	<b>Percentage</b>
Daily	276	28.8
Weekly	250	26.1
Monthly	128	13.3
Occasionally	281	29.3
Never used	24	2.5

---

### Usage Frequency of Digital Information Resources to Seeking Information

In response to a question that how often do you use digital information resources? Majority of the respondents 386 (40.3%) reported that they used digital information resources to seek information daily, 242 (25.2%) reported that they use digital information resources weekly, 123 (12.8%) use digital information resources monthly, 188(19.6%) occasionally use of digital information resources. However, only 20 (2.1%) never used digital information resources to seek information.

**Table.4.3. Usage Frequency of Digital Information Resources to Seeking Information**

	Frequency	Percentage
Daily	386	40.3
Weekly	242	25.2
Monthly	123	12.8
Occasionally	188	19.6
Never used	20	2.1

### Preference of Digital Information Resources over Traditional Resources

In response to a question that do you prefer to use digital information resources over traditional resources. The majority of the respondents 369 (38.5%) reported that they prefer sometime digital information resources over traditional resources, 319 (33.3%) prefer often, 164 (17.1%) prefer always, 92 (9.6%) respondents prefer rarely and only 15 (1.6%) respondents never preference of digital information resources over traditional resources.

**Table.4.4. Preference of Digital Information Resources over Traditional Resources**

	Frequency	Percentage
Never	15	1.6
Rarely	92	9.6
Sometime	369	38.5
Often	319	33.3

Always

164

17.1

---

### Purpose of Using Digital Information Resources

Respondents were asked 5 statements for a purpose of using digital information resources. All 5 statements received a mean score 4, indicating that majority of respondents were agreed that they use digital information resources to obtain latest information (M=4.03, SD=.930), they use to digital information resources for conducting research' (M=4.02, SD=.932), they use digital information resources to prepare exams' (M=4.01, SD= .923), ' they use digital information resources for keeping my knowledge up-to-date' (M=3.99, SD= .895) and 'they use to digital information resources for preparing class assignments' (M=3.90, SD= 1.078) (table)

**Table.4.5. Purpose of Using Digital Information Resources**

Rank	Statements	N	Mean	St.Div
1	I use digital information resources to obtain latest information.	959	4.03	.930
2	I use digital information resources for conducting research.	958	4.02	.932
3	I use digital information resources to prepare for exams.	959	4.01	.923
4	I use digital information resources for keeping my knowledge up-to-date.	959	3.99	.895
5	I use digital information resources for preparing class Assignments	959	3.90	1.078

---

*Scale: 1= Strongly Disagree, 2= Disagree, 3= Uncertain, 4= Agree, 5= Strongly Agree*

### **Reasons for Using Digital Information Resources**

Respondents were asked 7 statements to determine the reasons for using digital information resources. Six statements received a mean score between 3.53 to 4.01, showing that majority of the respondents use digital information resources very often because its save time (Mean=4.01, SD= 1.005), helpful for class assignemtns/presentations (Mean=3.79, SD= 1.108), easily accessible (Mean=3.79, SD=1.082), availability of digital information resources in university library (Mean=3.54, SD=1.193) and one window searching facility (Mean=3.53, SD=1.006). On the other hand, two statements received mean score between 3.31 to 3.50 indicating that respondents were used ‘sometime’ that the browsing database for scanning new information (M= 3.50, SD= 1.087) and searching capability in various digital information resources (M=3.31, SD= 1.133).

**Table.4.6. Reasons for Using Digital Information Resources**

Rank	Statements	N	Mean	Std. Deviation
1	Save Time	959	4.01	1.005
2	Helpful for class assignments/ presentations	959	3.79	1.108
3	Easily accessible	959	3.79	1.082
4	Availability of digital resources in university library	959	3.54	1.193
5	One window searching facility	959	3.53	1.066
6	Browsing databases for scanning new information	959	3.50	1.087
7	Searching capability in various digital information Resources	959	3.31	1.133

Scale: 1= Never, 2= Rarely, 3= Sometime, 4= Often, 5= Always

#### 4.8 Awareness about Digital Information Resources and Services

Respondents were asked a set of fourteen statements regarding their awareness about digital information resources and services. All these statements received a mean score between 2.66 to 3.41, indicating that respondents were ‘moderately aware’ about ‘digital information resources keep latest information’ (M= 3.41, SD= 1.173), ‘quite a number of search engines to use while searching the information (google, yahoo, msn)’ (M=3.40, SD= 1.089) and ‘how to limit online search by fields (such as date, place, format) (M=3.31, SD= 1.128).

**Table.4.7. Awareness about Digital Information Resources and Services**

<b>Rank</b>	<b>Statements</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	I am aware that digital information resources keep latest information.	959	3.41	1.173
2	I am aware with quite a number of search engines to use while searching the information (google, yahoo, msn)	959	3.40	1.089
3	I am aware how to limit online search by fields (such as date, place, format)	959	3.31	1.128
4	I am aware of appropriate search tools to use when searching for information	959	3.30	1.125
5	I have sufficient knowledge/awareness of specific digital information resources available online	959	3.17	1.055

6	I am aware how to perform online search that could result in at least 10 valid references on the given Topic	959	3.16	1.150
7	I am aware how to develop a search query that could help me find required information	959	3.05	1.156
8	I am aware that my university library is providing access to e-books and journals through HEC.	959	2.96	1.218
9	I am aware of HEC digital library	959	2.92	1.147
10	I am aware about using a Boolean search (i.e., the use of and or and not) to find relevant results.	959	2.90	1.158
11	Through HEC digital library I can freely access digital information resources (databases)	959	2.89	1.099
12	I am aware of HEC electronic books and e-journals	959	2.80	1.193
13	I am aware of digital information resources (such as Springer link, Emerald databases)	959	2.72	1.182
14	I am aware of HEC Summon (search engine)	959	2.66	1.180

---

*Scale: 1= Not at all aware, 2= slightly aware, 3= moderately aware, 4= Very aware,*

*5= extremely aware*

### What Kind of Digital Information Resources do you Prefer to Use?

Respondents were asked six statements about kind of digital information resources and services they do prefer to use digital information resources. All these statements received a mean score between 2.94 to 3.33, indicating that respondents 'sometime' prefer 'electronic newspapers (M= 3.33, SD= 1.156), electronic databases (M=3.19, SD= 1.120, bibliographic databases (M=3.12, SD= 1.073), indexing databases (M=3.06, SD=1.360) and institutional repositories (M=2.99, SD=1.361).

**Table.4.8. What Kind of Digital Information Resources do you Prefer to Use?**

Rank	Statements	N	Mean	Std. Deviation
1	Electronic newspapers	959	3.33	1.156
2	Electronic databases	959	3.19	1.120
3	Bibliographic databases	959	3.12	1.073
4	Indexing databases	959	3.06	1.160
5	Institutional repositories	959	2.99	1.361
6	Electronic Thesis/ Dissertations	959	2.94	1.307

*Scale: 1= Never, 2= Rarely, 3= Sometime, 4= Often, 5= Always*

### Usage Frequency of Different HEC Subscribed Databases

Respondents were given a list of twelve databases in order to determine their usage frequency of HEC subscribed databases. Nine items received a mean score between 2.51 to 3.06 indicating that respondents usage frequency of these databases were ‘sometime’ e.g., HEC digital library (M=3.06, SD= 1.295), HEC Summon (M=3.01, SD=1.214), and Science Direct (M=2.94, SD=1.294). On the other hand, three items received a mean score between 2.42 to 2.49 indicating that the respondents were ‘rarely’ use these databases e.g., ‘IEEE’ (M= 2.49, SD=1.276), Willey-Blackwell Journal (M= 2.48, SD= 1.319).

**Table.4.9. Usage Frequency of Different HEC Subscribed Databases**

<b>Rank</b>	<b>Statements</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	HEC digital library	959	3.06	1.295
2	HEC Summon	959	3.01	1.214
3	Science Direct	959	2.94	1.294
4	JStore	959	2.93	1.287
5	Science Online	959	2.89	1.294
6	Elsevier	959	2.76	1.258
7	Springer link	959	2.63	1.199
8	MC Graw Hill Collections	959	2.58	1.317
9	World Bank e- Library	959	2.51	1.332
10	IEEE	959	2.49	1.276

11	Wiley-Blackwell Journal	959	2.48	1.319
12	Emerald	959	2.42	1.264

*Scale: 1= Never, 2= Rarely, 3= Sometime, 4= Often, 5= Always*

### **Satisfaction level of the Students about Digital Information Resources**

Respondents were asked a set of eight statements in order to measure their satisfaction level about digital information resources. One statement received a mean score 3.59 indicating that respondents were ‘very satisfied’ ‘with digital information resources file formats (e.g. pdf)’ (M= 3.59, SD= .953). While on the other hand, seven statements received a mean score between 3.06 to 3.35 indicating that respondents were ‘moderately satisfied’ ‘with browser access to digital information resources (M=3.35, SD= .981) and ‘how they satisfy with the accuracy of digital information resources’ (M= 3.32, SD= .951).

**Table.4.10. Satisfaction level of the Students about Digital Information Resources**

<b>Rank</b>	<b>Statements</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	How satisfied are you with digital information resources file formats (e.g. pdf)?	959	3.59	.953
2	How satisfied are you with browser access to digital information resources?	959	3.35	.981
3	How satisfied are you with the accuracy of digital information resources?	959	3.32	.951
4	How satisfied are you with the assistance or help available on the interface of digital information resources if you feel difficulty?	959	3.31	1.016

5	How satisfied are you with the display results according to your required information?	959	3.29	.929
6	How satisfied are you with the availability of digital information resources at your university?	959	3.18	.962
7	How satisfied are you with your modes of seeking information online?	959	3.13	1.025
8	How satisfied are you with the timely and speedily downloading facility of digital information resources?	959	3.06	1.089

*Scale: 1= Not at all satisfied, 2= slightly satisfied, 3= moderately satisfied, 4= Very satisfied,*

*5= extremely satisfied*

### **Problems Faced by Respondents in Using Digital Information Resources**

Respondents were asked a set of sixteen statements to indicate the problems they faced while using digital information resources. All these statements received a mean score 3 indicating that respondents faced these problems 'sometime' which include 'slow downloading' (M= 3.23, SD= 1.042), 'hard to ask intermediate help' (M=3.11, SD= 1.074), and were 'lack of technical knowledge' (M= 3.07, SD=1.012)

**Table.4.11. Problems Faced by Respondents in Using Digital Information Resources**

<b>Rank</b>	<b>Statements</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	Slow downloading	959	3.23	1.042
2	Hard to ask intermediate help	959	3.11	1.074

3	Lack of searching technique	959	3.07	1.012
4	Lack of technical knowledge	959	3.04	1.035
5	Information overload (or too many information)	959	3.04	1.043
6	Lack of computer with internet connection at library	959	3.03	1.100
7	Difficulty in finding relevant information	959	3.03	1.012
8	Lack of access to electronic resources	959	3.02	1.103
9	Difficult to articulate query	959	3.00	.931
10	Inaccessibility of some databases	959	2.99	1.034
11	Credibility and quality issues	959	2.97	1.048
12	Non-availability of required resources	959	2.96	1.055
13	No Internet connectivity	959	2.95	1.129
14	Unsatisfactory past results	958	2.89	1.071
15	Poor Infrastructure	958	2.87	1.075
16	Difficult Interface design	959	2.86	1.080

---

*Scale: 1= Never, 2= Rarely, 3= Sometime, 4= Often, 5= Always*

**Relationship between Awareness and Use of Digital Information Resources**

The result of Pearson correlations shows that there is a strong relationship between awareness and use of digital information resources. As shown in table (4.12) with Sig. (2-tailed) .000.

**Table.4.12. Relationship between Awareness and Use of Digital Information Resources**

	Awareness	Use of DIRs
Pearson Correlation	1	.560
Sig. (2-tailed)		.000

### Discussion

The present study was carried out to assess “the relationship between awareness and use of digital information resources digital information resources among students of Universities in South Punjab specifically Islamia University of Bahawalpur (IUB) and Bahauddin Zakariya University Multan (BZU)”. Majorities (58.0%) of participants of the study were male and most of them belonged to science faculty students. The level of education of most of respondents were BS programs and majority of them daily users of digital information resources. The results of the study indicated that large number of respondents preferred digital information resources over printed materials. Javed and Bhatti (2013) found that the most of respondents use general e-books collection and “satisfied” with the digital.

The results of the study found that majority of respondents were used digital information resources with a purpose to prepared their academic assignments, and research work. Zhang et al. (2011) found that e-resources were used for research. Also Rehman and Ramzy (2004) agreed that the main purpose for which respondents used libraries are research problems and academic work.

The result of the study revealed that majority of the respondents reported that digital information resources were helpful to obtain latest information, conducting research, preparation for exams, knowledge up-to-date. The result of the current study are similar with Adeyoyin et al. (2016) that electronic resources improved the level of understanding of their subject, and make them creative and active. The electronic information resources also provide deep information. Lack of specific knowledge, finance and specific software create barrier for users to access the e-collection of library.

Majority of the respondents reported that the reason of digital information resources use is to save their time. Majority of the respondents reported that they were aware about digital information resources keep latest information, search engines such as Google, Yahoo, MSN, online searching by fields, appropriate searching tools, sufficient knowledge about digital information resources available online, HEC digital library and using a Boolean search. Nisha and Ali (2012) found that most of users know the use of electronic journals and they were using for obtaining information, and collection building.

The result of the study indicated that majority of the respondents reported that they used various kind of digital information resources such as electronic newspaper, electronic databases, bibliographic databases, indexing databases, institutional repositories and electronic databases dissertations. Majority of the respondents reported that they were used different database “sometime” like HEC digital library, HEC Summon, Science Direct, JStor and any others. The result of the present study is similar with Akpojotor (2016) that respondents were very well conscious about the worth of e-resources.

Majority of the respondents were satisfied with digital information resources file format, browsing accessibility, accuracy, help from staff, display of results, availability of digital information result, mood of seeking information online and timely and speedily downloading. The result of this study also supported with pervious study Rafiq and Ameen (2012) that the respondents know the importance of electronic databases, and un-restricted online resources for their research needs and the majority of respondents were satisfied with the authenticity of information. Shuling’s (2006) found that majority of the students were satisfied with resources available in their university.

A relationship was proven between awareness and use of digital information resources. Omotayo (2010) found that awareness and skills are the determining factors that may influence users’ decision to use electronic information resources.

Majority of the respondents faced problems while using digital information resources such as slow downloading, hard to ask intermediate help, lack of searching techniques. Similarly Achonna (2008) found that some of students faced some barriers like lack of skills in the use of these e-collections, limited no. of computer, electricity problems, and close access to electronic data-base collection. Also Adeleke et al. (2016) found that most of participants were not using e-resources because of searching skills were main hurdle in using e-resources. Similarly, Ankrah and Atuase (2018) found that poor internet speed was a major barrier and waste lot of time of the users.

## **Conclusion**

The result of study concluded that the majority of respondents use university library occasionally and give preference to digital information resources over printed materials. Most of the respondents were satisfied with available digital information resources. Majority of the

respondents have ability to use different databases such as; HEC digital library, HEC Summon, Science Direct, JStor etc. Majority of respondents were aware about digital information resources keep latest information, search engines such as Google, Yahoo, MSN, online searching by fields, appropriate searching tools, sufficient knowledge about digital information resources available online, HEC digital library and used Boolean search. The major purpose of using digital information resources was to provide access to users at any time.

A statistically it was found that a strong relationship existed between awareness and use of digital information resources. The availability of information resources in university library has direct link with satisfaction level of respondents. The result of the study highlighted some barriers faced by respondents while using digital information resources these barriers were internet speed, electricity shortage, limited working hours and respondents' poor ICT skills.

### **Recommendations**

Following recommendation will be given on the basis of findings

1. Universities should provide ICT program for low skill users
2. Universities should efforts to increase use of e-resources in the library. They should concentrate on the selection of appropriate medium of information dissemination about facility of the digital resource in the library.
3. Given the wide range of search engines used and the random nature of much of the searching, some thought should be given to ways of encouraging students to use the Internet more effectively.
4. The increasing preference for web-based e-mail systems over those of the institution, and the affiliated problems in communication suggest.
5. Central libraries need to organize various department wise training and orientation classes for faculty members and students for the best utilization of available e-resources.
6. High speed network of Wi-Fi as well as leased line should be introduced in the campus and hostels, with security features according to the suitability of users.
7. To save the time of users in searching the information about the availability and usage of e-resources, libraries should introduce content alert services, bulletin board services, library newsletter, pamphlets, training and online tutorials of the subscribed e-resources databases.
8. Universities should need to improve infrastructure of libraries and there should be continuously power supply and enhance the speed of Internet.
9. Need to develop web-based library services for the research scholars.

10. To improve library services, new gadgets such e-book readers, self-help, RFID technology, etc. should be made available in libraries, to attract more users in libraries.
11. All academic libraries should conduct time-to-time, user feedback regarding awareness and usability of resources available in libraries.
12. More advertisement/publicity should be given to e-resources available in libraries.
13. University should re-orientate academic staffs in university that facilitate how to access the electronic resources databases subscribed by the University for effective and efficient usage of the resources.
14. Provide the facility to each department should have a well-equipped computer lab and academics should be provided with a computer in their offices.
15. Departmental libraries should be provided with access details to online journals and electronic resources.
16. The library should also purchase offline electronic information resources to tackle the problem of lack of constant power supply.
17. Libraries should create a digital database of e-journals that they subscribe to through digital library software to enable users to search full-text journal articles from various publishers by subject, keywords and topic.
18. University should be appointed qualified IT experts to solve the problems for networking and hardware.

### **Delimitation of the Study**

This study delimited to students enrolled in Islamia University of Bahawalpur and Bahauddin Zakariya University Multan. It is also delimited to measure the relationship among two variables i.e., relationship between awareness and use of digital information resources.

### **Practical Implication**

The finding of this study will be helpful for university professionals, administrations and policy makers to determine the level of awareness and use of digital information resources among students in university libraries of South Punjab.

## References

- Achonna, A. U. (2008). Awareness, Access and Usage of E-Journal Resources of the Library, By the Students of Yaba College of Technology, Yaba–Lagos Nigeria. *Samaru journal of information Studies*, 8(1), 26-34.
- Adeleke, Dare Samuel D. S. and Emeahara, Evelyn Nkechi, "Relationship between Information Literacy and Use of Electronic Information Resources by Postgraduate Students of the University of Ibadan" (2016). *Library Philosophy and Practice (e-journal)*. 1381. <http://digitalcommons.unl.edu/libphilprac/1381>
- Adeyoyin, S. O., Idowu, T. A., & Sowole, A. O. (2016). Awareness, Access, and Use of Electronic Information Resources among the Seminarians in Nigeria. *Journal of Religious & Theological Information*, 15(1-2), 1-18.
- ADJOA, F., & Dzakotoe, F. D. (2017). Awareness and Use of Electronic Resources in University Libraries: A Case Study of University for Development Studies Library. *Library Philosophy and Practice (ejournal)*. 1562.
- Ajuwon, G. A., & Titiloye, M. A. (2016). HINARI usage patterns and trends in nigerian universities in five years (2010-2014). *African Journal of Biomedical Research*, 19(3), 171-177.
- 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 (e-journal)*. 1408.
- Altaf, A., & Warraich, N. F. (2017). Awareness and Use of Electronic Information Sources by University Students in Pakistan. *Pakistan Library & Information Science Journal*, 48(4).
- Amjad, A., Ahmed, S., & Naeem, S. B. (2013). Use of electronic information resources among research scholars in the Islamia University of Bahawalpur, Pakistan. *New Review of Academic Librarianship*, 19(3), 316-328.
- Ahmed, S., & Amjad, A. (2014). Evaluation of researchers' satisfaction with electronic resources in two universities of Pakistan. *Library Hi Tech News*, 31(7), 20-25.
- Ahmad, M., & Panda, K. C. (2013). Awareness and use of electronic information resources by the faculty members of Indian institutes in Dubai international academic city (DIAC): A survey. *International Research Journal of Computer Science and Information Systems (IRJCSIS)*, 2(1), 8-17.

Ahmad, S., & Muneebulla, k. K. (1994). Gender difference in usage and awareness of digital information resources in teacher training colleges: a study of anantnag district-j&k (india). *Education*, 445, 172.

Ani, O. E., & Ahiauzu, B. (2008). Towards effective development of electronic information resources in Nigerian university libraries. *Library Management*, 29(6/7), 504-514.

Ankrah, E., & Atuase, D. (2018). The use of electronic resources by postgraduate students of the university of cape coast. *Library philosophy and practice*, 1-37.

Atakan, C., Atilgan, D., Bayram, Ö., & Arslantekin, S. (2008). An evaluation of the second survey on electronic databases usage at Ankara University Digital Library. *The Electronic Library*, 26(2), 249-259.

Al-Saleh, Y. N. (2004). Graduate students' information needs from electronic information resources in Saudi Arabia.

<https://diginole.lib.fsu.edu/islandora/object/fsu%3A168066/datastream>

Armstrong, C., Fenton, R., Lonsdale, R., Stoker, D., Thomas, R., & Urquhart, C. (2001). A study of the use of electronic information systems by higher education students in the UK. *Program*, 35(3), 241-262.

Brophy, P. (1993) Networking in British academic libraries. *British Journal of Academic Librarianship*, 8(1),49-60.

Boumarafi, B. (2010). Electronic resources at the University of Sharjah medical library: an investigation of students' information-seeking behavior. *Medical Reference Services Quarterly*, 29(4), 349-362.

Crawford, J. C., & Daye, A. (2000). A survey of the use of electronic services at Glasgow Caledonian University Library. *The Electronic Library*, 18(4), 255-265.

Chisenga, J. (2004). The use of ICTs in African public libraries: A survey of ten countries in anglophone Africa: *INASP*.

- Chohan, T. M., Bhatti, R., & Naeem, S. B. (2017). 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.*
- Dadzie, P. S. (2005). Electronic resources: access and usage at Ashesi University College. *Campus-Wide Information Systems, 22(5), 290-297.*
- Deng, H. (2010). Emerging patterns and trends in utilizing electronic resources in a higher environment. *New Library World, 111(3/4), 87-103.*
- Delaney, G., & Bates, J. (2018). How Can the University Library Better Meet the Information Needs of Research Students? Experiences from Ulster University. *New Review of Academic Librarianship, 24(1), 63-89.*
- Deans, M.-J. O., & Durrant, C. F. (2016). An investigation into the knowledge and use of electronic library resources in Jamaican community colleges. *Journal of Web Librarianship, 10(4), 239-266.*
- Egberongbe, H. S. (2011). The use and impact of electronic resources at the University of Lagos.
- Gouseti, A. (2017). Exploring doctoral students' use of digital technologies: what do they use them for and why? *Educational Review, 69(5), 638-654.*
- Hong Sinh, N., & Thi Hong Nhung, H. (2012). Users' searching behaviour in using online databases at Vietnam National University–Ho Chi Minh City. *Library Management, 33(8/9), 458-468.*
- Holley, R. P., & Powell, R. R. (2004). Student satisfaction with electronic library resources at Wayne State University. *Journal of Access Services, 2(1), 41-62.*
- Jabeen, M., Qinjian, Y., Yihan, Z., Jabeen, M., & Imran, M. (2017). Usability study of digital libraries: An analysis of user perception, satisfaction, challenges, and opportunities at university libraries of Nanjing, China. *Library Collections, Acquisitions, & Technical Services, 40(1-2), 58-69.*
- Jagboro, K. (2003). Computerization of academic libraries: A case study of Hezekiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife. *Lagos Journal of Library and Information Science, 1(1), 47-52.*

- Javed, M. W., & Bhatti, R. (2013). Information Usage Patterns of Postgraduate Students at Nishter Medical College, Multan, Pakistan. *Journal of Hospital Librarianship*, 13(4), 353-361.
- Khan, A., & Ahmed, S. (2013). The impact of digital library resources on scholarly communication: challenges and opportunities for university libraries in Pakistan. *Library Hi Tech News*, 30(8), 12-29.
- Khan, A., Ahmed, S., & Masrek, M. N. (2014). Scholars' satisfaction with digital library collection and gaps in the provision of effective information resources and services: A Pakistani perspective. *Journal of Electronic Resources Librarianship*, 26(4), 250-267.
- Kwadzo Mrs, G. (2015). Awareness and usage of electronic databases by geography and resource development information studies graduate students in the University of Ghana. *Library Philosophy and Practice*, (e-journal) 1210
- Li, Y. (2012). Undergraduate students searching and reading Web sources for writing. *Educational Media International*, 49(3), 201-215.
- Lo, P., Cho, A., Law, B. K.-K., Chiu, D. K., & Allard, B. (2017). Progressive trends in electronic resources management among academic libraries in Hong Kong. *Library Collections, Acquisitions, & Technical Services*, 40(1-2), 28-37.
- Mirza, M. S. & Mahmood, K. (2012). Electronic resources and services in Pakistani university libraries: A survey of users' satisfaction, *The International Information & Library Review*, 20, 1-9
- Msagati, N. (2014). Awareness and use of scholarly electronic journals by members of academic staff: A case study of Dar es Salaam University College of Education (DUCE). *Library Philosophy and Practice*, 0\_1.
- Mbabu, L. G., Bertram, A., & Varnum, K. (2013). Patterns of undergraduates' use of scholarly databases in a large research university. *Journal of Academic Librarianship*, 39(2): 189 - 193.
- Motahari Nezhad, H., Shekofteh, M., & Kazerani, M. E-readiness assessment of academic libraries: A case study in Iran. *The Electronic Library (just-accepted)*, 00-00.
- Nagata, H., Toda, A., & Kytömäki, P. Students' Patterns of Library Use and Their Learning Outcomes [citirano: 2010-06-02]. Dostupno na: <http://www.ebllip4.unc.edu/papers/Nagata.pdf>.

- Nemati Anaraki, L., & Babalhavaeji, F. (2013). Investigating the awareness and ability of medical students in using electronic resources of the integrated digital library portal of Iran: A comparative study. *The Electronic Library*, 31(1), 70-83.
- Nisha, F., & Ali, N. (2012). Awareness and use of e-journals by IIT Delhi and Delhi University library users. *Collection Building*, 32(2), 57-64.
- Nwabueze, A., & CLN, L. O. U. (2015). Availability and Use of Digital Information Resources by undergraduates of universities in Delta and Edo states, *Nigeria. International Journal of Digital Library Services*, 5(2).
- Omotayo, B.O. (2010) Access, use, and attitudes of academics toward electronic journals: A case study of Obafemi Awolowo University, Ile Ife. *Library Philosophy and Practice*. Retrieved from: <http://unllib.unl.edu/LPP/omotayo.htm>
- Rafiq, M., & Ameen, K. (2012). Use of digital media and demand for digitized contents in higher education sector of Pakistan. *The International Information & Library Review*, 44(3), 116-122.
- Ray, K., & Day, J. (1998). Student attitudes towards electronic information resources. *Information research*, 4.
- Rehman, S., & Ramzy, V. (2004). Awareness and use of electronic information resources at the Health Science Centre of Kuwait University. *Library Review* 53 (3): 150-156.
- Raza, M. Z., & Babar, S. A. (2017). Use of Online Resources by students of Department of Social Work, University of the Punjab, Lahore: a case study. *Pakistan Library & Information Science Journal*, 48(3).
- Soni, N. K., Gupta, K. K., & Shrivastava, J. (2018). Awareness and Usage of Electronic Resources among LIS Scholars of Jiwaji University, Gwalior: A Survey. *DESIDOC Journal of Library & Information Technology*, 38(1), 56.
- Sinh, N. H., & Nhung, H. T. H. (2012). Users' searching behavior in using online databases at Vietnam National University, Ho Chi Minh City. *Library Management*, 33(8/9): 458 - 468.
- Tella, A., Orim, F., Ibrahim, D. M., & Memudu, S. A. (2018). The use of electronic resources by academic staff at The University of Ilorin, Nigeria. *Education and Information Technologies*, 23(1), 9-27.

- Togia, A., & Tsigilis, N. (2010). Awareness and use of electronic information resources by education graduate students: Preliminary results from the Aristotle University of Thessaloniki Qualitative And Quantitative Methods In Libraries: *Theory and Applications* (pp. 464-472): *World Scientific*.
- Tlakula, T. P., & Fombad, M. (2017). The use of electronic resources by undergraduate students at the University of Venda, South Africa. *The Electronic Library*, 35(5), 861-881.
- Ugboma, M., & Edewor, N. (2008). Use of e-mail in library and information services provision in higher institutions in Delta state, Nigeria. *Information Technologist (The)*, 5(1), 42-49.
- Ukachi, N. B. (2015). Information literacy of students as a correlate of their use of electronic resources in university libraries in Nigeria. *The Electronic Library*, 33(3), 486-501.
- Zhang, L., Ye, P., & Liu, Q. (2011). A survey of the use of electronic resources at seven universities in Wuhan, China. *Program*, 45(1), 67-77.
- Zhou, Q., Li, Z., Huang, X., & Chiu, D. K. (2017). Undergraduates' electronic resources diffusion at the Peking University: An exploration on language impacts. *Library Collections, Acquisitions, & Technical Services*, 40(1-2), 1-9.