

**INFLUENCE OF SUBSCRIBED ONLINE DATABASES USAGE ON THE
ACADEMIC ACTIVITIES OF POSTGRADUATE STUDENTS OF UMARU MUSA
YAR'ADUA UNIVERSITY, KATSINA**

BY

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SEMINAR II PRESENTATION

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January, 2022

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE
STUDIES, AHMADU BELLO UNIVERSITY, IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER IN LIBRARY SCIENCE**

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY,
ZARIA, NIGERIA**

January, 2022

DECLARATION

I declare that the work in this dissertation titled Influence of Subscribed Online Databases Usage on the Academic Activities of Postgraduate Students of Umaru Musa Yar'adua university, Katsina has been conducted by me in the Department of Library and Information Science, Ahmadu Bello University Zaria. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of the dissertation was previously presented for the award of another degree or diploma at this or any other institution.

HAFIZU Ashiru

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CERTIFICATION

This dissertation titled “influence of subscribed online databases usage on the academic activities of postgraduate students of Umaru Musa Yar’adua university, Katsina by HAFIZU, Ashiru (P17EDLS8020) met the regulation governing the award of the degree of Master of Library Science (MLS) of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This Dissertation is dedicated to my parents Alhaji Hafizu Sha'aibu and Hajiya Maryama Ibrahim.

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ABSTRACT

This study examined the influence of subscribed online databases usage on the academic activities of postgraduate students of Umaru Musa Yar'adua University, Katsina. In order to achieve this, six research objectives were raised. These are to determine subscribed online databases available for the academic activities of postgraduate students in the Umaru Musa Yar'adua University Library, to determine influence of subscribed online databases on academic activities of postgraduate students of Umaru Musa Yar'adua University, to find out challenges of utilization of the subscribed online databases by the postgraduate students of Umaru Musa Yar'adua University. Quantitative research method and survey research design were adopted. The population was 742; this included 739 postgraduate students and three (3) library ICT staff. Two hundred and fifty-three (253) postgraduate students were sampled out and three (3) ICT staff were all used. Data collected were analyzed using frequency, percentage, mean and standard deviation. Findings show that four subscribed online databases were available for use; namely ScienceDirect, Jstor, SpringerLink and EBCOhost databases. Use of subscribed online databases influenced quality of the students' research and acceptance of researches in world class journals. It was discovered that challenges hindering postgraduate students from effective use of subscribed online databases were difficulty in retrieving accurate search result, online ads pop up and low internet bandwidth. It was concluded that the subscribed online databases available in Umaru Musa Yar'adua University Library are relevant and influence academic activities of postgraduate students. The researcher recommended among others that more specialized subscribed online databases need to be made available; Seminars, workshops and conferences should be organized to educate users on how subscribed online databases would influence their performance in examination; ICT staff of the Library should ensure that every postgraduate student is acquainted with search strategy skills and general ICT competencies.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Academic activities of students are always the main focus of any educational institutions without which they have no basis for existence. All resources deployed are geared toward achieving excellence in academic activities of students. Academic libraries are not an exception rather the central in supporting academic activities in any higher institution of learning. All the resources provided in the library are meant to make an impact on the students' academic activities. According to Lawinsider (n.d) Academic activities are assigned work or project performed according to set out standards and used to determine academic credit, including (but not limited to) an examination, writing project, take- home test, or other project. In educational institutions, success is measured by the quality of academic activities, or how well a student meets standards set out by the institution. Academic activities in higher educational institutions include class assignment, test, group seminar, research and many others. By students performing excellently in academic activities, the students, the institution and the larger society will benefit greatly. Institution's quality in academic activities will prefer students to compete in the outside world and will have a positive impact on maximizing output in the workplaces.

Institution will use its academic activities as a measure of assessing influence of resources and facilities such as libraries, internet services and laboratories are making on students. This will make the management to either reassess the functionality of the resources if negative impact is found or deploy more resources if there is a positive impact. Moreover, excellent academic activity will also increase the fame of the institution in the outside world. According to Mphale and Mhlauli (2014), Educational institutions are mandated to use education as a tool for social transformation. The success of a school is measured by the

quality of students it produces. This is supported by Yusuf (2008) as cited in Mphale and Mhlauli (2014), when contending that the performance should not only be based on terms of test and examination results and student ability to apply what is learnt and the rate at which students move on to higher institution of learning, but should include other areas such as whether the students have acquired the survival skills. In spite of that, the use of students' achievement in academic activities to assess the teacher's effectiveness has gained ground.

Academic libraries as an integral part of any higher institutions of learning have a significant impact on the academic activities of the students. This implies that the resources, both prints and non-prints have important role to play in the academic activities of these institutions. Thorpe, Lukes, Bever and He (2016) assert that several libraries have started to explore the connection between library use and student retention rates. Pagowsky and Hammond (2012) described programmatic approaches undertaken at two libraries to link library activities with institutional retention efforts. The rationale behind systematic integration into the curriculum and outreach initiatives is that more meaningful library interactions may help increase student engagement, and student engagement may help boost retention rates.

Non-print resources of libraries are dominating the library services and consequently making more impact on students' academic activities than the print resources do. Ashikuzzaman (2016) asserts that the electronic resources are generally accepted because of the ease of use, readability, affordability and accessibility. Others include multi-access, Speed, Mobility, Savings physical Space, Convenience as well as Saving time and money.

The non-print resources are supposed to influence the academic activities of students more than the print resources. This is because Kenchakkanavar (2014) asserted that electronic resources are resources which require computer access or any electronic product that delivers a collection of data, be it referring to full-text bases, electronic journals, image collections,

other multimedia products and numerical, graphical or time-based, as a commercially available title that has been published with an aim to being marketed. These may be delivered on CD ROM, on tape, via the Internet and so on. These e-resources include electronic journals (e-journal), electronic books (e-book) online databases in varied digital formats, WebPages etc. Online database which is one type of electronic resource which is further subdivided into two: fee-based or what is referred to as online subscribed database and free online database. Ugwu and Onyegiri (2013) as cited in Anyim (2018) clearly gave examples of electronic resources which include, but are not limited to: web sites, online databases, e-journals, e-books, electronic integrating resources, and physical carriers in all formats, whether free or fee-based, required to support research in the subject covered, and maybe audio, visual, and/or text files.

Online database has been broadly defined by Naqvi (2012) as a large, regularly updated file of digitized information (bibliographic records, abstracts, full-text documents, directory entries, images, statistics, etc.) related to a specific subject or field, consisting of records of uniform format organized for ease and speed of search and retrieval and managed with the aid of Database Management System (DBMS) software. It is further stated that the content is created by the database producer, which usually publishes a print version and leases the content to one or more database vendors that provide electronic access to the data after it has been converted to machine-readable form, usually on CD-ROM or online via the Internet, using proprietary search software.

The fee-based, usually referred to as subscribed online databases, as the name implies are those types that require payment for access. Examples are EBSCOhost, Proquest, Springer, ScienceDirect, Ajol, ResearchGate etc. These databases have advantages over the free-based ones. Ntakumba (2002) asserts that Fee-based databases usually offer a powerful search

option, enabling users to focus their searches more precisely, and they provide access to information that is not available in the free information environment, mainly newspaper and journal articles. Due to the advantages that these databases offer and their richness, academic libraries budget and subscribe to these databases for students' access.

These databases, if properly utilized, is believed that the parent institution's fame, students' retention rate, the library's reputation and relevance would improve. The databases would also increase the quality and quantity of researches. In essence, the databases should have a greater influence on the students' academic activities. The influence will justify the huge amount of resources been spent on the databases and can ultimately encourage the management of the institution to provide more resources in that course.

1.2 Statement of the Problem

Academic libraries established in universities are designed and packaged in order to impact the entire undertaking of the institution it is serving in the areas of teaching, learning and research. Online subscribed databases are collections of scholarly articles, acquired and organized by a body which is accessible only by subscription and made available via the internet to support the realization of the objectives. This information lists bibliographic references, abstracts and full-text documents, amongst others. Subscribed online database in this world of information explosion has been widely accepted and deployed in many libraries to serve in the conduct of teaching, learning and research. Universities subscribe to the databases to have a greater influence on the academic activities of the students. Its' importance in the promotion of teaching and learning cannot be overemphasized. It has been observed that the investment in these databases is high. For example, Ball (2008) asserts that University Tun Hussein Onn Malaysia (UTHM) invested more than one million Malaysian Ringgit in 2013 to subscribe to only twenty-nine databases. Such high investment requires

high accountability especially in the light of current government budgeting policy called Outcome-Based Budgeting (OBB) Thus, to justify the university investment in the online library databases, the outcome measure or effectiveness in the form of user satisfaction need to be measured.

Adam (2017) asserts that because collecting, organizing and developing database is not an easy work most organization charge huge amount for this service and equipped their database with authentication and authorization mechanisms to verify the identity and grant require access. It further stated that Kaduna State University subscribed to the following databases; Springer, Proquest, Ebrary, Science Direct, SCOPUS, HINARI, Jstor, Ebscohost, AGORA.

Similarly, Umaru Musa Yar'adua University has been spending huge amount of money for the subscription and management of these databases. A preliminary survey conducted by the researcher revealed that the use of the databases by the postgraduate students has not been measured as regards its' influence on the academic activities of the students to justify the resources being spent. It is therefore deemed necessary to conduct research with the aim to ascertaining influence of these databases on the academic activities of the postgraduate students.

1.3 Research Questions

This study was guided by the following research questions:

1. What are the subscribed online databases available for academic activities of Postgraduate Students in the Umaru Musa Yar'adua University Library?
2. To what extent do the Postgraduate Students of the Umaru Musa Yar'adua University utilize the subscribed online databases?

3. To what extent are the subscribed databases relevant to academic activities of the postgraduate students of Umaru Musa Yar'adua University?
4. What is the level of satisfaction with the use of the subscribed online databases by postgraduate students of the Umaru Musa Yar'adua University?
5. What is the influence of the subscribed online databases on the academic activities of the postgraduate students of Umaru Musa Yar'adua University?
6. Are there challenges in utilizing the subscribed online databases by Postgraduate students of Umaru Musa Yar'adua University?

1.4 Objective of the Study

The objectives of the study were to:

1. find out the subscribed online databases available for academic activities in Umaru Musa Yar'adua University, Library.
2. Measure the extent to which postgraduate students of Umaru Musa Yar'adua University utilize the subscribed online databases.
3. ascertain the relevance of the subscribed online databases to academic activities of postgraduate students of Umaru Musa Yar'adua University, Katsina.
4. find out the level of satisfaction with the use of subscribed online databases by postgraduate students of Umaru Musa Yar'adua University.
5. determine the influence of subscribed online databases on the academic activities of the postgraduate students of Umaru Musa Yar'adua University.
6. identify the challenges in utilizing the subscribed online databases by the postgraduate students of Umaru Musa Yar'adua University

1.5 Significance of the Study

Some of the reasons for research are to solve a particular problem, improve an existing situation, or discover new knowledge. Subscribed online databases, like all other library resources and services, are meant to primarily influence the academic activities of the target audience which postgraduate students are inclusive. Improvement in academic activities of the postgraduate students will justify the huge expenditure on the subscription and maintenance of these databases.

Findings from this study is of great significance in bridging the gap in researches made on subscribed online databases. It is also important to future researchers who want to conduct similar or related researches.

The findings will also be significant to librarians in designing and packaging their services, as it revealed students' level of satisfaction, problems encountered in utilizing subscribed online databases.

The study would be a tool that would justify the resources being spent on the subscription and the management of the databases. It revealed the influence of these databases on the students' academic activities which is of greater concern to the management.

Specifically, the findings of this study would be beneficial to the librarians of the Umaru Musa Yar'adua University, Katsina, management of the university, the students and researchers who have interest in the area.

1.6 Scope of the Study

The study focuses on the influence of subscribed online databases usage on the academic activities of postgraduate students of Umaru Musa Yar'adua University Katsina. The study covers postgraduate students of 2016/2017, 2017/2018 and 2018/2019 academic session and ICT staff of the Library.

The study covers only online subscribed databases which are usually referred to as fee-based databases in relation to its availability, extent of use, relevance, satisfaction, influence and challenges.

1.7 Operational Definition of Terms

The following terms are defined within the context of this study:

- a) **Academic activities:** these are prescribed activities that students in an educational institution perform within a stated period of time and are used to determine success or failure. They include seminars, assignments, research, test, examinations.
- b) **Influence:** this has to do with change or impact that something has over something else which can be negative or positive. By influence in this research, it means positive change which online subscribed databases make on academic performance of postgraduate students of Umaru Musa Yar'adua University Katsina.
- c) **Online Subscribed Database:** this consist of a collection of scholarly published electronic journals and other electronic informational materials organized and managed by the creators using Database Management System (DBMS) software accessible remotely only by subscription or fees.
- d) **Postgraduate Students:** these are the students of the university who are undergoing master or PhD or postgraduate diploma programs which is usually of one, two or three years duration depending on the course of study.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presented literature reviewed under the following headings:

2.2 Concept of Online Database

2.2.1 Open Access Online Database

2.2.2 Subscribed Online Database

2.2.3 Subscribed Online Database Search Strategies

2.3 Concept of Academic Activities

2.4 Availability of Subscribed Online Database

2.5 Utilization of Subscribed Online Databases

2.6 Satisfaction on the Use of Subscribed Online Databases

2.7 Relevance of Subscribed Online Database

2.8 Challenges of Using Subscribed Online Database

2.9 Empirical Studies on Subscribed Online Database

2.10 Summary of the Review

2.2 Concept of Online Database

The database is an organized collection of information regarding a particular entity which can be accessed and retrieved for use. The accessibility of these databases can be online or offline. That is, while some databases are hosted on a website which made them accessible via the internet others are stored on computers or attached storage facilities.

According to Verma (2016) online database search is simply bibliographic research which is performed by an individual scholar or librarian using a computer and the internet. By connecting with a database research service, millions of records from thousands of publications in hundreds of databases can be searched for material on a topic. According to Edesiri (2018) online databases, also known as electronic databases, are a collection of electronic information sources by publishers from various fields and disciplines and can be accessed through a computer network. He added that these databases are usually updated files of digitized information, in which the content is revised usually on a regular basis to provide current information to users. It may contain indexes to and abstracts of articles and/or links to the full-text articles. In almost similar view Khan and Haridasan (2015) as cited in Edesiri (2018) define online databases as records of related digital information concerned with either general information or any specific subject field, which is arranged in a uniform format to retrieve information easily through the internet or online networks. In the same vein, Samaravickrama and Samaradiwakara as cited in Gifty (2017), stressing on the importance and nature of these databases, opined that their impact on academic libraries and scholars is noteworthy and unprecedented. These databases are organized digital collections of references to published literature such as journal articles, newspaper articles, conference proceedings, reports, legal publications, theses, e-books among others. E- Databases are in different types such as bibliographic, full-text, directory, and multimedia.

In agreement to the above, CSN College Library (n.d) assert that A database is an organized collection of electronic, digitized information that can be searched in a variety of ways. Databases typically include information from magazines, journals, newspapers, and electronic books. Since most of the information found in a database has previously appeared in print form, it has gone through the editorial process. In support Naqvi (2012) asserts that electronic database is a large, regularly updated file of digitized information (bibliographic records, abstracts, full-text documents, directory entries, images, statistics, etc.) related to a specific subject or field, consisting of records of uniform format organized for ease and speed of search and retrieval and managed with the aid of Database Management System (DBMS) software. Content is created by the database producer (i.e. Thomson Reuters), which usually publishes a print version (*Biological Abstracts*) and leases the content to one or more database vendors (EBSCO, OVID, etc.) that provide electronic access to the data after it has been converted to machine-readable form (*BIOSIS*), usually on CD-ROM or online via the Internet, using proprietary search software. Stewart, Narendra and Schmetzke (2014) suggest that general-subject databases that provide access to articles in magazines, newspapers and journals – such as Ebscohost’s Academic Search and MasterFILE, Wilson’s OmniFile and Readers’ Guide, and Proquest’s Newspapers – have become the bread-and-butter of lower-level undergraduate research. Subject-specific online indexes, which have largely replaced their paper-based predecessors, are bibliographic tools essential for higher-level course work and faculty research.

From the foregone views of scholars, an online database can be specific or generalized. Both share a common feature of being one of the types of electronic resources accessible via the internet. The specific or specialized online databases are those databases that collect and organize resources in a non-print format such as e-journals, e-magazines, e-books accessible remotely that are specifically related to particular discipline or field of study. In contrast, the

generalized online databases are those types that collect and organize information resources in electronic format such as e-journals, e-books, e-magazines for search remotely and try to include or cover all human endeavours.

2.2.1 Open access online database

The online database can be free (obtainable without payment) or unfree (that which require payment for access). The former usually referred to as open-access database is usually of lesser quality compared to latter which usually referred to as a subscribed database. Some examples of open access database are AJOL, AFRICAN JOURNAL ARCHIVE, Bepress, Biomed central etc.

Burtle (2019) suggest that open access is information that is: free to read unrestricted online. She further stated that is a movement that wants to increase information access and innovation. By open access, it usually refers to open access publishing, particularly of scholarly communication in academia. Open access may be an answer to the serials/scholarly communication crisis, which refers to the system where information is locked up in subscription journals and databases whose prices keep rising (as library and university budgets stagnate or decrease) and universities and libraries are forced to pay for the creation of the research as well as to buy it back through subscriptions. It is about the democratization of information and knowledge. Open access resources are largely made available through open access journals, subject-specific and institutional repositories, where research is posted online for anyone to access. These are indexed by Google and other search engines increasing visibility and impact of the research.

Some of the advantages of these resources posited by Burtle (2019) are

- Greater visibility and impact of research
- Increased opportunity for collaboration
- Easier access to information for anyone

- Takes advantage of technology - text mining and the digital environment
- Better return on investment for research sponsors
- Encourages and enables greater innovation
- Faster than traditional publishing
- Contributes to education's mission of advancing knowledge

In agreement, Sparc (2010) suggest that Open Access seeks to return scholarly publishing to its original purpose: to spread knowledge and allow that knowledge to be built upon. Price barriers should not prevent students (or anyone) from getting access to research they need. Open Access, and the open availability and searchability of scholarly research that it entails, will have a significant positive impact on everything from education to the practice of medicine to the ability of entrepreneurs to innovate. Explore why Open Access is so important to a number of groups... chances are you probably belong to more than one. It went further to state the advantages of open access to researchers, students, developing countries, small businesses. The students will have, by the use of open access, complete education, researching beyond degree (nonstop research). From the side of researchers, it argues that research is useless if it's not shared as well as better visibility and higher impact for your scholarship finally avoiding duplication.

Developing countries will appreciate open access because are home to the same groups that require access to research in order to thrive (students, researchers, doctors, etc), but they often face much steeper access barriers. While many institutions in the developed world can afford journal budgets of several million or more dollars, institutions in developing countries must make do with a fraction of that budget. Hunt and Swan (n.d) are of the view that Open Access, which implies disseminating research information for free on the Web, brings benefits to researchers, their institutions and funders, and to the wider public. It is not without

cost, but the principal issue is that costs do not fall on the readers. They argue that open access is necessary because “conservative estimates put the number of peer-reviewed journals at around 30,000, and the number of articles published in those journals at around 3 million per year. University libraries subscribe to as many journals as they can afford, but even the wealthiest libraries can manage to buy access to only a fraction of the total. Indeed, Harvard University library, the richest in the world, recently announced that it needed to change the way it buys journals because the large publishers charge too much, and price increases are too high”

Stressing on the importance of the open-access database Hunt and Swan (n.d) believe that Open Access improves the speed, efficiency and efficacy of research because researchers no longer need to spend time seeking out papers that their library does not subscribe to, nor waste time going into cul-de-sac duplicating research of which they are unaware because they cannot access the right journals.

Oxford Journals (2006) believes that over the past few years there has been much debate among publishers, librarians and the research community at large concerning the potential benefits of free access to research information. Protagonists of open access (OA) models believe that free availability of research results will bring wider dissemination, which will be of considerable benefit to the research community. Publishers have argued that they have been investing heavily in both new technology and the deployment of new business models and that a potent combination of technology and flexible pricing models such as consortia deals have already resulted in much greater availability of research information published via online journals than was ever possible with their printed counterparts.

Open Access usually abbreviated as (OA) are online database accessible free of charge. They contained a collection of e-journals, e-books and e-magazines accessible online requiring no

payment from the visitor. It is readily available for users to read, download, copy, distribute, print, search, share articles without any financial requirement. It is pertinent to state here that, most of the definitions above did not capture the open-access features. While open access has the advantage of being accessible freely and catering for the needs of researchers in the developing countries, it is also important to note that openness of the database makes resources lesser in quality compared to the subscribed database.

2.2.2 Subscribed Online Database

Unlike the open-access database which requires no payment for access subscribed online database access will require one to make payment. Gifty (2017) agrees that subscribed online databases have become a major element of library collections around the globe. They are regarded as essential for learning, teaching and research activities. Iroaganachi and Izuagbe (2019) defined online databases as are collection of electronic information resources uniquely or generally organized to suit the information needs of researchers from specific or multidisciplinary subject fields.

Verma (2016) defines subscribed online database as a database accessible from a network, including from the internet. It differs from a local database, held in an individual computer or its attached storage, such as a CD. Currently, there are several database products designed specifically as hosted databases, delivered as software as a service, products. Some of the differences are:

- The online databases are delivered primarily via a web browser
- They are often purchased by a monthly subscription
- They embed common collaboration features such as sharing, e-mail notifications, etc.

Some examples of online databases are: (a) Web of Science; (b) EBSCO; (c) Science Direct; (d) Springer Link; (e) ABI/INFORM; and (f) Scopus.

Tremblay (2018) discussing on the advantages and disadvantages of subscribed online databases believes that some of the pros of the databases are; no installation required, work from anywhere, including mobile devices, no upgrades and versions. The cons according to him are; no internet connection = no access, subscription and per-user pricing, cost of extra storage.

2.2.3 Subscribed Online Database Search Strategies

Search strategies are employed by the visitors of the online databases in order to get the needed information accurately, easily and timely. Ibrahim (2013) suggests that search strategies involve series of processes, techniques and ways researchers adopt in order to locate where information is, its types and format, and ways of retrieving, evaluating and utilizing the information. It categorized the carriers of information on the internet into four namely: search engines, subject directories, and scholarly databases as well as information gateways. In relation to the above, other strategies for search into these carriers are as follow:

- Thesaurus search: to achieve this, the researcher needs to define and understand the major variables, concepts, keywords etc in his research work. Therefore, the thesaurus search helps to select appropriate terms, ensuring the most comprehensive retrieval.
- Phrase search: this search strategy requires putting the phrase or variable under search in enclose quotation marks.
- Advanced search: this is achieved through the use of what is called Boolean Operators. Boolean Operators help define the relationship between words or group of words. This enables the researcher to expand or narrow his searches. The Boolean Operators are as follows:

- AND is used to narrow a search and retrieve records containing all of the words its separates.
- OR is used to broaden a search and retrieve records containing any of the words its separates.
- NOT is used to narrow a search and retrieve records that do not contain the term following it.

Internet search strategies can be seen as the application and proper arrangement of search keywords and signs in order to retrieve exact electronic information resources that will answer the searcher's query.

2.3 Concept of Academic Activities

All efforts put and facilities dedicated, be it library resources, laboratory facilities are meant to impact students' academic activities. All postgraduate academic activities in higher institution of learning are directly or indirectly has to do with research activities. These activities include conferences, knowledge update, preparing for seminars and preparation for workshops, writing of the dissertation, preparing for examinations, writing of assignment and writing of a thesis. These academic activities can be influenced by some factors. Harb and El-shaarawi (2006) assert that there have been many studies that sought to examine this issue and the findings of these studies point out to hard work and discipline, previous schooling, parents' education, family income and self-motivation as factors that can explain differences in students' grades. Though they have mentioned most of the factors that explain differences in students' grade, it is to emphasize here that, the effectiveness and efficiency of libraries in the academic institution can also serve as a factor.

Jayanthi et al (2014) academic success has a great influence on a student's self-esteem, motivation, and perseverance in higher education. Poor academic performance or high failure rates may result in unacceptable levels of attrition, reduced graduate through put and

increased cost of education. Educators and researchers have long been interested in identifying and understanding the variables that contribute to academic excellence. Many researchers have identified demographic, socio-economic, family and school factors as variables contributing to students' academic performance. In the world of today, looking at the huge amount of money being spent for subscription and access to online databases, this can be included in the variables that contribute to the students' academic achievement.

As regards determinant for the academic activities quality of students in higher institution of learning Holloway (1999) asserts that school students across Singapore participate in a wide variety of extracurricular activities (also known as extra-curricular activities). These can be sports, clubs, debate, drama, school publications, student council, and other social events. These activities are, voluntary, usually conducted outside the normal school hours, and students do not receive grades for their involvement. In agreement, Marsh and Kleitman (2002) suggest that many extracurricular activities have proven to be beneficial in enhancing academic performance, even if the activities are not obviously related to academic subjects. Students participating in extracurricular activities did better academically than students who did not participate.

Alos, Lawrence, Jose and David (2015) greatly emphasized the importance of having qualified teachers in the field of teaching and said that the success of any program is conditioned by the ability of the teacher to teach. If there is a failure at this point, the whole structure fails. Hence, the implementation, selection, preparation and supervision of education will be affected. Libraries, especially academic are missing which are considered central in any academic setting for academic achievement. This is evident considering services rendered by these libraries especially to graduate and postgraduate level students.

Kapur (2018) identified factors that affect students' academic activities as follows:

- The attitude of the Students – Goal-oriented students usually possess positive feelings regarding their school experiences, they possess the traits of discipline, diligence, and resourcefulness, are avid readers and tend to devote less time towards recreation and leisure activities.
- School Resources – these include Library facilities such as online subscribed databases and laboratory facilities, especially in science subjects should include essential materials.
- Leadership Aspects – the leadership style of the institution has a direct impact on the academic achievement of the students because of the decision that management makes directly affect what and how students do activities.
- Skills and Abilities of the Teachers – Teachers have an imperative role in influencing the academic activities of the students. They are bestowed with the authority to direct all the classroom activities and administer learning. It is vital for teachers to possess the traits of professionalism and conscientiousness.
- Classroom Environment – It is vital to promote mutual understanding, amiability and co-operation among the teachers and students as well as among the fellow students.
- Role of Parents – In order to produce good academic outcomes, it is vital for the parents, children and other family members to encourage a learning atmosphere within homes.
- Social Circle– students get enrolled in schools not only to learn academic concepts, but they also learn, how to interact and socialize with others. Students usually form friendly terms and relationships with fellow students. Forming a social circle and friendships have a positive effect on the academic activities of the students.
- Psychological and Health-Related Factors – In order to generate positive academic outcomes, it is essential for the students to maintain their psychological and physical

health. When a student is healthy, then he will be able to contribute an active role in learning. On the other hand, factors such as stress, anxiety, fear, trauma, depression or physical health problems prove to be impediments within the course of their academic achievement.

Others include time management, home management, approachability and professionalism of teachers as well as teaching-learning method.

Some acceptable activities as stated by Macquire University (2017):

ACCEPTABLE ACADEMIC ACTIVITIES

Good academic practice refers to the process of completing academic work, responsibly, honestly and in an appropriate academic style.

The good academic practice is supported by, but not limited to, the following acceptable academic (including learning and teaching and research) activities:

Authorship: An author is a person who has made a substantial scholarly contribution to work and is able to take responsibility for at least part of that work. Authorship recognizes the author's contribution or involvement in that work.

Proofreading: is the process of identifying basic errors in grammar, spelling and punctuation in a work by the author or another. Proofreading does not involve rewriting the text, changing the words of the author or rearranging the structure of the text. While it is acceptable for students to have their work proofread, the University does not endorse any commercial proofreading services.

Editing: is the process of checking and suggesting changes to a text which has been proofread. While it is acceptable for a third party to advise a student on ways to improve a paper, the student must make the changes him/herself. Also, it is acceptable for higher degree

research students to work with an editor after they have obtained permission from their supervisor.

Referencing: this is to attribute information and ideas to their original source(s) using an appropriate referencing style.

Acknowledgement: is to identify the contributions of others that do not justify authorship.

Collaboration: is a form of cooperative learning in which two or more students work together to understand an academic exercise.

Group work: An academic exercise completed in collaboration by a number of students to produce a common piece of assessment. The assessment must clearly outline which items were the results of collaborative group work.

Data management: good data management supports and enables learning and teaching and research. It involves planning and making decisions about how to collect, organize, manage, store, back-up, preserves and share data throughout its lifecycle.

This is supported by University of Kent (2021) which asserts that a good academic practice means developing study skills which include reading, note-taking and research; critical enquiry and evaluation such as balanced opinion, reasoning and argument; appropriate academic writing like essays, reports and dissertations; referencing skills which include when and how to acknowledge sources; exam techniques examples, preparation and timing.

2.4 Availability of subscribed online database

There are so many databases available for academic activities which are made accessible only after subscription. Some of these databases are specialized while others are generalized.

Healy library, University of Massachusetts, Boston (2021) University of Massachusetts identified and hyperlinked alphabetically two-hundred and sixty-two online databases available for searches. Among the databases, some are tagged popular which are the most used and popular worldwide. They are Academic Search Complete, EBSCOhost Databases, JSTOR, ProQuest Central, ScienceDirect.

i. **The Academic Search Complete** features thousands of full-text journals. This scholarly collection offers unmatched coverage of information spanning a broad range of important areas of academic study including anthropology, astronomy, biology, chemistry, civil engineering, engineering, ethnic & multicultural studies, geology, law, materials science, mathematics, music, pharmaceutical sciences, physics, psychology, religion & theology, veterinary science, women's studies, zoology, and many other fields.

ii. **The EBSCOhost:** This is further subdivided into:

EBSCO eBook Collection: Search and view eBooks on the EBSCOhost platform Browse eBooks by subject area and by latest added to your library's collection.

EBSCOhost Databases: Search all the EBSCO databases at one time, or select favourites like Academic Search Complete; whose indexed content is superb, it is easy to use, and there are a number of special features.

EBSCOhost Education Databases: The collection includes databases for educators and databases designed for students, grades K-12.

EBSCOhost Mobile: enables one search the library's EBSCOhost databases on his/her mobile device including Blackberry phones, Dell Axioms, iPhones, Palm 750s, and more.

iii. **JSTOR:** JSTOR's (Journal Storage) archives include scholarship published in over one thousand of the highest-quality academic journals across the humanities, social sciences and science

iv. ProQuest: this also divided into:

ProQuest Biology Journals: This database provides access to a wide range of biology topics including some of the most popular information resources for users in academic, government and public research environments.

ProQuest Central: This is the most popular. ProQuest Central is a comprehensive multidisciplinary research database. It provides access to databases across all major subject areas, including business, health and medical, social sciences, arts and humanities, education, science and technology, and religion. The collection includes thousands of full-text scholarly journals, newspapers, magazines, dissertations, working papers, and market reports all together in one platform.

ProQuest Criminal Justice: Covers research on crime, its causes and impacts, legal and social implications, as well as litigation and crime trends.

ProQuest Education Journals: Access to over 900 top educational publications, including more than 600 of the titles in full text. Many titles are indexed in the ERIC database. The coverage spans the literature on primary, secondary and higher education as well as special education, home schooling and adult education.

ProQuest Nursing & Allied Health Source: An excellent resource for researchers in nursing, community health sciences, communications disorders and other health-related disciplines. ProQuest Nursing & Allied Health Source contains over 250 full-text nursing and allied health journals. The full text begins in the early to mid-1990s, but indexing goes back to the early 1980s.

In addition to the above Krueger (2012) mention InfoTrac which is a comprehensive and powerful reference resource for student and consumer research. The ICE combines tens of thousands of articles from major encyclopedias, reference books, magazines, pamphlets, and other sources onto a single Web site with fast and easy search tools for all your reference

needs. InfoTrac College Edition is the ideal one-stop reference source for students doing homework, making vacation plans, keeping up with current events, or researching any topic from important health issues to hobbies to making large purchasing decisions. And its information can be accessed anytime. Others include: EconLitEconomics, Scopus, EMBASE, SpringerLink, HINARI, AGORA etc

According to Elsevier (2020), **Scopus** is a multidisciplinary database. It is one of the world's largest abstract and citation database of peer-reviewed research literature. It contains over 20,500 titles from more than 5,000 international publishers. While it is a subscription product, authors can review and update their profiles via ORCID.org or by first searching for their profile at the free Scopus author lookup. The providers of this database are Elsevier. **EMBASE** is a Biomedicine and Pharmacology database with a strong focus on drug and pharmaceutical research provided by Elsevier.

Elsevier (2021) declared that ScienceDirect is a specialised online database which supports teaching, learning, research and discovery containing scholarly journals on Chemistry, Computer Science, Earth and Planetary Sciences, Mathematics, Physics and Astronomy with over 1.4 million open access articles.

SpringerLink.com (2020) asserts that **SpringerLink** is a multidisciplinary database containing over ten million publications where abstracts are made available freely but accessing full text requires a subscription. The provider of this database is Springer.

Ochs, Aronson and Wu (2004) while writing on Hinari and AGORA HINARI (Health Internetwork Access to Research Initiative) and AGORA (Access to Global Online Research in Agriculture) are sister programs which offer free or very cost access to scientific journals for the developing countries. HINARI is coordinated by the World Health Organization and

AGORA by the UN Food and Agriculture Organization in collaboration with the scientific publishers and other partners.

Similarly, Kofi (2014) observed that there is an increase in the use of EIR databases in universities in developing nations and it was also found that the commonly used resources are Elsevier, EBSCO host resources, AGORA, Thomson, JSTOR, Scopus, Questia, Proquest, Emerald, DATAD Science Direct and Springer Link, DOAJ, OARE, HINARI, TEEAL, Ebrary, AJOL and MIT Open Course Ware EIRs databases than print resources in teaching, learning and research work among academic staff in private universities in Ghana.

The above databases are basically subscribed databases which imply that access to the database requires payments. However, some of these databases provide access to abstracts of the articles freely but to view and read the full text one has to subscribe.

2.5 Utilization of subscribed online databases

Any service designed in any academic type of library is targeted for the users' access and utilization. Many researchers in recent times have published articles on access and utilization of subscribed online databases. The researchers have identified many access points to these databases, purpose for utilizing the databases as well as in-depth of the use. Yusuf and Farouk (2017) reveal that users access subscribed online databases through the use of personal computers and cell phones. Furthermore, the users access electronic database easily at their various offices and ICT section of libraries to meet their information need. Aina (2014) revealed that subscribed databases have now got acceptance indicated by large accessibility and use of EBSCOHost, JSTOR and AJOR but emphasize that efforts need to be made to achieve more and use. Nhung (2012) as cited in Harazeem et al (2019) argued that users' behaviour will influence the usage of e-databases, and those factors that influence usage of databases are the purpose of usage, preferred types of materials, ways to learn the

search, search techniques, and difficulties and expectations in using the databases. In order to make online subscribed databases readily available for usage and easily accessible, the target users should be trained in the various search strategies, power supply problem should be overcome, enabling environment has to be provided.

2.6 Satisfaction on the utilization of Subscribed Online Databases

When resources deployed by libraries are accessed and utilized, the concern of the library and the management is whether or not the users have derived maximum satisfaction from the usage. Abukari (2019) asserts that user satisfaction is simply the “desired” satisfaction users received after patronizing a library. It is when users' needs and expectations are met upon using a library. User satisfaction can be seen as the fulfillment of a person's needs and expectations after utilizing a product or service. Jayasundara (2013) asserts that generally aim to satisfy their key stakeholders, and similarly, libraries also need to satisfy the requirements of their customers and other stakeholders. Ahmed (2013) in studying the use of electronic resources by faculty members in universities in Bangladesh found that respondents were not satisfied with the subscribed resources because of limited access to back issues; poor IT infrastructure; difficulty in finding required information; inability to access from home, slow download speed and online access problems.

2.7 Relevance of Subscribed Online Database

The importance of subscribed online database cannot be overemphasized. Considering the articles published on the databases there is no doubt are to impact the academic activities of students in institution of high learning. Online databases should be the first thought for any academic research assignment because they contain educative articles and give a basic overview or in-depth research coverage. Nkoyo and Nsanta (2016) in a research on the availability and utilization of electronic resources by postgraduate students in University of

Calabar, Nigeria revealed that they made use of e-resources for research work, reviewing the literature, getting general information, as well as for exams preparation.

In agreement, Akuffo and Budu (2019) in their research on the use of electronic resources by students in a premier postgraduate theological university in Ghana revealed that the various e-resources were used mainly for academic purposes. Specifically, the students used them to enhance their research activities, that is, to aid in reviewing literature, completing assignments. This result as according to the findings both the postgraduate students and the academic staff made use of databases for academic activities.

This is supported by Tiemo (2017) who viewed that the lecturers use databases for the writing of journal articles. Other purposes for which lecturers reasonably use databases are preparing for a conference, to update knowledge, preparing for seminars and preparation for workshops. According to him, postgraduate students use databases for the writing of the dissertation, preparing for examinations, writing of assignment and writing of a thesis.

2.8 Challenges of using an Subscribed Online Database

Despite the advantages of using online databases, studies have shown that there are obstacles that hinder access to the databases or retrieval of required information on time. This may be as a result of terminologies used in the databases for search or lack of literacy in information search. Ugwu & Orsu (2017) state the following as the general challenges of utilizing electronic resources browsing skills, ICT infrastructure, search strategy, the complexity of online resources, subscriptions, downloading/printing, power supply, bandwidth issues, time for browsing, and meeting information needs. He calls these challenges as direct constraints affecting the use of electronic information resources. The indirect challenges are as follows as stated by respondents in his research work. I do not own a laptop. I have no smartphone for e-learning. I have no internet access in my hall of residence. I have no internet access in my

home. My department provides fewer opportunities for cooperative learning. My lecturers do not give us online assignments. No functional computer laboratory in my department. My department is yet to provide us with the needed social pressure for online information use. My course of study is a factor. No time to attend awareness workshop on online resources. I do extra jobs to enable me to be in school.

Iroaganachi and Izuagbe (2019) assert that other challenges that are associated with online databases access are inflexibility of content transfer. By renting access to online database contents, the interlibrary transaction is automatically discouraged among institutions with the intention to share resources. Furthermore, Access to online databases can also be restricted due to security authorization, or the inability to crawl portions of the web. In any of the cases, documents are inaccessible to the user or the system because of some limitations. With respect to the latter, for instance, the difficulties involved in navigating a web site may mean that certain documents are not indexed by the Information Retrieval (IR) system, and therefore are not accessible to the users via the same platform. Software and hardware incompatibility is another barrier that could impede access to online databases if not considered during the subscription contract.

Annuobi (2009) argues that the problems of utilization of online information resources arise basically from information pollution, destabilization potential, information insecurity, socio-technical issues and potential lack of control over communication. He further states that information pollution arises from the dysfunctional provision of information that is caused by

(a)

the amount of information available that exceeds the capacity of the recipient to examine, to filter, and to assimilate relevant information, and (b) provision of wrong information resulting in incorrect decisions.

Although the above-stated challenges given by scholars formed part of the hindrance of accessing and utilizing electronic in a specific term online databases users and the libraries face some of the following challenges: information security, higher availability, planning and budgeting, sustainability and search strategies.

2.9 Empirical studies on Subscribed Online database

Scholars have conducted researches on online databases and some of these researches would be reviewed under this section. The researches mostly focused on awareness, access and utilization of the online databases. They are mostly journal articles with a very small number of thesis and dissertation.

As regards the availability of online databases some of the researches are reviewed. Krueger (2012) in research titled the Status of Statewide Subscription Databases qualitative content analysis method was used to presents subscription databases available to school libraries through statewide purchases in America. Under the question “databases in ten or more states in order of prevalence” revealed that states were generally independent and had a wide variety in their selections. No states had identical selections. The highest percent of states having the same database was less than half (46 percent). Among the most popular, Gale Virtual Reference Library offers a database format for searching reference e-book contents. Libraries may vary widely in depth and breadth of e-books; no attempt was made to assess the number of e-book titles for each state. Also prevalent, Funk and Wagnalls were often included with states EBSCO periodicals indexing. Kwadzo (2015) in a study on the awareness and usage of electronic databases by graduate students in the University of Ghana where the focus was on graduate students of Departments of Geography and Development Resource, and Information Studies, Questionnaire was used to collect the data. The findings were that students were very much aware of the databases available to them as indicated by 96.9% and 93.8% indicated to use them. The studies have also established that the majority of

students knew about the databases from their lecturers and most of them accessed from the central library.

Manjack, Umar and Fari (2019) in a research titled utilization of electronic information resources by undergraduate students in university libraries in Gombe state, Nigeria under a question on available online databases showed that electronic journals with frequency of 179 have the highest response rate more than any other in GSU, E-books have 174, E-newspapers have 172, AGORA has 158, E-magazines have 151, Institutional Repository has 148, Science Direct has 128, TEEAL has 121, HINARI has 113, JSTOR has 73, DVD has 43 and CD-ROMs with frequency of 25 have the lowest response rate. In FUK the electronic books with frequency of 86 have the highest response rate more than any others, E-newspapers have 83, E-journals and E-magazines have 79 each, AGORA have 63, Institutional Repository has 62, HINARI has 56, Science Direct has 52, CD-ROMs have 49, OARE have 47, TEEAL has 42 and DVDs with frequency of 14 have the lowest response rate. Online journals carrying major frequency of availability clearly indicates the possibility of students visiting the carriers of these databases unknowingly such as AGORA and HINARI.

In contrast Nkoyo and Nsanta (2016) in research titled availability and utilization of electronic resources by postgraduate students in a Nigerian university library. A descriptive survey was adopted and the population of the study was two thousand, seven hundred and twenty-six, while a sample of four hundred postgraduate library users was selected through stratified sampling; two hundred postgraduate students each from Faculty of Education and Faculty of Science. A questionnaire was the main instrument used for data collection. Pearson Correlation Coefficient (r) was the statistical analysis technique adopted to test the hypothesis under study at 0.05 level of significance. Three hundred and eighty-two dully filled questionnaires were received, giving an overall response rate of 95.5 percent.

The findings of the study revealed the following availability of e-resources of e-journal (43.65%), followed by Internet resources (29.65%), e-books (19.52%) and lastly databases (7.18%). The popularity of e-journal among the respondents may have been influenced by the activities of postgraduate students which is dominated by research. With the presence of the Internet and WIFI within and around the University of Calabar Library, registered students had access to Internet resources without entering the Electronic Library. More so, users find it more convenient using search engines which gave them access to Internet resources. It is possible that the convenience of access to Internet resources through search engines minimizes the awareness and utilization of electronic books by postgraduate students at the University of Calabar. The low awareness of databases (7.18%) is an indication that postgraduate students are not familiar with the databases available in the University of Calabar Library. Based on the findings the researcher recommended that adequate budgetary allocation should be given to the University Library for subscription to online databases and acquisition of electronic books, more relevant open-access databases should be made accessible to users.

Regarding access and utilization as well, researchers such as Abba (2016) in his research on knowledge and accessibility of online subscribed databases by academics in university libraries in Katsina state aimed at finding out the extent of academic knowledge about the online subscribed databases, access points of online subscribed databases by academics and how academics search and obtains downloads from online subscribed databases in the university libraries in Katsina state. The research method adopted was the survey and the instrument used for data collection was questionnaire. The target population of the study was the academics of universities in Katsina (Umaru Musa Yar'adua University, Alqalam University, Katsina and Federal University, Dutsinma). Two of the universities (Umaru Musa Yar'adua University and Alqalam University) were selected for the study. A total of 99

academics from the two universities were randomly sampled out from a population of 425 academics. Ninety-nine (99) copies of questionnaire were distributed to respondents in which a total of eighty-five (85) copies were duly completed and found usable. Responses were analyzed using descriptive statistics. Revealed that most academics were aware of the online databases subscribed, the majority of the academic access online databases in their Offices and mostly search by themselves. And therefore the researcher recommended that management of the libraries should introduce user education and training opportunities aimed at improving the accessibility of online subscribed databases among academics in the university libraries in Katsina state.

In contrast Harazeem, Mshelia and Bello (2016) in a study which investigated the awareness, accessibility and use of library subscribed online electronic databases by students of the University of Maiduguri. The study covered registered users of Ramat library, university of Maiduguri. The survey research design was adopted in conducting the research. The target population of the study was 2,326 registered users of the library and a sample size of 341 was drawn using a simple random sampling technique. A total of 341 copies of the Questionnaire were administered to registered users in the library, out of which 247 copies were retrieved and found valid for analysis. The data collected were analyzed using descriptive statistics of frequency counts and percentage to answer the research questions, while results were presented in tables. The SPSS version 20 package was used for the analysis of data collected. Findings revealed that there is a low level of awareness of the online databases by users, it was also found out that majority of the databases are not accessible by students, therefore, leading to the low extent of utilization of the subscribed database. The study recommends among others that the library should increase the level of awareness of users on the online electronic databases available subscribed to by the library through active publicity

programmes. Also, to develop a plan that will improve the use of electronic databases by users of the library.

Shorunke, Adekunle and Ibikunle (2018) on a study titled awareness and use of electronic databases by postgraduates in the University of Ibadan a survey method employed because it was a suitable and efficient way of studying large populations. It allows only a sample population to be used to represent the entire population. The target population for this study was postgraduate students of the University of Ibadan. 150 postgraduate students from four faculties (Art, education, science and social sciences) were randomly selected. A well-structured questionnaire was administered on the respondents and 131 out of 150 were completed and returned. The data collected were classified, analyzed and tabulated by using the simple percentage (%) and frequency counts as well as the arithmetic mean and standard deviation.

On the frequency of use of the electronic databases the findings showed that JSTOR (1.85) ranked highest as the most frequently used electronic database and was followed in succession by AJOL (1.63), AGORA (1.58), HINARI (1.46), EBSCO Host (1.45), DOAJ (1.40). Findings further showed that 8.1% used JSTOR daily, 6.9% use AJOL and AGORA respectively weekly, 9.6% use JSTOR monthly, 26% use JSTOR occasionally while 78.6% of the respondents have never used AJOL. The researchers established that preference of certain databases over others affected usage because users tended to use certain databases and ignored others that could be providing related information.

Regarding satisfaction, some literature was reviewed. Uddin, Shafiur Rahman, Nazim and Al Mamun, (2019) in a study titled adoption and usage of web-based library resources and services: an investigation of ICDDR, B Library in Bangladesh which aim to investigate the adoption and utilization of subscribed, registered and open access – resources by the

scientists and researchers at ICDDR, BLibrary. The study used a mixed-method research design using the case study approach. Both qualitative and quantitative approaches were used and a questionnaire was used as an instrument. The study involved scientists and researchers of ICDDR, B.

The objectives of the study are: to ascertain the extent of availability of web-based services and resources in the ICDDR, B library; to identify the different purposes for which the e-resources are used by the researchers; to examine the impact of e-resources on the various activities like academic, learning and research; to find out the awareness and use of e-resources which examine usage patterns, acceptance, perceived importance and satisfaction with e-resources; to discover and trace out the problems in using e-resources by the scientific staff; to suggest appropriate measures for the improvement of the management and utility of web-based information resources and services. As regards the satisfaction the users derived from the resource, the research revealed that the respondents were asked to indicate their satisfaction with the web-based library facilities and services in 5-point ranking scale from 'Excellent' to 'Poor'. It has been observed 'Overall library environment' with highest mean value (3.97) was ranked as the first which is followed by 'ICDDR, B new publications posted in weekly bulletin' with a mean value of 3.93 ranked second and reading facilities ranked third which 3.92. Accessing online journals and accessing e-books through Hinari with the least, 3.72 and 3.65 respectively.

Bea Musabila and Deogratus (2018) in a study titled analysis of customer satisfaction with library services at the Sokoine national agricultural library (SNAL) in Morogoro region in Tanzania. Both qualitative and quantitative data were collected using questionnaire and interviews, which were supplemented by document analysis. A total of 72 respondents were selected using simple random and purposive sampling procedures. Data were analyzed descriptively and were presented in tables, pie charts and percentages. The expectancy

disconfirmation theory with Four-Level Zone of Tolerance (ZoT) developed by Oliver (1980) guided data analysis in this study. Findings indicate that leaning materials and services provided by SNAL are relatively sufficient due to the satisfaction level of the majority of customers being over 50%. Some of the options that were used to measure the level of the satisfaction include Helpfulness of library management, Friendliness of library management, Staff availability, Usefulness of information available, Library Opening hours, Uploaded/currency of information materials, Speed of downloading information, Customer needs, Speed of responses to customer needs, Ease of finding information materials.

Wagwu and Obuezie (2019) conducted research on student's satisfaction in the utilization of Electronic Information Resources in Rivers State University for National Digital Development. The objectives of the study were: to determine the extent to which the use of electronic information resources contributes to the satisfaction of information needs of the students, to ascertain the difference in the satisfaction of students over utilization of EIRs based on gender. to determine the difference in the satisfaction of students over utilization of EIRs on age.

The study adopted a survey research design and the population of the study consisted of 6,344 students. A total of 450 registered students constitute the sample of the study. A structured questionnaire was the instrument for data collection, titled Students satisfaction in the utilization of Electronic Information Resources (SSUEIRS). The reliability of SSUEIR was established using Cronbach Alfa method to obtain an index of 0.87. The mean and standard deviation were used to analyse the data collected while regression analysis was used to test the hypothesis at 0.05 level of significance. The overall mean rating of the respondents over satisfaction of EIR was low. The regression shows that the mean difference between the male and female students over satisfaction in the utilization of EIRs was not statistically significant at .05 alpha level ($t=.000$, $df =390$, $p > .05$) and there is no significant difference

in the satisfaction of students over utilization based on age ($t=.011$, $df=390$, $p>.05$). The study recommended that departments should be adequately equipped with modern ICT facilities and more skillful staff be employed.

The relevance of online subscribed database is a perspective where little researches were conducted. Some of the researches are reviewed. Shorunke, Adekunle and Ibikunle (2018) in a study titled awareness and use of electronic databases by postgraduates in the University of Ibadan have drawn the inference that the major purpose for using electronic databases as indicated by the postgraduate students are for research work, for literature searching, to generate new information, to update knowledge, for doing course assignment and lastly to write seminar/conference paper respectively.

In agreement, Tiemo (2017) conducted a study on the use of electronic information resource databases among lecturers and postgraduate students in university libraries in south-south Nigeria. The purpose of the study was to find out the utilization of electronic information resource databases in University libraries in South-South, Nigeria. 6 (six) research questions and 4 (four) hypotheses were formulated to guide the study. The survey design was employed. The population of the study was made up of 1,421 lecturers and 922 postgraduate students. Data collection was done through the use of a questionnaire. The research questions were analyzed using percentages, while Z-Test proportion of difference of significance was used to test the hypotheses at 0.05 level of significance. The finding on purpose for which online databases are used revealed that for federal universities, all the lecturers (100%) use EIR databases for the writing of journal articles. Other purposes for which lecturers reasonably use EIR databases, in order of frequency are: preparing for a conference (97%), to update knowledge (86%), preparing for seminars (79%) and preparation for workshops (74%). The purposes for which lecturers in federal universities least use the EIR databases is group discussion which has only 1% of the respondents that indicated using it.

Other purposes for which the lecturers less use those databases are for the writing of dissertation (3%), preparing for examinations (4%) writing of assignment (5%) and writing of a thesis (6%). In the state universities, all the lecturers (100%) use the EIR databases for writing journal articles. Other purposes for which lecturers reasonable use EIR databases, in order of frequency are: to update their knowledge (81%), for teaching (78%), preparing for lectures (78%); preparing for a conference (77%) and for recreation and leisure (57%).

It could be observed that greater proportion of lecturers in the federal and state universities use the EIR databases for the following purposes: writing of journal articles, preparing for seminars, preparing for conference, preparing for workshops, for teaching, preparing for lectures and writing of books, while the lecturers least use the EIR databases for group discussion, writing of their dissertation, preparing for examinations and writing of assignments.

On influence of online subscribed databases, the following researches were reviewed. Izuagbe and Ariomerebi (2019) in research titled Access to Online Databases: Predicate for Faculty Research Output which tries to measure the impact online subscribed database are making on the research output in universities of the southwestern state of Nigeria. The study specifically examined the role of access to online databases as the basis for faculty research output in six universities (comprising two each of federal, state and private) in two Southwestern states in Nigeria.

A descriptive research design guided the study. Multi stage sampling procedures including purposive, stratification, randomization as well as proportionate sampling techniques were employed to select 339 faculty members who provided the data for the study. The data were collected using a structured questionnaire. Of the 339 copies of the questionnaires administered, 89 per cent were retrieved fully completed and found usable. The research

questions that guided the study were analyzed using inferential statistics. Findings revealed that HINARI, ProQuest, JSTOR, and EBSCOhost were the most regularly accessible online databases. Incessant power supply and lack of downloadable full-text posed the greatest threats to online databases access. Similarly, the study found that the provision of full-text of most relevant research materials, steady power supply and acquisition of information literacy skills were the most effective ways of addressing online databases access constraints. Accordingly, the study recommended adequate funding of university libraries, provision of alternative means of power generation and increased user education for maximum exploitation of subscribed databases.

The researchers have tried in bringing a perspective of concern that has not been touched but the research questions formulated have not addressed the subject of their topic which is the performance assessment, that is, assessing the influence these databases are making on the research activities of the faculty members of these universities. What should have been done is adding a research question that will cover the said gap.

Uddin and Rahman (2017) in a research titled use and impact of HINARI: An Observation in Bangladesh with Special Reference to ICDDR, B This paper analyses the impact of the use of electronic resources and Health InterNetwork Access to Research Initiative (HINARI) services for medical research libraries in Bangladesh, emphasizing the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B). Purposeful use of e-resources, time and cost-saving benefits, research impact, and challenges of using HINARI are discussed. The basic study was conducted at ICDDR, B in January–February 2014, using a mixed methodology, combining qualitative and quantitative approaches, including a background literature review, usage data shared from the HINARI secretariat at the World Health Organization (WHO), questionnaires, personal observations, and interviews with star members of ICDDR, B Findings revealed that ICDDR, B is the heaviest user of HINARI (a

major source of public health and medical e-resources) in Bangladesh, with demonstrable increases of health research journal articles after introducing HINARI in 2003.

Saikia and Gohain 2013 as cited in Ball (2008) revealed that measuring library performance could be done using either indirect or direct indicators. The most common indirect indicator to measure library performance would be library user satisfaction.

Okorie, J., N., Nwokocho, U. and Ibenne, S., K. (2018) investigated the influence of Electronic Information Resources utilization on academic performance of HND students of Federal Polytechnic Nekede, Owerri. The research was descriptive in design and adopted the quantitative survey method using questionnaire as instrument for data collection. The population of the study was 385 students which comprised 202 students in HND 1 and 183 in HND 2 in the Department of Library and Information Science. The entire population was used for the study due to the manageable size. The data was analyzed using mean and standard deviation.

The findings revealed that the HND students used Electronic Information Resources (EIR) daily for academic purposes such as helping them in completing their assignment and seminar papers. A greater number of the respondents attested to the fact that the use of EIR influence their performance in seminar writing and presentation positively with a mean score of 2.77 which is above the decision rule of 2.5. Electronic books (e-books) were found to be the resource mostly available for the students' academic consumption. The study identified epileptic power supply and the cost of access as the main challenges faced by the students in the use of EIR. Constant provision of electric power and reduction in the cost of accessing the Internet, were therefore, suggested as the possible solutions to the identified problems in the students' use of EIR.

On challenges also many researchers have tried to find out the challenges postgraduate students face while using or trying to access online subscribed databases. Ugwu and Orsu (2017) in a study titled challenges of utilization of online information resources by undergraduate students: implications for information services explored the direct and indirect factors underlying the students' challenges with the use of online information resources in the University of Nigeria, Nsukka and propose the implications of these challenges. Qualitative descriptive inductive content analysis was used which enabled the researchers to reveal who said what with respect to the research questions. Data were collected from a total of two hundred third-year undergraduate students who visited the university library between September, 30, 2015 and March 31, 2016. The data collection was done through a questionnaire developed by the researchers. While the demographic information of the participants was illustrated in descriptive statistics, qualitative data were analyzed through inductive content analysis to represent participants' views on each of the research questions. The findings revealed that Lack of browsing skills 108 54 Insufficient ICT infrastructures, poor knowledge of search strategy, complexity of online resources, high subscription cost, high downloading/printing cost, unstable power supply, low internet bandwidth, lack of time for browsing as the major direct challenges of database utilization.

With regards to indirect challenges, the following were the major responses of the participants: lack of internet connectivity at home, absence of online assignments Students do not have internet access in their halls of residence, poor social pressure for online information use and as a result they lacked the motivation to use online sources, the participants do not have personal laptops for independent study, majority of the students (80%) agreed that even though awareness workshop on online resources is crucial, they had no time to participate in the workshops, the findings showed that 70% of the students were in agreement that their departments do not have functional computer lab for online searching.

2.10 Summary of the Review

Subscribed online databases are databases that contain scholarly research articles and which access to them require resources payment. Most institutions of higher learning across the world now subscribe to these databases for students' access in order to enhance the academic activities of students. The major points addressed in this chapter are: online databases are categorized into two –online subscribed or fee-based databases and free online databases, accessibility to and utilization of these databases, purposes for which the postgraduate students utilize the databases, impact of the database on the academic activities as well as challenges the postgraduate students face in utilizing the database. All these were reviewed conceptually and empirically. Most of the researches have established that postgraduate students are aware, access and utilize subscribed online databases.

Despite all the efforts made by the previous researchers in the area of online databases there are gaps which still need to be filled. Though some few researchers have touched perspective of influence, but they did not use any indicators upon which the influence can be assessed. Indicators such as students' retention rate, timely graduation, number of researches and their quality need to be considered which this study will address. Particularly, there were no researches in the area of this study on the influence of the subscribed online database. Other areas which this research addressed are subscribed online database search strategy and relevance of subscribed online databases to courses offered in the area under study.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the following:

3.2 Research Method Adopted for the Study

3.2.1 Research Design Adopted for the Study

3.3 Population of the Study

3.4 Sample Size and Sampling Technique

3.5 Instruments for Data Collection

3.6 Validity of the Instrument

3.7 Reliability of the Instrument

3.8 Procedure for Data Collection

3.9 Procedure for Data Analysis.

3.2 Research Method Adopted for the Study

The research method adopted for this study is quantitative. Quantitative research method is appropriate because the study collected data that is quantifiable from population. Apuke (2017) posits that a quantitative research method deals with quantifying and analysing

variables in order to get results. It involves the utilization and analysis of numerical data using specific statistical techniques to answer questions like *who, how much, what, where, when, how many, and how*. The study tries to find how the independent variable influences the dependent variable by collecting quantitative data from the population.

3.2.1 Research Design Adopted for the Study

Survey research design was used for this study. Avedian (2014) defined survey design as a systematic method for gathering information from (a sample of) entities for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members. Surveys are conducted to gather information that reflects population's attitudes, behaviors, opinions and beliefs that cannot be observed directly. According to Odoh and Chinedum (2014) in survey research, researchers select a sample of respondents from population and administer standardized questionnaires to them. The survey can be a written document that is completed by the person being surveyed, an online question, a face to face interview or telephone interview. Using survey is possible to collect data from large or small populations. Survey design is appropriate for this study because the study is to determine how a particular variable influence another by collecting data from large population where a sample must be drawn.

3.3 Population of the Study

The population of this study comprised all the postgraduate students of Umaru Musa Yar'adua University Katsina as well as the staff of the ICT Unit of Umaru Musa Yar'adua University Library. There are seven hundred and thirty-nine (739) postgraduate students in the University spread across the four faculties running postgraduate programmes in the university and three ICT staff in the Library. Table 3.1 presents the population in a tabular form:

Table 3.1 Population of the Study

Faculty Name		Programme			
		PGD	Masters	PhD	Total
1	Education	21	185	0	206
2	Humanities	0	184	75	259
3	Natural and applied science	0	222	12	234
4	Social and management science	0	39	1	40
5	Library ICT staff				3
Total		21	630	88	742

SOURCE: Information and Communication Technology Unit, Umaru Musa Yar'adua University, Katsina (2019)

3.4 Sample Size and Sampling Technique

A sample is a portion of a larger population selected according to particular criteria to represent the entire population. Ibrahim (2013) posited that if the population is too large for the researcher to survey all its members, a small but carefully chosen sample can be used to represent the population. The size of the population justifies the need for drawing a sample using an appropriate technique. Two hundred and fifty-three (253) respondents were selected from four faculties that run postgraduate studies as guided by Krejcie and Morgan table for determining sample size (1970) and all three (3) ICT staff of the Library were included. A percentage was used to determine the number of respondents for each faculty based on the total number of its population as indicated in Table 3.2.

The sampling technique is the technique or method employed to select the sample. stratified random sampling technique was employed in selecting the sample from the postgraduate students while the ICT staff of the library were all used. The choice of this technique is as a result of the nature of the population which is not evenly distributed.

Table 3.2: Sample Size of the Study

S/N	Faculty Name/Library	Population	Number of Respondents Selected
1	Education	206	70
2	Humanities	259	89
3	Natural and Applied Sciences	234	80
4	Social and Management Sciences	40	14
5	Library ICT Unit Staff	3	3
Total		742	256

3.5 Instrument for Data Collection

Questionnaire was used as an instrument to collect for the study. The choice of this instrument was because it was most appropriate for the collection of quantitative data. Abawi (2013) posited that a questionnaire is a data collection instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Furthermore, the respondents are literate as such they can conveniently answer the questions contained therein. The questionnaire was self-developed with the help of the supervisors of the researcher based on variables of the research questions.

The questionnaire was both open-ended and closed-ended so that the respondents were not constrained to enable them to express their views especially in area where their idea was not captured in the options. It was divided into seven (7) sections A-G. Section A: demographic information, Section B: Online subscribed databases available for academic performance of postgraduate students in the Umaru Musa Yar'adua University library, Section C: extent to which the postgraduate students of the Umaru Musa Yar'adua University access and utilize the online subscribed databases, Section D: relevance of the of the articles contained on the

databases to the courses offered by the postgraduate students of the Umaru Musa Yar'adua University, Section E: satisfaction the postgraduates of Umaru Musa Yar'adua University derive from utilization of the online subscribed databases, Section F: Influence the online subscribed databases make on the academic activities of the postgraduate students of Umaru Musa Yar'adua University, Section G: challenges encountered by the postgraduate students of Umaru Musa Yar'adua University in accessing and utilizing the online subscribed databases. In addition, Likert Scale was used in sections C, D, E and F of the questionnaire.

3.6 Validity of the Instrument

An instrument is said to be valid if it measures what is expected to measure. Face and content validity methods were employed where the instrument was subjected to scrutiny and modification by researcher's supervisors and research experts. These were aimed at ensuring that the instrument was accurate and had adequately catered for the variables of the research. Haradhan (2017) validity is the degree to which the results are truthful. So that it requires research instrument (questionnaire) to correctly measure the concepts under the study. It encompasses the entire experimental concept, and establishes whether the results obtained meet all of the requirements of the scientific research method.

Face and content validity perform different activities on the instrument. Ibrahim (2013) posited that where face validity only evaluates the individual items on an instrument, content validity goes further by attempting to determine if an instrument provides adequate coverage of a topic. Experts' opinions, literature searches and pretest open-ended questions helped to establish the content validity of this study.

3.7 Reliability of the Instrument

An instrument is reliable when it is used several times and gives the same result. It simply means consistency in results. Chakrabarty (2013) agreed that a reliability test tries to measure consistency, precision, repeatability, and trustworthiness of an instrument.

According to Haradhan (2017) reliability indicates the extent to which instrument is without bias (error-free), and hence ensures consistent measurement across time and across the various items in the instruments (the observed scores). It is the degree to which an assessment tool produces stable (free from errors) and consistent results. It indicates that the observed score of a measure reflects the true score of that measure.

In order to determine the reliability of the instrument, a pilot study was conducted in Ahmadu Bello University, Zaria, where ten (10) copies of the questionnaire was distributed personally by the researcher, completed by the respondents and retrieved. Hassan, Schattner and Mazza (2006) defined a pilot study as a small study aiming at testing research protocols, data collection instruments, sample recruitment strategies, and other research techniques in preparation for a larger study. They further added that pilot study is conducted to identify potential problem areas and deficiencies in the research instruments and protocol prior to implementation during the full study. The retrieved copies of the questionnaire were subjected to statistical calculation where Pearson Product Moment Correlation (PPMC) was used to determine relationship. The reliability coefficient of 0.877 was obtained. This indicates that the instrument is reliable and can be used for the research.

3.8 Procedure for Data Collection

A letter of introduction was collected from the Department of Library and Information Science, Ahmadu Bello University, Zaria. Afterwards, two hundred and fifty-six copies of the questionnaire were administered to the respondents personally by the researcher and two (2) trained research assistants from Umaru Musa Yar'adua University, Katsina. Administering and retrieval of the questionnaire took the researcher four weeks after which analysis followed.

3.9 Procedure for Data Analysis

Data collected were presented and analyzed using descriptive statistics (frequency distribution, percentage mean and standard deviation) as appropriate for quantitative research method, after which a discussion followed. 3.0 benchmark was used for research questions two to five. For research questions one and six, fifty percent 50% was used as benchmark.

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CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the data collected, analyzed and discussed according to the research questions raised.

4.2 Response Rate

The response rate of the postgraduate students of Umaru Musa Yar'adua University Katsina and the Library ICT staff is presented in table 4.1.

Table 4.1 Response Rate

		Number of Questionnaire		
		Distributed	Number of Questionnaire Returned	%
1	students	253	215	85
2	Staff	3	3	100
	Total	256	218	

Table 4.1 showed the total number of questionnaires distributed and the total number retrieved. The table has indicated the number of the Library ICT staff and students who were the two categories of respondents involved in the research, where the response rate of each is calculated. Out of the 253 questionnaires distributed, 215 were retrieved and this represents 85%. 3 copies of the questionnaire were administered to the staff and all were retrieved, which means 100% response rate. The total number of questionnaires distributed were 256 and 218 were retrieved. This indicates that the overall response rate is 85%. The high response rate was achieved because of the researcher's perseverance and persistence in distributing and retrieving the questionnaire.

4.2.1 Distribution of the Respondents' Programme of Study

Table 4.2 Level/Program of the respondents

s/no	Level	F	%
1	Postgraduate Diploma	18	8.37
2	Masters	194	90.23
3	Ph.D	3	1.40
4	ICT Library staff	3	100
	Total	218	

Table 4.2 indicated level/programme of the respondents. 18 of the respondents were Postgraduate Diploma students which represents 8.37%. 194 were Masters students, representing 90.23%. Only 3 of the respondents were Ph.D students, representing 1.40%. Lastly, 3 Library ICT staff were involved in the research work who answered research question one.

4.2.2 Distribution of the Gender of Postgraduate Students

Table 4.3 Gender of Postgraduate Students

S/No		Freq	%
1	Male	133	61.86
2	Female	82	38.14
	Total	215	100

Table 4.3 presented data on question regarding the gender of the postgraduate students of Umaru Musa Yar'adua University Katsina. The respondents in the study constituted both male and female postgraduate students. This is represented in table 4.3 above. From the table, it showed that 133 of the respondents representing 61.86% were male while 82 representing

38.14% were female. This indicated that, although male students dominate but females' involvement was also encouraging.

4.3 Descriptive Data Analysis

This section presents the data collected using the six (6) research questions raised in the research study and are analyzed using descriptive statistics. Frequency, percentages, mean and standard deviation were used in the in the analysis. A decision rule of 3.0 mean score was used for interpretation where any response from 3.0 mean score and above was considered as positive response; while below 3.0 mean score was considered as negative response.

4.3.1 Online Subscribed Databases Available for Academic Activities of Postgraduate Students of Umaru Musa yar'adua University, Katsina.

The researcher asked to find out available subscribed online databases for use by postgraduate students of Umaru Musa Yar'adua University, Katsina where list of subscribed online databases is presented to ICT staff of the Library.

Table 4.4 Availability of Subscribed Online Databases

S/No	Online Subscribed Databases	F	Percentage
I	Academic search complete		
III	EBSCOhost databases	3	100
V	EBSCOhost mobile		
VI	JSTOR	3	100
VII	ProQuest Biology Journals		
VIII	ProQuest Central		
IX	ProQuest Criminal Justice		
X	ProQuest Education Journals		
XI	Proquest Nursing and Allied Health Sources		
XII	Econlit Economics		
XIII	Scopus		
XIV	EMBASE		
XV	SpringerLink	3	100
XVI	HINARI		
XVII	AGORA		
XVIII	ScienceDirect	3	100

Table 4.4 showed online subscribed databases available in Umaru Musa Yar'adua University Library Katsina. As indicated in the table, all the three ICT staff of the library indicated that, four subscribed online databases including EBSCOhost databases, Jstor, ScienceDirect and SpringerLink were available in the Library. This shows that subscribed online are available for use in Umaru Musa Yar'adua University Library. This is in line with Manjack, Umar and Fari (2019) who assert that there are available online databases such as ScienceDirect and JSTOR. Some of these databases are specialized while others are multidisciplinary. SpringerLink and ScienceDirect are specialized. Elsevier (2021) declared that ScienceDirect is a specialized online database which supports teaching, learning, research and discovery containing scholarly journals on Chemistry, Computer Science, Earth and Planetary Sciences, Mathematics, Physics and Astronomy with over 1.4 million open access articles. This shows that ScienceDirect is appropriate for subscription.

The available databases namely; ScienceDirect, Jstor, EBCOhost and SpringerLink as said earlier, are either multidisciplinary (eg Jstor and EBCOhost) or specialised (ScienceDirect and SpringerLink which are science oriented). This implies that there is imbalance in the provision of subscribed online databases for postgraduate students in Umaru Musa Yar'adua Katsina Library, because there are many courses being offered which need to also be considered.

4.3.2 Extent to which the Postgraduate Students of Umaru Musa Yar'adua University Utilize Subscribed Online Databases

The researcher sought to uncover the extent to which postgraduate students of Umaru Musa Yar'adua University utilize online subscribed databases for academic activities and the data collected is presented in table 4.5 table.

Table 4.5 Extent to which the Postgraduate Students of Umaru Musa Yar'adua University Utilize Subscribed Online Databases

S/No	Academic Activities	SA		A		DA		SD		UD		TOTAL	Mean	SD
		freq	%	freq	%	freq	%	freq	%	Freq	%			
I	I use subscribed online databases for assignment	49	23	44	20	13	6	1	0	108	50	215	2.65	0.85
II	I use subscribed online databases for examination preparation	30	14	24	11	54	25	100	47	6	3	214	2.87	0.07
III	I use subscribed online database for preparing conference paper	36	17	142	66	14	7	4	2	10	5	206	3.92	0.18
IV	I use subscribed online database to update knowledge	42	20	44	20	88	41	38	18	2	1	214	3.40	0.19
V	I use subscribed online database for seminars and workshops	36	17	135	63	22	10	12	6	10	5	215	3.81	0.05
VI	I use subscribed online database for writing dissertation	128	60	40	19	20	9	8	4	16	7	212	4.21	0.08
VII	I use subscribed online database for writing thesis	36	17	134	62	10	5	16	7	18	8	214	3.72	0.11
VIII	I use subscribed online database for getting general information	58	27	52	24	56	26	38	18	10	5	214	3.51	0.02

Key:

SA = Strongly Agree

A = Agree

DA = Disagree

SD = Strongly Disagree

UD = Undecided

Table 4.5 presents the extent to which postgraduate students utilize online subscribed databases for their academic activities. Eight academic activities were listed on five Likert Scale (Strongly Agree: SA, Agree A., DisAgree: DA., Strongly Disagree SD., and Undecided UD.). The table indicated that use of online subscribed databases for writing dissertation and preparing conference papers with mean score 4.21 and 3.92 respectively have the highest use which is above the benchmark. Use of online subscribed databases for assignment writing and examination preparation have least mean of 2.65 and 2.87 respectively which is below the benchmark and this indicates less usage. Harazeem, Mshelia and Bello (2016) assert that users of Ramat Library University of Maiduguri have low awareness and face difficulty in accessing databases leading to low extent of utilization of the subscribed database. This goes contrary to the outcome of this research, which indicated the databases are hugely use for most of the academic activities except in writing assignment and examination preparations. This is supported by Tiemo (2017) who declared that in libraries of universities of South-South region, Nigeria users do not use online subscribed databases for preparing for examinations and writing of assignment.

Based on the above outcome, some important academic activities are missed out in using the available online subscribed databases – assignment and examination preparation and this implies underutilization in these important academic activities.

4.3.3 Extent the Online Databases Subscribed to are Relevant to the Academic Activities of the Postgraduate Students of Umaru Musa Yar’adua University

Question on relevance of the online subscribed databases to academic activities of postgraduate students of Umaru Musa Yar’adua University was asked and this is presented in table 4.6.

Table 4.6 Extent of relevance of the Subscribed Online Databases to the Academic Activities of the Postgraduate Students of Umaru Musa Yar'adua University

S/No	Subscribed Online Databases	HR		R		FR		IR		UD		TOTAL	MEAN	SD
		Freq	%	Freq	%	freq	%	freq	%	freq	%			
I	EBSCOhost databases	28	13	139	65	12	6	6	3	10	5	195	3.87	0.12
II	JSTOR	20	9	119	55	26	12	14	7	12	6	191	3.63	0.08
III	SpringerLink	20	9	129	60	16	7	12	6	18	8	195	3.62	0.09
IV	ScienceDirect	13	6	50	23	10	5	0	0	0	0	73	4.04	0.16

Key:

HR = Highly Relevant

R = Relevant

FR = Fairly Relevant

IR = Irrelevant

UD = Undecided

Table 4.6 presented level of relevance of the online subscribed databases to postgraduate students' academic activities. All of the subscribed online databases such as ScienceDirect, EBSCOhost, Jstor and SpringerLink databases have 4.04, 3.87, 3.63, and 3.62 mean scores respectively. Therefore, these databases are found to be relevant since each exceeded the benchmark of 3.0. The subscribed online databases available in Umaru Musa Yar'adua University Katsina Library are found relevant because these are databases that have achieved worldwide coverage.

ITHAKA (2021) revealed that JSTOR provides access to more than 12 million academic journal articles, books, and primary sources in 75 disciplines. This is to help researchers explore a wide range of scholarly content through a powerful research and teaching platform. It collaborates with the academic community to help libraries connect students and faculty to vital and relevant content while lowering costs and increasing shelf space.

This indicated that students' academic activities will greatly be influenced by these databases since all the databases are found to be relevant especially with most of the subscribed online databases subscribed to, being specialized.

4.3.4 Satisfaction of Postgraduate Students of the Umaru Musa Yar'adua University with Utilization Subscribed Online Databases

The researcher tried to determine users' satisfaction in the use of online subscribed databases and the data collected is analyzed and presented in table 4.7

Table 4.7 Satisfaction of Postgraduate Students of Umaru Musa Yar'dua University with utilization of Subscribed Online Databases

Responses	VS		S		DS		VD		UD		TOTAL	MEAN	SD
	F	%	F	%	F	%	F	%	F	%			
Overall library environment	72	33	122	57	10	5	0	0	6	3	210	4.21	0.12
Accessing online journals from online subscribed databases	50	23	147	68	8	4	0	0	4	2	209	4.14	0.16
Accessing e-books from the online subscribed databases	71	33	125	58	10	5	0	0	2	1	208	4.26	0.22
ICT staff readiness for guide to search	50	23	6	3	50	23	100	47	4	2	210	2.99	22.24
Currency of information materials	148	69	38	18	14	7	2	1	4	2	206	4.57	0.39
Usefulness of information available	128	60	52	24	16	7	6	3	6	3	208	4.39	1.29
Speed of downloading information	34	16	39	18	14	7	121	56	0	0	208	2.93	26.90
Efficiency of the facilities	12	6	49	23	10	5	131	61	0	0	202	2.71	29.20
Ability to access online subscribed databases outside library	24	11	31	14	12	6	129	60	10	5	206	2.66	28.77

Key:

VS = Very Satisfy

S = Satisfy

DS = Dissatisfy

VD = Very Dissatisfy

UD = Undecided

Table 4.7 presents data collected on students' satisfaction. It is indicated that the currency of information materials and usefulness of information available have the highest mean score of 4.57 and 4.39 respectively while those with the lowest mean score are; ability to access subscribed online databases outside library, efficiency of facilities and speed of downloading information with 2.66, 2.71 and 2.93 respectively.

This is in agreement with the research findings of Wagwu and Obuezie (2019) who declared that students in Rivers State University were not satisfied with the use of electronic resources in the areas of Emailing, surfing the internet, modern network speed and research activities. It is further stated that this may not be unconnected with the low availability and use of the facilities.

The negative outcome of ICT staff attitude in supporting or guiding users and low speed in downloading documents will affect students' satisfaction in utilizing these databases thereby subjecting them to unnecessary difficulty in accessing and retrieving needed information from the online subscribed databases.

4.3.5 Influence of the Subscribed Online Databases on the Academic Activities of the Postgraduate Students of Umaru Musa Yar'adua University.

The influence of the databases is determined by seeking responses from the respondents in relation to academic activities and the data collected is presented in table 4.

Table 4.8 Influence of the Subscribed Online Databases on the academic activities of Postgraduate Students of Umaru Musa Yar'adua University.

S/N	Areas of influence of Subscribed Online Databases	SA		A		DA		SD		UD		TOTAL	MEAN	SD
		f	%	F	%	F	%	f	%	F	%			
I	Use of online subscribed database increase the quality of my research	168	78	36	17	4	2	2	1	4	2	214	4.69	0.42
II	Use of online subscribed databases help in passing my examinations with good grades	42	20	6	3	18	8	136	63	6	3	208	2.72	0.25
III	Use of online subscribed databases in the conduct of my research lead to the acceptance of my research in world class journals	148	69	46	21	8	4	6	3	0	0	208	4.62	0.17
IV	Use of online saves me from expulsion on academic ground	18	8	32	15	14	7	137	64	8	4	209	2.59	0.10

Key: SA = Strongly Agree A = Agree DA = Disagree SD = Strongly Disagree UD = Undecided

Table 4.8 presents data collected on research question five (5) which is on the influence of subscribed online databases on the academic activities of postgraduate students of Umaru Musa Yar'adua University Katsina. The respondents declared that they used subscribed online databases to add quality to their research with mean score of 4.69. And that the use of the subscribed online databases in the conduct of their research lead to the acceptance of their research in world class journals and this is indicated in the mean score of 4.62. It can be observed that the options; use of subscribed online databases help in passing my examinations with good grades and use of online saves me from expulsion on academic ground with mean 2.72 and 2.59 have least acceptance and therefore indicated less influence of subscribed online databases in those areas.

The options in the table would serve as indicators to determine the influence of online subscribed databases on academic activities of postgraduate students of Umaru Musa Yar'adua University, Katsina. Saikia and Gohain 2013 as cited in Ball (2008) revealed that measuring library performance could be done using either indirect or direct indicators. The most common indirect indicator to measure library performance would be library user satisfaction. This finding is in support of Okorie, Nwokocha and Ibenne (2018) who revealed that EIR influence the performance of HND students of Federal Polytechnic, Nakede, Owerri in seminar writing and presentation positively.

From the findings above, it can be deduced that, the postgraduate students do not visit these databases during examination. This implied underutilization in this important academic activity.

4.3.6 Challenges Encountered by Postgraduate Students of Umaru Musa Yar'adua University in Utilizing Subscribed Online Databases

The researcher sought to identify challenges militating against effective usage of subscribed

Table 4.9 Challenges Encountered by Postgraduate Students of Umaru Musa Yar'adua University in Utilizing Subscribed Online Databases

S/No	Challenge	F	%
I	Difficulty in retrieving accurate search result	168	78.14
II	Poor knowledge of search strategy skill	88	40.93
III	Irrelevance of online subscribed databases articles	100	46.51
IV	Low internet bandwidth	144	66.98
V	Online ads pop up	146	67.91
VI	Uncooperative attitude of library staff	61	28.37
VII	Complexity of the online subscribed databases	62	28.84

online databases and the data is analyzed and presented in Table 4.9.

Table 4.9 presents the data on challenges faced by postgraduate students of Umaru Musa Yar'adua Katsina in utilising subscribed online databases. The table indicates that difficulty in retrieving accurate search result, Online ads pop up and low internet bandwidth have the highest frequency of 168 (78.14%), 146 (67.91%) and 144 (66.98%) respectively. Low internet bandwidth in particular justifies the reason why the respondents were not satisfied with the speed of downloading information. From the table, it indicates that complexity of online subscribed databases and uncooperative attitude of library staff have low frequency and percentage 62 (28.84%) and 61 (28.37%) respectively. It simply signals that the respondents face less

challenges. This is in agreement with the findings of Ugwu and Orsu (2017) who revealed that students of University of Nigeria Nsukka face such challenges as Lack of browsing skills, Insufficient ICT infrastructures, poor knowledge of search strategy. And it contradicts the findings of Ugwu and Orsu (2017) who declared complexity of online resources as a challenge faced by students of University of Nigeria Nsukka.

This implies that the postgraduate students of Umaru Musa Yar'adua university faced difficulties in downloading e-resources from the subscribed online databases and lacked adequate knowledge of search strategy since accurate result is not obtained.

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the research work, conclusion, recommendations based on the research findings as well as suggestions for further studies.

5.2 Summary of the Study

This study was on the influence of subscribed online databases usage on the academic activities of postgraduate students of Umaru Musa yar'adua University, Katsina. To achieve this, six research questions were raised and objectives formulated. The objectives are; to find out the subscribed online databases available for academic activities in Umaru Musa Yar'adua University, Library, measure the extent to which postgraduate students of Umaru Musa Yar'adua University utilize the subscribed online databases, to ascertain the relevance of the subscribed online databases to academic activities of postgraduate students of Umaru Musa Yar'adua University, Katsina, to find out the level of satisfaction of the postgraduate students of Umaru Musa Yar'adua University with utilization of subscribed online databases, to determine the influence of the subscribed online databases on the academic activities of the postgraduate students of Umaru Musa Yar'adua University, to identify the challenges to the utilization of subscribed online databases by the postgraduate students of Umaru Musa Yar'adua University.

Related literature were reviewed conceptually and empirically based on variables on the research title and research questions of the study. The major ones include: Concept of online database, concept of academic activities, availability of online subscribed database, utilization of subscribed online databases, satisfaction on the use of online subscribed databases, relevance of online

subscribed database, challenges of using an online subscribed database and summary of the review was provided where gap that needed to be filled was identified.

The research method adopted was quantitative and descriptive survey design was used. The population of this study comprised all the postgraduate students of Umaru Musa Yar'adua University, Katsina and the staff of the ICT Unit of Umaru Musa Yar'adua University Library. There were seven hundred and thirty-nine postgraduate students in the University spread across the four faculties that run postgraduate programme in the university and three ICT staff of the Library. The size of the population justified the need for drawing a sample using an appropriate technique. Two hundred and fifty-three (253) postgraduate students were selected from the four faculties that run postgraduate studies as guided by Krejcie and Morgan table for determining sample size (1970) and three (3) ICT staff. Stratified random sampling technique was used to draw the sample. Self-developed open-ended and closed-ended questionnaire was used as instrument for data collection. Frequency, percentage, mean and standard deviation were used to analyze the data collected from the research questions.

The data collected were presented in tables and interpretations as well as discussion were made under each table. Summary of the study, summary of major findings, recommendations and conclusions were made.

5.3 Summary of the Major Findings

The following are the major findings:

5.3.1 Summary of the Descriptive Statistics

Summary of the major findings as regard research question are as follows:

1. The type of subscribed online databases that were found to be available for use by postgraduate students of Umaru Musa Yar'adua University, Katsina are four. These include: ScienceDirect, Jstor, SpringerLink and EBSCOhost database.
2. Postgraduate students of Umaru Musa Yar'adua University Katsina, used subscribed online databases mainly for writing dissertation and preparing conference papers.
3. All the subscribed online databases subscribed to by Umaru Musa Yar'adua University Library Katsina were relevant to academic activities of the students.
4. The postgraduate students were satisfied with the currency of information materials and usefulness of information contained in the subscribed online databases. They were, however, dissatisfied with the speed of downloading information from the subscribed online databases as well as access outside the library.
5. Use of subscribed online databases influenced quality of the students' research and acceptance of researches in world class journals but did not influence passing of their examination and stay in the school.
6. Challenges hindering postgraduate students from successful use of subscribed online databases were difficulty in retrieving accurate search result, online ads pop up and low internet bandwidth.

5.4 Contribution to Knowledge

1. This study has brought to light the influence of subscribed online databases on the quality of research of postgraduate students.
2. The study has unveiled the strategies librarians can adopt to ensure effective service delivery through the use of subscribed online databases.

5.5 Limitation of the study

The researcher was unable to collect data on time from the respondents because most of postgraduate students went for break

As result, it took the researcher more weeks to retrieve the questionnaire and this entails expending more resources than expected.

The respondents' reluctance to fill in the questionnaire was another problem encountered by the researcher and the research assistants.

5.6 Conclusion

From the analysis and summary of the findings of this study, the conclusion drawn is that there are subscribed online databases available for use by postgraduate students of Umaru Musa Yar'adua University Katsina though more need to be subscribed to. That all the databases were found to be useful and relevant to academic activities of postgraduate students. It was found out that the postgraduate students derived satisfaction from the use of the subscribed online databases in carrying out some academic activities. It was also discovered that these databases influenced some of the academic activities of postgraduate students of Umaru Musa Yar'adua University, Katsina. There are also a number of challenges militating against effective use of subscribed online databases such as that difficulty in retrieving accurate search result, online ads pop up and low internet bandwidth.

5.7 Recommendations

The following recommendations have been provided based on the findings of the research:

1. Since many courses are being offered in Umaru Musa Yar'adua University, it is recommended that more online subscribed databases both multidisciplinary and specialized should be subscribed to, to add to the four existing databases. This would cater for the needs of other departments that offer non-science courses.
2. The Umaru Musa Yar'adua University Library should organize such programmes as user education, library orientation, workshops and seminars to showcase the importance of subscribed online databases and how utilization of these subscribed databases could help in postgraduate students' assignment and examination thereby increasing the students' retention rate.
3. Since all the subscribed online databases were found to be relevant, Umaru Musa Yar'adua University should sustain subscription to these databases.
4. The Umaru Musa Yar'adua University Library, should put in place measures and facilities such as bandwidth, regular update of software and hardware to ensure high speed in accessing the internet and downloading relevant e-resources. The subscribed online databases should also be made available within and outside the Library building, so as to encourage more use of the databases and ensure high satisfaction.
5. Postgraduate students of Umaru Musa Yar'adua should be made to understand that utilization of subscribed online databases can also influence their examination. This can be achieved through services such as SDI (Selective Dissemination of Information), seminars as well as outreach programmes.
6. To address some of the challenges faced by postgraduate students of Umaru Musa Yar'adua University, the ICT staff of the library should ensure that every postgraduate student is acquainted with search strategy skills. This could help the postgraduate students to retrieve accurate search results from Online subscribed

databases. The Umaru Yar'adua University Library in collaboration with the University Management should ensure high bandwidth for access to subscribed online databases.

5.9 Suggestion for Further Studies

The researcher suggested the following for further research:

1. Comparative study on influence of subscribed online database usage by on academic activities among postgraduate students of Umaru Musa Yar'adua University Katsina.
2. Assessment of facilities for access and utilisation of subscribed online databases usage by postgraduate students of Umaru Musa Yar'adua University Katsina.

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Appendix I

Letter for Respondents

Department of Library
and Information
Science,
Ahmadu Bello
University,
Zaria.

11th December, 2019.

Dear Respondent,

I am a master student undergoing a research titled **influence of subscribed online databases usage on the academic activities of postgraduate students of Umaru Musa Yar'adua**

University Katsina. The information requested is purely for research purpose. Please help to respond honestly to the questions. All information given will be treated confidentially.

Thank you.

Ashiru Hafizu

P17EDLS8020

Appendix II

Questionnaire

Section A: Demographic data

- 1. Name of faculty** _____
- 2. Programme/level**
 - i. postgraduate diploma []
 - ii. master []
 - iii. Phd []
 - iv. ICT library staff []
- 3. Gender**
 - i. male []
 - ii. female []

Section B (to be answered by ICT library staff only): subscribed online databases available for academic activities of postgraduate students of Umaru Musa yar'adua University, Katsina.

S/No	Online Subscribed Databases	
I	Academic search complete	
II	EBSCOhost eBook collection	
III	EBSCOhost databases	
IV	EBSCOhost Education Databases	
V	EBSCOhost mobile	
VI	JSTOR	
VII	ProQuest Biology Journals	
VIII	ProQuest Central	
IX	ProQuest Criminal Justice	
X	ProQuest Education Journals	
XI	Proquest Nursing and Allied Health Sources	
XII	Econlit Economics	
XIII	Scopus	
XIV	EMBASE	
XV	SpringerLink	
XVI	HINARI	
XVII	AGORA	
XVIII	ScienceDirect	
	Others specify	

Section C: Extent to which the postgraduate students of Umaru Musa Yar'adua University utilize subscribed online databases

Instruction: Using five-score scale namely Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), Undecided (UD), please, tick appropriately for each item the options that best reflect your opinion regarding the extent you go in using online subscribed databases.

S/No	In-depth of the Usage	SA	A	DA	SD	UD
I	I use subscribed online databases for assignment					
II	I use subscribed online databases for examination preparation					

III	I use subscribed online database for preparing conference paper					
IV	I use subscribed online database to update knowledge					
V	I use subscribed online database for seminars and workshops					
VI	I use subscribed online database for writing dissertation					
VII	I use subscribed online database for writing thesis					
VIII	I use subscribed online database for getting general information					
IX	Others specify					

Section D: extent the databases subscribed to are relevant to the academic activities of the postgraduate students of Umaru Musa Yar’adua University?

Instruction: Using five-score scale namely Highly Relevant (HR), Relevant (R), Fairly Relevant (FR), Irrelevant (IR), Undecided (UD) please, for each item tick option that best reflect your opinion regarding the relevance of online subscribed databases to your course of study.

S/No	Online Subscribed Databases	HR	R	FR	IR	UD
I	Academic search complete					
II	EBSCOhost eBook collection					
III	EBSCOhost databases					
IV	EBSCOhost Education Databases					
V	EBSCOhost mobile					
VI	JSTOR					
VII	ProQuest Biology Journals					
VIII	ProQuest Central					
IX	ProQuest Criminal Justice					

X	ProQuest Education Journals					
XI	Proquest Nursing and Allied Health Sources					
XII	Econlit Economics					
XIII	Scopus					
XIV	EMBASE					
XV	SpringerLink					
XVI	HINARI					
XVII	AGORA					
XVIII	ScienceDirect					
Other specify						

Section E: Satisfaction of the postgraduate students of the Umaru Musa Yar'dua University with utilization of subscribed online databases?

Instruction: Using five-score scale namely Very Satisfied (VS), Satisfied (S), Dissatisfied (DS), very dissatisfied (VD), Undecided (UD), please tick appropriate options regarding the level of satisfaction your derived from the items below.

S/N	Responses	VS	S	DS	VD	UD
I	Overall library environment					
II	Accessing online journals from subscribed online databases					
III	Accessing e-books from the subscribed online databases					
IV	ICT staff readiness for guide to search					
V	Currency of information materials					
VI	Usefulness of information available					
VII	Speed of downloading information					
VIII	Efficiency of the facilities					
IX	Ability to access to subscribed online databases outside library					

Section F: Influence of the subscribed online databases on the academic activities of the postgraduate students of Umaru Musa Yar’adua University.

S/N	Areas subscribed Online influence academic activities	SA	A	D	SD	UD
I	Use of subscribed online database increase the quality of my research					
II	Use of subscribed online databases help in passing my examinations with good grades					
III	Use of subscribed online databases in the conduct of my research lead to the acceptance of my research in world class journals					
IV	Use of subscribed online databases serves me from expulsion on academic ground					
V	Others specify					

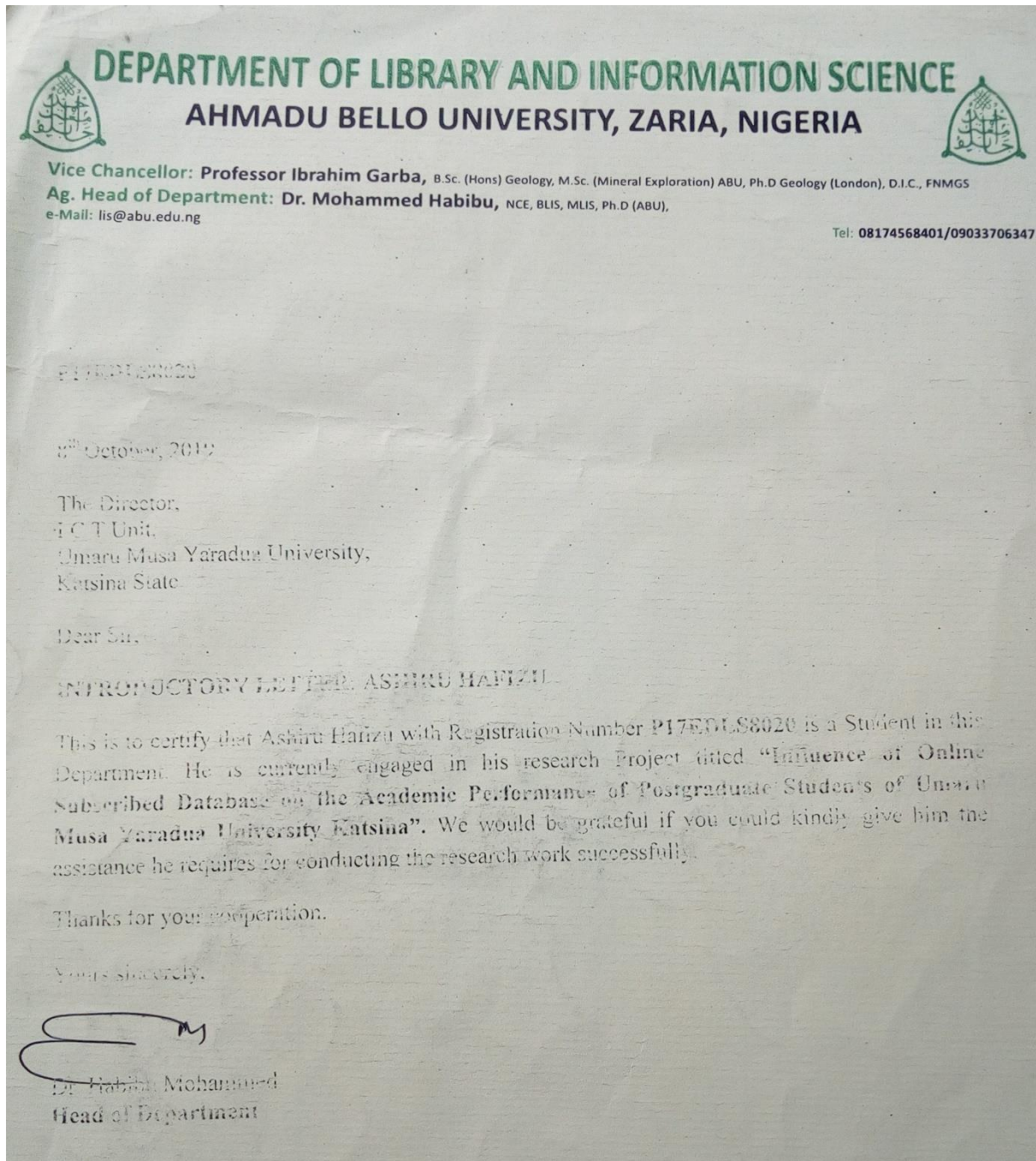
Instruction: Using five-score scale namely Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), Undecided (UD), please tick appropriate options regarding the area where online subscribed databases influence your academic activities

Section G: challenges encountered by the postgraduate students of Umaru Musa Yar’adua University in utilizing the subscribed online databases.

S/No	Challenge	
I	Difficulty in retrieving accurate search result	
II	Poor knowledge of search strategy skill	
III	Irrelevance of subscribed online databases articles	
IV	Low internet bandwidth	
V	Online ads pop up	
VI	Uncooperative attitude of library staff	
VII	Complexity of the subscribed online databases	
VIII	Others specify	

Appendix III

Letter of Introduction



Appendix IV

Calculation of Population Distribution

The two hundred and fifty-six (256) sample drawn (guided by Krejcie and Morgan) amounted to 34.2% of the total population of seven hundred and forty-two (742). Since the population is not evenly distributed, a percentage was used to determine the number of respondents for each faculty base on the number of its population. This is calculated below:

1. Faculty of education	$206/100*34.2 = 71$
2. Faculty of humanities	$259/100*34.2 = 88$
3. Faculty of Natural and Applied Science	$234/100*34.2 = 80$
4. Faculty of Social and Management Science	$40/100*34.2 = 14$
5. Library ICT Unit Staff to 3)	$3/100*34.2 = 1$ (rounded
Total	256

Note: All ICT staff of the library have been involved.