UNIVERSITY OF GHANA, LEGON

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AWARENESS AND USE OF ONLINE ACADEMIC DATABASES AMONG UNDERGRADUATE STUDENTS AT THE UNIVERSITY OF GHANA

BY

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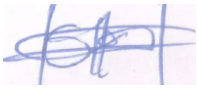
OCTOBER, 2020.

DECLARATION

I sincerely declare that this dissertation is my own work and was supervised by Dr. Philip Kwaku Kankam. All the sources used have been duly acknowledged. I accept responsibility for any shortcomings of this work.



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DEDICATION

I dedicate this work to my mother Lydia Owusu Wiredu, Dr. P. K. Kankam and all Lecturers at the Department of Information Studies, my colleagues, my friends and Ernestina Nyarko for their support and encouragement.

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I first and foremost thank Jesus Christ for His grace which has enabled me to get this far. I am forever indebted and extremely grateful to my supervisor Dr. Philip Kwaku Kankam whose careful attention and guidance resulted in the completion of this work.

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ABSTRACT

The advancements in technology have necessitated the change in preferences in a number of fields. This is seen in libraries making the conscious effort to subscribe to online academic databases to enable their users can get access to thousands of scholarly and peer reviewed articles. However, due to the cost of subscriptions, equipment and among others, if the users are not making use of them, then it becomes a challenge. Hence, this study investigated the awareness and use of online academic databases among the undergraduate students at the University of Ghana in Accra City Campus. This study is useful to libraries, the student body in academic institutions, policy makers in academic institutions and researchers.

The study used the Technology Acceptance Model (TAM) as the theoretical framework. The study adopted a case study design which used a quantitative approach with a sample of 256 of the Accra City Campus BA students of the University of Ghana. Stratified and convenience sampling were used and questionnaire was the instrument for data collection and analysed using the SPSS and transferred to MS Excel for graphical representations and frequencies.

The study revealed a high awareness and satisfaction of the online academic databases among the students. However, they are rarely used by them and mostly to aid in their academics. They again found it easy to use and access to the online academic databases was mostly through their mobile phones but the major challenge they faced was slow internet and the study as such recommended trainings, subscriptions to more databases, awareness programmes, intensive orientations and addressing the slow internet access to curb the challenges faced.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Libraries are integral part of academic institutions as they provide essential services for the survival of the academic needs of the institutions they serve. However, their primary function of aiding users to the print materials has been transformed with the advent of information technologies. Libraries have thus embraced in addition to print materials, the electronic academic databases, to provide the information resources needed by their users (Bell, 2009).

Electronic databases (e-databases) refer to the various electronic resources (e-resources) which cover a wide range of fields and disciplines by publishers that can either be online or off-line (Kwadzo, 2015). Academic databases are collections of peer-reviewed journals and electronic books (e-books). Libraries of academic institutions make subscriptions to them in order to better serve their users (Adanu, 2019). According to Encyclopaedia Britannica (2020), database or electronic database can be seen as a set of information which has been purposefully organised for effective search and retrieval by a computer.

Going back into time, databases in libraries have long existed with the computer versions springing up later in the 1960s, and the first that went online in the 1970s were bibliographic together with the inception of the CD-ROM format in the early 1980s. The growth from that time has been rapid (Yusuf & Farouk, 2017). There is no verified accurate count of the available databases in the world but as far back as 1997, over 10,000 databases with CD-ROM inclusive existed (Walker & James, 1999). The e-databases make it possible to have accessibility to a

wide range of relevant materials and can come in the form of academic journal, magazines, newspapers, e-books and other multimedia (Maria, n.d.). There are databases which have free access to developing nations by their vendors. The various forms e-databases come in include Textual, Numerical, Open source, Commercial, Bibliographic, Non-Bibliographic, Online and Offline and among others (Henderson, 2009). E-resources are priceless research aids that help complement the print-based resources in libraries. They help users get access to information regardless of one's location as long as the needed devices and connections are available as they provide updated information. They give opportunity for different search techniques where one can get access to materials (Dadzie, 2005).

Academic databases serve as means of getting new knowledge. They look into current happenings and mostly started as a result of a research question (Williams, 2010). Rich new peer-reviewed materials can be accessed from these databases. They have become an important component in the services provided by libraries in higher institutions for teaching, learning and research purposes (Zhang, Ye, & Liu, 2011). As such, libraries in Ghanaian universities are doing their best to get access to these resources for their users to help their educational and research purposes (Dadzie, 2005). Compared with the hard copy materials, resources from the academic databases are easy to use, search and download (Wu & Chen, 2012). They can be used by a number of people at the same time for better services. The various e-resources are the best avenues for academia to frequently be updated on new knowledge as and when they come out (Soni, Gupta, & Shrivastava, 2018). E-databases are invaluable for studies and research as they have a number of advantages over the paper-based materials: frequency of information, extended search abilities with easy storage of results and information access without borders (Yusuf & Farouk, 2017).

A lot goes into choices about which electronic resources a library must get for their users by librarians in academic institutions. Their choices mostly do not just reflect materials with rich contents and high-end software access but rather effective use of the limited monies available to get those that will be of use to the large number of their population. Thus, selection of databases to be subscribed to are checked against their usages by large groups of their users. So, if there are those that people do not make much use of them, due to the limited allocated budget and pricing systems, they mostly discontinued their subscription to them (Tenopir & Read, 2000). In the era of limited and cutting budgets for libraries, it is needful for them to make full use of the electronic resources so as to prove the need for them for the monetary allocation to continue for these systems (Dadzie, 2005).

Academic libraries must make conscious efforts to champion more awareness and give the needed outlook to the subscribed electronic resources through various outreach programmes, training, workshops, conferences and seminars, in order to get many users utilising the various databases they have subscribed to (Soni et al., 2018). As such, huge sums of monies are spent on these resources to fulfil the needs of the faculty and students in various universities, it is only right if they get value for their monies spent on subscriptions to the academic databases as they ought to be used to the fullest by their users in order to ensure that they are not wasting resources. However, studies have shown that there is poor usage of these databases and that the level at which they wished users were utilising the databases are low with reasons being lack of awareness, easy accessibility of services like Google, inadequate ICT infrastructure, low search skills and at times, attitudes of users. These instances are however, different from one setting to another and as indicated by Dukic (2013) and Ahmed (2013), there is high usage of e-databases in the developed nations as to the developing ones due to inadequate ICTs and the high cost of these resources. As stated by Anaraki and Babalhavaeji (2013) (as cited in

Kwadzo, 2015) "where students are not aware of existence of e-databases they tend to use general search engines to meet their information needs" (Kwadzo, 2015, p.2).

Bringing the narrative to Ghana, it was difficult in time past to get access to these e-resources due to the monetary constraints. However, through the ideas from "institutions such as International Network for the Availability of Scientific Publications (INASP) and Programme for the Enhancement of Research Information (PERI) in the 1990s and early 2000s" (Kwadzo, 2015, p. 3), researchers and scholars in Ghana had the opportunity to enjoy usage of CD-ROM facilities and electronic databases. To add up to the above initiatives, universities in Ghana including both the private and the public ones and research institutions came up with a consortium; Consortium of Academic and Research Libraries of Ghana (CARLIGH) purchasing of electronic databases to deal with cost for these resources individually. This made it possible for a wide range of e-resources to be accessible to the various university libraries in the country (Kwadzo, 2015).

The University of Ghana is the premier university in Ghana and its academic library is known as the Balme Library. This library has subscribed to a number of databases and they include the INASP initiative ones, consortia subscribed ones, the university's own subscribed ones, and open access ones. The subscribed databases sum up to over 80 which spans across subjects in the "humanities, social sciences, applied sciences, physical sciences, and engineering" (Kwadzo, 2015, p. 3). In the various databases, they include some with full text e-journal articles, bibliographic information, abstracts, e-books and among others. They are annually being renewed for subscription. All these are to contribute to easy access to the e-resources provided. The Balme library environs have the needed infrastructures which can lead to proper use of these databases in addition to the orientations and the library tour programmes done

frequently for continuing undergraduate and postgraduate students during the various semesters to create awareness of these service so the students can use them (Kwadzo, 2015).

However, the level of awareness and use are not known well especially in the area of the undergraduate students as studies abounds with the postgraduate students. Based on the monies and efforts spent on subscriptions and creating awareness by the library to these databases and even the off-campus access which regardless of location, one can still get access to these resources, it would be only right if the usage matched up to it and thus, this study was undertaken to know the use and awareness of these databases particularly among the undergraduate students at the Accra City Campus.

1.2 Statement of the Problem

The benefits academic databases can bring to users are enormous to learning, studies and research. The ever-growing advancements in information technology have drastically affected how information is retrieved, handled and stored in the digital form as it has become very important to satisfy the information needs of users. Currently, information needs of users are moving from then traditional resources and services to digital resources and services (Kaladhar, Naick, & Somasekhara Rao, 2019). However, "in spite of the value of e-databases and ensuring that it is available for use by library clients, studies have shown that usage is not up to level expected or is simply underutilized." (Kwadzo, 2015, p.2).

From the preliminary review of studies, it was seen that the use of e-databases in the developed countries is greater than the developing countries due to ICT infrastructures and cost of the resources (Ahmed, 2013a; Dukic, 2013). Studies also showed that there is high awareness of digital resources in terms of e-books and e-journals which students and academic staff consider

necessity for studies and researches (Adam, 2017; Akinola, Shorunke, Ajayi, Odefadehan, & Ibikunle, 2018; Basiru & Okwilagwe, 2018; Isibika & Kavishe, 2018; Kaladhar et al., 2019; Kwadzo, 2015; Kwafoa, Imoro, & Afful-Arthur, 2014; Natarajan, 2017; Verma, 2016).

Despite high awareness of e-resources, students are found to still prefer to the use of search engines like Google to get access to the various e-materials rather than using databases which their respective institutions have subscribed to (Ahmed, 2013b; Anaraki & Babalhavaeji, 2013; Wang & Bai, 2016). Due to the high costs involved in the subscriptions of the online academic databases as well as the quality of materials available in them, there is the need to re-orient students for them to know the benefits they can get from the subscribed databases so libraries can get value for their monies through the usage of the databases (Dadzie, 2005). Studies have reported that through more awareness creation, usage can increase with the subscribed databases among students and faculty in various institutions (Atakan, Atilgan, Bayran, & Arslantekin, 2008; Chirra & Madhusudhan, 2009; Nisha & Ali, 2013).

Against this backdrop that the researcher decided to undertake this study and from preliminary studies, it is seen that works on online academic databases mostly focused on the postgraduate students and not much emphasis is placed on the undergraduate and the researcher identified the paucity of information on this phenomenon at the City Campus of the University of Ghana. As such, this study seeks to fill this gap and contribute to knowledge.

1.3 Purpose of the Study

The study sought to examine the awareness and use of academic databases among undergraduates at the City Campus of the University of Ghana.

1.4 Objectives of the Study

The main objectives of the study were:

1. To determine the level of awareness of the online academic databases among the undergraduate students.
2. To identify the extent of use of the online academic databases by the undergraduate students.
3. To know the purpose of use of the online academic databases by the undergraduate students.
4. To find out the ease of use of the online academic databases among the undergraduate students.
5. To determine the level of satisfaction of the use of the online academic databases by the undergraduate students.
6. To know the students' mode of access to the online academic databases.
7. To find out the challenges related with the use of online academic databases.

1.5 Scope of the Study

This study was done at the University of Ghana with attention on the undergraduate Bachelor of Arts students at the Accra City campus. The focus was to know their awareness and use of online academic databases subscribed by the University's library which is the Balme Library.

1.6 Theoretical Framework

Every research work must have a guide which will be the path on which the entire work will follow. Therefore, Theoretical Framework is the "blueprint" that serves as the foundation upon which the research is built or based upon. "It serves as the structure and support for the rationale

for the study, the problem statement, the purpose, the significance, and the research questions" (Grant & Osanloo, 2014, p.12). Theoretical Framework is made up of the accepted theory or theories from the understanding of the researcher on how he or she plans to go about with the topic chosen and explanation of the various terms in relation to the topic. It depicts the nature of one's study philosophically, epistemologically, methodology and analytically. It also gives one the accepted viewpoints which can back one's understanding of a study and how the analysis of results should be done (Grant & Osanloo, 2014).

Theoretical Framework shows the accepted boundaries within the limitations of the chosen theory or theories a researcher must be in so he or she does not go off course whiles undertaking the study (Adom, Hussein, & Joe, 2018). Thus, every research must be guided by a theory and rightly defined by Kerlinger (1979, p.64) as "a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena".

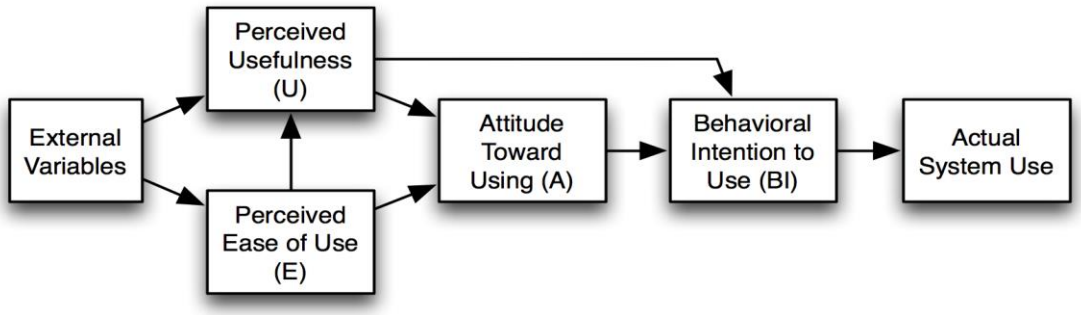
In order for the researcher to understand and know undergraduate students' awareness and use of academic databases, which is the main purpose of the study, there has to be a theory in place to guide the study and bring out the related factors. As a result, the researcher adopted the Technology Acceptance Model (TAM) for this study.

1.6.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model has its creation by Davis (1986) as an adaptation from the Theory of Reasoned Action (TRA) which was made to see how users accept information systems. It is seen as one of the most influential models of technology acceptance (Charness & Boot, 2016). Its aim is to give out the factors that result in the general acceptance of the use of

computers being able to explain user behaviours over a wide range of computer technologies and populations. A very important objective of TAM is to give a stand on how external factors influences internal beliefs, attitudes and intention. The model rests on two factors which are the perceived usefulness and perceived ease of use as the main beliefs for users' acceptance habits for computers (Davis, Bagozzi, & Warshaw, 1989).

Figure 1.1: Technology Acceptance Model



Source: "Technology Acceptance Model (TAM)" (Davis et al., 1989).

Perceived Usefulness (PU) as defined by Davis (1989, p. 320), is "the degree to which a person believes that using a particular system would enhance his or her job performance". Thus, when a user perceives a system to be very useful, there would be a positive use-performance.

On the other hand, **Perceived Ease of Use (PEU)** is "the degree to which a person believes that using a particular system would be free of effort." (Davis, 1989, p. 320). This is synonymous with the user seeing the system that it is very easy to use effortlessly. As stated by Davis (1989) (as cited in Eskilsson & Suorsa, 2014, p.7) "once the system is perceived to be easier to use compared to another, it is more likely to be accepted by the users…a system

that is easy to use, but lacks in functionality, might not be seen attractive from the users' perspective".

Attitude is seen as the willingness or unwillingness of one towards undertaking a behavior. Attitude greatly influences one's behaviour towards technological acceptance.

Behavioral intention (BI) is seen as "a person's perceived likelihood or subjective probability that he or she will engage in a given behavior" (Committee on Communication for Behavior Change in the 21st Century, 2002, p. 31).

Actual System Use is seen as the various levels at which users of systems make practical use of them. This is impacted by the behaviourial intention with which one has towards the use of the system.

1.6.2 Mapping Objectives to Theory Attributes

The Table 1.1 on the next page shows the mapping of each objective to the TAM attributes.

Table 1.1: Mapping Objectives to Theory Attributes

Objectives	Attribute of Theory	Instrumentation
Level of awareness of the academic databases	**Behavioural Intention to use**	Questionnaire for students
Extent of use of the academic databases	**Actual Use of System**	Questionnaire for students
Purpose of use of the academic databases	**Actual Use of System**	Questionnaire for students
Ease of use of the academic databases	**Perceived Ease of Use**	Questionnaire for students
Level of satisfaction of the use of the academic databases	**Attitude towards use**	Questionnaire for students
Students' mode of access to the academic databases	**Actual Use of System**	Questionnaire for students
Challenges related with the use of academic databases	**Actual Use of System**	Questionnaire for students

1.7 Significance of the Study

The findings from this study are expected to help obtain data about students' views and use of academic databases to enable libraries make informed decisions when subscribing to any database.

Again, this study should add to existing knowledge and serve as an avenue for further studies to be conducted on the area of study.

Lastly, awareness and need for the use of academic databases would be looked at extensively to create the necessity among the various groups of students to fully make use of them.

1.9 Organisation of Study

This study was organised into five chapters and they are seen below:

- **Chapter one** is the Introduction which includes the Background of the Study, Statement of the Problem, Purpose of the Study, Objectives of the Study, Scope of the Study, Theoretical Framework and the Significance of the Study
- **Chapter two** looks at Literature Review in which the various themes of the study were reviewed using available related literature.
- **Chapter three** clearly explained the Methodology that was be used to carry out this study. The Resign Design, Selection of cases, Population, Sample Size, Sampling Technique, Instrumentation, Reliability and Validity, Data Analysis and Presentation of data and the Ethical Consideration were examined under this chapter.
- **Chapter four** looks at the Data Analysis and Discussions of the various Findings.

- **Chapter five** presents the Summary of the Findings, Conclusion and Recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Research works are not done in isolation. They are many related works that one ought to go through in order to find out what other researchers have done which could be related to the work being done. Undertaking review of available literature builds on the premise that knowledge continually grows and thus, we can get and continue to add up to what others have done (Neuman, 2014). Literature Review gives a framework for affirming the need of a study in as much as ascertaining your study to findings already available as a means of comparison (Creswell, 2013).

Related works and concepts on the awareness and use of academic databases by students were looked at from the worldwide view, to the African view and then narrowed down to the Ghanaian perspective. The following themes were reviewed in this chapter:

2.2 Overview of Online Databases

2.2.1 Introduction

The Online Dictionary of Library and Information Science (ODLIS) gave an encompassing definition for database to be:

> "A large, regularly updated file of digitized information (bibliographic references, 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." (ODLIS, p. 193).

The Encyclopaedia Britannica also defined database or electronic database as a collection containing data or information specifically organised to facilitate quick searches and retrieving of the information or data by a computer (Encyclopaedia Britannica, 2020).

The inception of online databases brought about a new form of information searching and retrieval from the traditional systems to network-based retrieval systems. "Online database is a record of logically related information, recorded in computer files in a uniform form to facilitate easy and efficient retrieving of data by means of internet or communication networks." (Muthumari, 2013, p. 65).

Online databases have undergone changes since they were started. It was then seen by Gray (1976) as collections of bibliographic information resident in a host computer and allows for searches to be done remotely through software. Simply put, they can be seen as collections containing bibliographic information which can be accessed through networked communications.

These services are given by vendors and producers of the online databases where searches can be done using devices that can interact with systems containing the information. Access to electronic databases is not limited to any location and one can get accessed to them once the needed technologies are available not necessarily going to the library in order to get access (Soyizwapi, 2005). Online databases nowadays are done on time-sharing and real-time modes to facilitate information access concurrently through interaction with the host computer.

Information in online databases is structured and represented in logical order containing records divided into various fields such as author, title, year of publication and among others for the grouping, searching and retrieval of contents.

As seen from earlier definitions of online databases such as Gray (1976), they were primarily used to give bibliographic information. It was as time went on that they started to be providing full-text information to aid information provision and hence the name for some of them being known as full-text online databases. The full-text online databases contain huge and regularly updated contents with some as "abstracts, full-text references or citations on general or specific field of knowledge." (Muthumari, 2013, p. 65). Hence, through full-text databases, people are able to get access to information on different disciplines real-time without any difficulty, reliable and fast as well.

As opined by Sinh & Nhung (2012) online databases are amongst the vital information resources which universities around the world provide as they are invaluable and current source of information for learning and research purposes. They further continued that, the university communities have become used to using these online databases for information retrieval purposes and equipping themselves with certain search skills.

The online databases have become a one stop avenue to get access to different forms of electronic materials such as "books, scholarly journals, theses, reviews, official documents and so on." (Muthumari, 2013, p. 66). It should be noted that not all online databases are full text type as such, as some will contain full-text information, others contain solely abstracts and indexes, citations of published literature and among others. The scope of the online databases can range from general, multidisciplinary or subject specific and the contents available can

come in the different formats as well as such HTML, PDF, RTF and among others. All these attributes make them the best media for detailed study on subjects as one can get access to well-known scholarly publications.

Through the online databases, access is gained to electronic materials which mostly may not be found on the World Wide Web. Due to the scholarly nature of information contained in the databases, there are some that subscriptions ought to be made through payment of monies and this varies from one online database to another as each offers different features, functionalities, contents, language, searching features, interfaces and among others with popular examples in relation to education and research include JSTOR, ERIC, ScienceDirect, ProQuest and among others (Muthumari, 2013).

2.2.2 Historical Overview of Online Databases

Online database systems resulted from advancement in ICT applications in the processing and retrieval of information. The beginning can be traced back to over the past five decades with various changes and advancements (Muthumari, 2013).

Prior to the 1940s, systems used for information retrieval were solely manual types with examples like the indexes and catalogues. These manual systems were made up of pre-coordinate and non-manipulative retrieval tools. However, a significant development was seen in the 1940s where there was made post-coordinate and manipulative retrieval systems even though they were still manual based as “these included Peek-a-Boo or Optical Co-Incidence Systems introduced by Batten and Cordonnier, Edge-Notched Cards System developed by Mooers and the Uniterm System of Taube.” (Muthumari, 2013, p. 68). These systems were succeeded by the computer-based systems.

The 1950s were the time the Punched Card Data Processing Systems were introduced as various techniques of automatic indexing were developed as well as the first computer-based retrieval systems.

During the 1960s was the era of retrieval of information using "off-line, batch-processing, tape-oriented model." (Muthumari, 2013, p. 69). This was also the period where information centres and government agencies in the United States began to make use of information retrieval practices for their ventures such as the National Aeronautics and Space Administration (NASA) and the National Library of Medicine (NLM). Most systems used in the 1960s were off-line types but the on-line types started in the 1970s.

The inception of the online databases in the 1970s resulted in creation of different types of databases mostly reference types such as the "MEDLINE service of the National Library of Medicine, the bibliographic services of OCLC and RLIN and many other commercial and governmental services." (Muthumari, 2013, p. 69). These reference databases are currently widely available for use with inclusion of other hundreds of reference databases being accessed through them. From the 1975s, other online databases were developed to facilitate access to large information and some include "Chemical Abstracts Service (CHEMCON), Engineering Index (COMPENDEX), the National Technical Information Service, the Science Citation Index, ERIC (the Educational Resources Information Center), and CAIN (the machine-readable data base of the National Agricultural Library)" (Muthumari, 2013, p. 69).

The database producers or vendors played their part in the advancement of the databases. They grew during the 1970s as they improved upon the services such as introduction of new search functionalities. Through licensing agreements, the online service providers have access to these

databases and through subscriptions by the organisations and libraries with payment agreements, they also get access to the contents. To add up to this, another worth noting contribution to the development of the online databases is the Text Retrieval Conference (TREC). This initiative was started in 1992 under the auspices of the U.S. National Institute of Standards and Technology and the U.S. Advanced Research Projects Agency to help with information representation and retrieval (Chowdury, 2010).

Bringing the narrative to Africa, subscriptions to these databases due to the costs involved, was a great challenge for African universities to get access to them. Adesoye & Amusa (2013) indicated that the International Network for the Availability of Scientific Publications (INASP) makes subscriptions to the databases and offered them to the developing countries, those part of its partnership at low costs. It is seen in Manda (2005, p. 269) that the INASP motivation behind these initiatives is to

> "facilitate the acquisition of international information and knowledge by researchers in developing countries through acquisition of full-text online journals, current awareness databases and document delivery; to improve access to research information from developing countries through the establishment of institutional, national and regional online journal services for example, African Journals Online (AJOL); and to provide training in the use, evaluation and management of electronic Information and Communication Technologies."

The INASP as cited in Katabalwa (2016, p. 447) "works in depth with 22 partner countries in Africa, Asia and Latin America; on the African continent, it works with 11 partner countries, namely, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zambia and Zimbabwe." It should be noted that most of the countries listed above, registration

is done within the confines of the consortium available there to help with acquisition (Katabalwa, 2016). Example of some of the databases which the INASP makes subscriptions to are "the American Chemical Society Journals and Magazines, American Institute of Physics Journals, American Physical Society, Annual Reviews, ASA-Journal of the Acoustical Society of America (JASA), ASABE Technical Information Library and many others" (Katabalwa, 2016, p. 448)

2.2.3 Characteristics of Databases

The characteristics of databases as stated by Muthumari (2013) include the following:

- **Organized Collection**

The contents in the database are being arranged in an orderly manner to enable access and retrieval without any difficulty and with speed also.

- **Credibility**

Contents or materials in the databases are reviewed by experts in the various areas and thus, contain credible materials. Publishers make sure contents are accurate and well-evaluated before they are published.

- **Usability**

There are various search functionalities and well-designed organisation that make users access and retrieve information efficiently and effectively.

- **Conversational**

They have interactive interfaces that enable communication to be two-way. Hence, users through their searches and retrieval activities interacts with the systems and hence they being conversational.

- **Expert System**

They are expert systems designed to give information on specific disciplines. For instance, a database about library science will have contents from library science and its related association which have been expertly evaluated.

- **Controlled Vocabulary**

In order to facilitate the searching and retrieval, online databases are characterized by their own controlled vocabulary. Through the controlled vocabulary, information is presented and retrieved though there are other searching strategies supported by different online database systems.

- **Permanence**

Materials published in the online databases like the journals, reviews, books, and among others hardly are removed from the databases. They are preserved and kept for longer periods of time in the form of archives that can retrieved anytime needed.

- **Up-to-Date**

Contents are periodically updated in the areas they cover as the providers continually add or publish new information in order to have current content which are also copyrighted scholarly materials.

- **Real-time**

The real-time characteristic of online database is seen in how the systems even though remote are able to quickly respond to users' queries. The remote terminals aid the users in their activities of interaction with them by accepting their queries, searching for the information for them and returning their results.

- **Time-sharing**

This means that during the online processing, the machine processing time is shared between different terminals equally for separate activities. Through this time-sharing, users at the same or different locations can at the same time each use the system to serve their needs without any interruptions.

2.2.4 Other Features

Muthumari (2013) again indicated some other retrieval features of databases and they are as follow:

- **Links**

The online databases have links in them that help users get access to full-text materials in other databases of the same publisher.

- **Report**

Reports can be generated by the online databases to show the electronic holding reports of any institution who have made subscriptions to them. That is, the list of subscriptions can be seen.

- **Login/ Register**

Personal accounts can be created and one can personalise his or her account to include contents and features he or she is interested in such as saving search results, area of interest, e-mail alerts and purchases.

- **Modify Search**

It enables users to make changes to searches using different search strategies to end at getting the needed results.

- **Export Data**

Bibliographic details of materials can be generated and exported in different citation manager formats such as the EndNote, CSV, BibTex and TSV.

- **News and Updates**

New initiatives and products are made known by the database providers to the subscribers in the form of news and updates.

2.2.5 Types of Databases

Online databases come in two main groups which are the Reference and Sources databases. Reference type of databases are those that lead the users or searchers to the source of the content they are seeking whereas the source types are those that contain that information in themselves (Chowdury, 2010). On the grounds of content, scope and the information incorporated, online databases fall under these groups:

I. On the Basis of Information Incorporated

Most online databases fall in this category as they are classified based on the content inside them. Under this, they are categorized into four main types which are:

- **Full-text Online Databases**

This is the type of databases in which the complete text of the needed document can be viewed, printed or downloaded. Also, they include graphs, maps, pictures and diagrams. "It includes large files of text such as, all the paragraphs of a journal article or all the chapters from a book along with abstract or citations of the text files incorporated in them" (Muthumari, 2013, p. 75). Popular examples include JSTOR, Emeraldinsight and among others.

- **Reference Databases**

This type of database provides bibliographic descriptions of materials such as the abstracts or the citations and are grouped into two which are:

a. Bibliographic Databases

Bibliographic databases serve as reference tools and aids in "citations, abstracts and index to published literature" (Muthumari, 2013, p. 76). They assist one to get the needed details about published works very quickly. Such information may not even be available in the library's holdings. Bibliographic databases are of great value when one wants to get access to information especially when it is not about just getting information regarding the holdings in a library. They include bibliographic descriptions which are used to describe materials such as journals, books, and other published works. They are also good for verifying bibliographic details. Examples are LISA, Scopus and Web of Science and among others.

b. Referral databases

The referral databases on the other hand points users to where they can get the information needed. Thus, this type of database gives details "such as names, address, specialization of persons, institutions, information systems and so forth." (Muthumari, 2013, p. 76). Examples include the Ulrich's Periodicals Directory and Electronic Yellow Pages.

- **Numeric Databases**

The numeric database as the name suggests is mainly made of numeric data accessible by computer also called fact sources and non-bibliographic databases. They are mainly used to help with business or financial researches as they contain "organized numerical data along with brief textual description and provide it access in the form of statistics, demographic and financial reports, stock market quotations, chemical and physical properties, and chemical nomenclature and graphic structures, etc." (Muthumari, 2013, p. 76). Examples of such include COMPUSTAT and ProQuest Statistical Insight.

- **Multimedia Databases**

Multimedia databases contain multimedia "data types such as images, sound recordings, video recordings, signals, graphics together with text data etc." (Muthumari, 2013, pp. 76-77). This kind of database holds files in different formats with examples being ".txt for documents, .jpg used for images, .swf deals with videos, .mp3 use for generating audio files etc" (Muthumari, 2013, p. 77). Multimedia databases are about getting these multimedia contents, making them available and transferring them over networks. Thus, they get access to multimedia contents such as videos, pictures, audios, and among others. Examples include Artstor and Academic Video Online.

II. On the Basis of Scope of Data

Online databases by the scope of data contained in them can be grouped into the following:

- **General interest Databases**

These are general in nature, in that, they cut across diverse subjects and disciplines such as "current news and opinion, social and political affairs, cultural, educational, health and on public issues." (Muthumari, 2013, p. 77). Thus, they provide generic information in nature with examples being the Academic Search Complete (EBSCO) and Encyclopaedia Britannica

- **Discipline Specific Databases**

These are types are focused compared to the generic type. They contain contents from a number of related areas. When one does not get the needed information from a generic type of database, it is highly recommended for such an individual to search in these types of databases. Examples include SocINDEX and PAIS (Public Affairs Information Service).

- **Subject Specific Databases**

Subject specific databases are dedicated to only one subject. They provide detailed information for topics as they contain contents from professional publications and scholarly works. Hence, they are well suited for researches on specific topics as they contain comprehensive materials from different scholarly works. Examples include Historical abstracts and PsycINFO

III. On the Basis of Contents

Online databases can be classified based on the nature of contents available in them and based on this, we have the following databases:

- **Article Database**

Article databases enable users to have access to thousands different journals and magazines in order to get articles needed on the specified area. Whiles most of them provide full text of the articles, some give abstracts, others give citations or abstract to aid in locating the main document. Examples of this databases include Google Scholar and Annual Reviews.

- **Theses/Dissertation Database**

This type of database contains dissertations awarded by Higher Educational institutions. They serve as a stop point to get access to full text theses and dissertations, thus, facilitating easy access to help with further research. Examples include ProQuest Dissertations and Theses and EThOS- Electronic Theses Online Service

- **Citation Database**

These "are index of citations of published literature." (Muthumari, 2013, p. 78). They help users find and track articles which they are in need in any specific area. Most of the citation databases come with the abstracts of the articles. Using keywords which are in an article can enable users through this type of database get access to the citation of the article. Example: Scopus and Web of science

- **Audio / video Database**

This is a collection of audio and video contents. Examples are Audiovisual Database of Spoken American English and Academic Video Online

- **Online Catalogue Databases**

This is a bibliographic type of database that gives descriptions to holdings in a library such as books, e-resources, periodicals and among others. This allows users to search for resources in

the library through the use of the bibliographic details of the material such as the author, title, date of publication, keywords and among others. Examples are IndCAT, UGCat and WorldCat

- **Dictionary Databases**

A dictionary database gives "a measure of control in the use of bibliographic databases." (Muthumari, 2013, p. 79). Examples are Oxford English Dictionary and Chemical substance Dictionary

- **Directory Databases.**

They give out information concerning published directories. They are not full-text databases though they can represent full-text materials in machine-readable form and again not numeric. Examples are Electronic Yellow Pages and Encyclopedia of Associations.

- **Indexing & Abstracting Databases**

This type of database gives "brief summary of publications along with descriptors access points to documents" (Muthumari, 2013, p. 79). They help one locate publications and aid them to know whether they are relevant to their need of research or not. Examples are SocINDEX and Educational Research Abstracts Online (ERA)

IV. On the Basis of Providers

Online databases can be grouped according to their providers and they are as follows:

- Publisher /Commercial Databases

These are the types of databases made available by online commercial service producers who through the internet, users have to pay in order to get access to the contents. Downloads can be

made through their homepages but one has to get the credentials given by the publishers before they can get access. Examples include Oxford University Press and Taylor & Francis.

- **Institutional Databases**

These are made by professional institutions in order to develop the knowledge base area for specific areas among themselves. They help promote research in such areas and they are mostly subject specific. Examples are PsycInfo (American Psychological Association) and EconLit (American Economic Association)

- **Aggregator Databases**

"Aggregator databases are defined as the service providers that make available contents, licensed by several publishers and is offered in packages at a single price to libraries." (Muthumari, 2013, p. 80). The coverage of such databases is extensive with very good functionalities Examples include ProQuest and EBSCO's.

2.3 Awareness of Online Academic Databases among students

In order to get users to use a system or anything, there ought to be awareness as such will inform them about the system so they use it. Thus, Reinhardt, Mletzko, Sloep, & Drachsler (n.d.) defined awareness to be process of continual informing and reminding of people regarding something existing. They further elaborated awareness being able to impact users' use of systems. As such, works were reviewed in line with the awareness in relation to the online academic databases.

A study undertaken on the awareness and use of electronic databases by postgraduates in the University of Ibadan by Akinola, Shorunke, Ajayi, Odefadehan, & Ibikunle (2018) reported

that 79.4% of the respondents were not aware of both EBSCO Host and DOAJ. JSTOR rather was the database they were aware most of with 48.9%. Again, in the same study, it was revealed that many of the postgraduate students as large as "(71.8%) were not aware of HINARI; some of the students (44.3%) were aware of AGORA; few of the respondents (20.6%) were aware of DOAJ; a good number of the respondents (41.2%) were aware of AJOL" (Akinola et al., 2018, p. 6). However, taking into consideration the entire databases, it was seen in the same study that the students were aware of the e-databases as 87 (66.4%) respondents were aware against 44 (33.6%) who were not aware.

Basiru & Okwilagwe (2018, p.28) in the study of the awareness of electronic databases by academic staff in private universities in South-West Nigeria revealed that "e-resources (such as e-books, journals) are fully aware by the respondents (mean=3.58), followed by online public access catalogue (OPAC) (mean=3.54), e-abstract and indexes (mean=3.25), repositories (mean=3.15), e-archives(mean=3.12), e-bibliographies (mean=3.07) and e-prints (3.06)". This is ascertained by Isibika & Kavishe (2018) who revealed users of Mzumbe University library were aware of the subscribed e-resources.

In South Africa, a study on the use of e-resources by undergraduate students at the University of Venda by Tlakula & Fombad (2017) revealed that their awareness of the different e-resources is low. However, questionnaire issued to undergraduates to find out the awareness of different types of e-resources by Natarajan (2017) indicated that out of the 147 responses, 93 (62.8%) were aware of e-databases.

Studies abound in awareness of e-databases by faculty in university libraries (Yusuf & Farouk, 2017). A study by Yusuf & Farouk (2017, p. 24) on the awareness, access and use of academic

databases by faculty members found that "the faculty member's level of awareness is "average" in respect to Elsevier Sciencedirect, JSTOR, EBSCOHOST, AGORA, African Digital Library, Nigerian Virtual Library, HINARI and Indiana University press but "never" to all offline databases in the library".

Also, a study was conducted by Adam (2017) on the awareness and use of online scholarly database by Academics of Kaduna State University. It was revealed in the study that "almost all of the respondents are aware of the online database" (p. 6). It further indicated that Science Direct was the database that the respondents were aware most with 130 responses, followed by JSTOR with 120 responses, then by Springer with 118 responses, followed by AGORA with 110, followed by HINARI with 90 responses, then EBRARY with 80 responses, followed by Ebscohost with 75 responses, then Proquest and SCOPUS with 70 and 50 responses respectively. Verma (2016, p. 106) found similar results in the survey of Central Science Library, University of Delhi about the use of online databases that "70 (97.22 %), were aware and used Science Direct, 69 (95.83 %) and 61 (84.72 %) users were aware of and used Springer Link and IEEE Xplore, respectively. Fifty-eight 58 (80.55 %) users were aware and used EBSCO; 54 (75%) ABI/INFORM; 52 (72.22 %) Web of Science; and 51 (70.83 %) were aware and used Scopus". The survey further revealed that other databases available at the library were hardly used by the postgraduate students.

There are different studies done on the awareness and usage of databases in Ghana (Ahenkorah-Marfo, 2017; Dadzie, 2005; Kwadzo, 2015; Kwafoa et al., 2014; Sulemani & Katsekpor, 2007).

Ahenkorah-Marfo (2017, p. 8) found out that "the most patronized scholarly databases by graduate students included Sciencedirect, Wiley Online, HINARI, Sage Online, and JSTOR.

AGORA, Emerald Insight, and EBSCO Host also enjoyed considerable patronage from respondents."

Kwadzo (2015) in the study of awareness and usage of electronic databases by Geography and Resource Development and Information Studies graduate students in the University of Ghana revealed that 31 (96.9%) had heard about databases with a further 30 (93.8%) not just heard it but knew what they were. However, only 17 (53.1%) had the definition of e-databases right. A deduction from the answers provided revealed that 61.5% of those who had the definition right were Information Studies whereas 47.7% were the Geography and Resource Development students which the researcher indicated this can be due to the nature of their course that the Information Studies students had that result. In the same study, when the respondents were inquired to mention the databases they were aware of, only 23 were mentioned against the 83 databased subscribed by the University library. From the most mentioned to the least are "JSTOR (50%), Ebscohost (34.4%), Emerald (34.4%), Science Direct (25%), and AGORA (18.8%)" (Kwadzo, 2015, p. 13).

Also, Kwafoa, Imoro, & Afful-Arthur (2014) undertook a study in Ghana at the University of Cape Coast. It was found in the study that although the awareness about the general academic databases was high among the faculty members with a percentage of 92, they were not aware that such databases were subscribed by the university library. The study further revealed that though 83 out of the 217 responses knew about the databases, they did not make use of them.

Aina (2014) reported of a varied awareness of e-resources among the academic staff of Babcock Business School. In the study, it was seen that "majority of respondents were aware of Academic Journal 59 (69.4%), followed by JSTOR 48 (56.5%) as well as Dissertation and

Theses and Ebscohost with 46 (54.1) and 43(50.6) respectively." (Aina, 2014, pp. 44-45). The study further revealed that there were some databases subscribed by the library in the school that the students were not aware of and they are "Bookboon, World Bank Open Knowledge Repository and National Virtual Library with 22(25.9%), 28 (32.9%) and 25(29.4%) respectively" (p. 45). This is similar to the findings of Uma (2014) which also revealed awareness among the respondents with regards to the use of online databases.

Via the library staff, websites, circulations and notices, Chandran (2013) reported that library users found at Siva Institute of Frontier Technology in India were fully aware of the e-resources inclusive the e-databases with a percentage of 95.2.

Upadhyay and Chakraborty (2011) cited in Yusuf & Farouk (2017) indicated in their study that Science Direct and IEL are the most known online journal databases which the faculty and researchers are fully aware licensed through UGC-infonet. The same study revealed again that other known journal databases were Spring links. (56.25%), Taylor and Farncis (46.87%), Science (46.87%, Nature (31.25%) and Royal Society of Chemistry (28.12%).

However, a study by Angello (2010) revealed low awareness of e-databases by researchers of livestock in Tanzania. It was seen that just 24.4% had awareness of AGORA, 11.1% aware of HINARI, INFORM and OARE had an awareness percentage of 6.7 and the rest of the databases had 4.4%. Again, awareness of databases available in the University of Namibia had a low awareness among the nursing students as they were not familiar to them and neither did they use them (Ndinoshiho, 2010). The study revealed 86.4% of the respondents not using them.

A study by Swain (2010, p.584) in an attempt to find out the awareness of management specific online databases among students reported that "majority of students are aware of EBSCO (62.5

percent), followed by Emerald Management Xtra (52.6 percent)". The study further indicated that awareness of rest of the online databases was very low.

Velmurugan (2009) reported of high awareness of online databases by the faculty of Engineering College Chennai with 62.8% among the respondents. Haridasan & Khan (2009) also stated that there was awareness of e-resources among the respondents. Kaur & Verma (2009) indicated that due to the high awareness of the e-resources, the usage of e-journals usage is on the increase at Indian Institute of Technology, Delhi.

Borrego, Anglada, Barrios, & Comellas (2007) undertook a survey at universities in the Catalan to know the usage and users of e-journals. The findings from the study indicated 95% awareness of the various databases holdings of the e-resources among the faculty and researchers. In the same study, lack of awareness was seen among those who made use of the e-journals less.

2.4 Extent of use of Online Academic Database among students and academic staff

E-resources such as the online academic databases are subscribed to be used. The rate at which they are used influences continuous subscriptions. Hence, it is very important to identify the frequency of use of online academic databases as such determine those to continue subscribing to and those to stop. In view of this, studies have identified the extent to which online academic databases are used.

Muzzammil & Ansari (2019) indicated in their study at Bar library that e-databases are among the most used e-resources from 109 (55.6%) respondents. Wu & Chen (2010) reported graduate

students to be frequent users of e-resources. It was found by Rehman & Ramzy (2004, p. 152) that “more than half of the respondents used the library extensively”.

Akinola et al. (2018) found an occasional use of the e-databases at the University of Ibadan by the postgraduates. The findings revealed 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” (p. 11). The study further indicated that the occasional use of the e-databases can be attributed to the likeness of some databases compared to others, thus shunning the use of them even though they can give relevant information.

Yusuf & Farouk (2017) in their study of awareness, access and use of academic databases by faculty members found out that majority of them made “use of the online databases of the “sometime”.” (p. 25). Adam (2017) undertook the study of the awareness and use of online scholarly database by Academics of Kaduna State University, Nigeria. The findings indicated that out of the 130 respondents, 56 use the online database daily, in terms of weekly use, the study reported 28, then 15 using them twice a month, 25 had occasional use and 6 did not respond. Natarajan (2017) similarly reported that the undergraduate students in Jimma University made use of e-resources daily. Also, in the Central Science Library, a survey by Verma (2016) on the use of online databases stated that 41.6% of the postgraduates made use of them daily whiles 34% had a weekly basis use.

The study by Katabalwa (2016) revealed that most of the postgraduate students, 36 of them representing 39.6% at the University of Dar es Salaam used the e-journal resources weekly, 30 representing 33% accessed them daily, 24 representing 26.4% accesses them monthly and 1

representing 1.1% accessed them yearly. This is ascertained by the study of Vicente, Crawford, & Clink (2004) which revealed also that e-journals were accessed mostly weekly.
Dukić & Strišković (2015) indicated that Croatian students due to the inability to get full-texts e-journals and e-books from the databases do not make use of them regularly.

The study on medical trainees by Egle, Smeenge, Kassem, & Mittal (2015) stated that e-resources are used frequently by them for quick searches, answers and studies.

A survey by Ani & Edem (2012) in the University of Calabar, Nigeria on the extent of access and use of online databases by the academic staff revealed that whiles there was high access and usage of the online databases for the various purposes, the frequency of use was low as many (48%) respondents choose the occasional use of them.

Sharma, Singh, & Sharma (2011, p. 807) in their study indicated "a huge number of respondents make the use of e-resources usually i.e. 58 (89.23 percent) and 54 (87.10 per cent) in NDRI and NBAGR respectively. Few respondents use e-resources sometimes i.e. seven (10.77 per cent) and eight (12.90 per cent) in NDRI and NBAGR respectively." Again, the same study revealed that "Animal Science online is the most used database among the respondents i.e. 55 (88.71 per cent) and 40 (61.54 per cent) in NBAGR and NDRI respectively" (p. 809). The study also recorded that "25 (38.46 per cent) and 14 (22.58 per cent) respondents of NBAGR and NDRI respectively prefer to use Aqricola" whereas "Web of Science is the least used database among respondents" (p. 809).

Ndinoshiho (2010) reported in a descriptive study of e-information services usage by undergraduate nursing students that among the 13.6% who are found to use the e-databases,

just 1.5% made use of them daily, 3.8% had monthly use and 3% hardly made use of them. One thought evoking finding in the same study was Medline database not been known by the respondents as it is seen to be one of the most well-noted medical databases.

Tahir, Mahmood, & Shafique (2010) reported in their study that online databases were the sixth most used having a mean score of 2.68. Haridasan & Khan (2009) reported that 55.56% social scientists of NASSDOC accessed e-resources weekly whereas 33% accessed them occasionally. Ozoemelem (2009) also stated that e-resources use among student population is high.

In terms of demographics, Borrego, Anglada, Barrios, & Comellas (2007) indicated that, the e-journals were highly used by those under forty whereas those over the fifties preferred the print counterpart in the Catalan universities.

A survey undertook by Bar-Ilan, Peritz, & Wolman (2003) to know the use of e-databases and e-journals at Israeli Universities revealed that 76.6% of the respondents made use of either the e-databases or the e-journals with 85.2% of the respondents having the belief that they have control over the use of the e-resources. This indicates the online databases or the e-journal are highly used by the Israeli Universities.

In Ghana, Dadzie (2005) revealed that at Ashesi University, among the scholarly databases Emerald is the most used with 18%, followed by Academic Search Premier, and lastly Blackwell-Synergy with 12%. In terms of frequency, the same study revealed that 5% of the respondents made use of scholarly databases always whereas 14% often made use of them and with 58% stating they hardly or have never made use of them.

2.5 Purpose and the ease of use of Academic Databases among students

Online academic databases in which there are a number electronic resources such as journals, books and among others are of great use to their population. However, the use of the online academic databases differs from one user to the another, one group to another. In view of this, studies have tried to identify the diverse purposes for the use of the online academic databases among different groups of people.

A study by Ahmed (2013b) concluded that, such electronic resources aided faculty members in their studies, teaching, research and getting hold of up-to-date contents. Also, in the same study, it was found out that these electronic resources from the databases helped with personal development as through that, the faculty members are able to increase their knowledge base, help with preparation for academic lessons for students and supporting research as well. Manda (2005) had the same results with a study conducted where it was found that the electronic resources are being used by the staff for finding materials to support research and teaching as well. Vicente, Crawford, & Clink (2004) opined that at Glasgow Caledonian University, the academic staff preferred the use of electronic resources over that of the print counterparts.

The use of electronic resources is not limited to the staff or faculty but the students as well both at the graduate and the undergraduate levels for different purposes. Natarajan (2017) indicated a large number of the students made use of the e-resources for research purposes, that is, 140 (94.6%). Other uses indicated included peer learning, getting current information, getting job related information and among others in the same study.

Manda (2005) indicated that electronic resources accessed from the various databases are used by the students as means to get information to aid them in their academic works and researches.

Students make use of the electronic resources in their studies, getting up-to-date information and researches (Ahmed, 2013a; Ali, 2005; Egberongbe, 2011; Katabalwa, 2016; Kumar & Kumar, 2010; Pandita, 2012; Sudhier & Seethalekshmi, 2011).

With regards to the use of specific online databases by staff and students, the findings found differ not from the general e-resources. Yusuf & Farouk (2017) found out that academic staff at Bayero University used the e-databases for researches, preparation tool and getting current information. Adam (2017) also revealed similar findings where at Kaduna State University academics made use of the online scholarly databases for research, self-improvement, teaching and among others. These same findings are ascertained by Aina (2014) and Akinola et al. (2018).

Adesoye & Amusa (2013) found out that electronic resources are used by healthcare personnel in tertiary institutions for their work, research, teaching and getting current information. This is back by Rehman & Ramzy (2004) who indicated that the Health Sciences Center of Kuwait University had their medical professionals making use of e-journals to become the second most used by them. The study by Egle, Smeenge, Kassem, & Mittal (2015) reported that medical trainees used e-resources regularly for "quick studying, clinical decision-making questions, and medication queries" (p. 316).

Researchers also make use of e-journals from the academic databases as and when they are undertaking their researches (Katabalwa, 2016). Amjad, Ahmed & Bin Naeem (2013) opined that researchers are now highly dependent on the electronic resources as they are now the main materials for their activities. Researchers' primary aim of using the electronic journals "for

learning, research purposes and to update knowledge in their research areas" (Amjad et al., 2013, p. 325).

Concurrently, whiles with the use of the e-resources in the databases, some studies have found out that the student population do not just use them but "emphasize ease of use, search, and access to information (Arya & Talukdar, 2010; Beard, Dale, & Hutchins, 2007; Kandpal et al., 2013; Ranganadham & Babu, 2012; Sudhier & Seethalekshmi, 2011; Uçak, 2007)" as cited in (Dukić & Strišković, 2015, p. 246).

Madhusudhan (2010) found that 78% of the respondents on the study of research scholar at Kurukshetra University found the e-resources easy to use. Wu & Chen (2010) also indicated the ease of use of library's e-resources by graduate students. Sharma et al. (2011, p. 809) revealed that "respondents of NBAGR 62 (100 per cent), and 55 (84.62 per cent) respondents of NDRI can access the various e-resources easily." Similar finding was stated by Sharma (2009) where 42 representing 80.77% teachers and 26 representing 86.67% research scholars found it easy to use the electronic resources.

Easy access affects the usage of the online databases as it was opined by Naidu, Rajput, & Motiyani (2009) e-resources are used regularly due to ease of accessing the information. This is ascertained by Kwadzo (2015) that students put high value on easy access and use of online databases compared to other reasons.

Basically, online databases have grounded their roots in the learning, research, teaching and means as getting updated information among faculty, students, researchers and others (Adam, 2017; Aina, 2014; Akinola et al., 2018; Katabalwa, 2016; Verma, 2016; Yusuf & Farouk,

2017). It is seen again that these online databases in which a number of e-resources are accessed have impact on the students' academic endeavours as without them they will suffer negatively (Adeniyi-Aderibigbe & Adebimpe-Ajiboye, 2013).

2.6 Level of satisfaction and mode of access of the Academic Databases among students

In order to get people to continue to use one's product and services, there ought to be high satisfaction as when one is dissatisfied, they might shun the service or product. Likewise, with the use of online databases, making satisfaction a critical factor. As such, there have been a number of studies having findings about the satisfaction from the use of online databases (Egharevba, 2018; Kwadzo, 2015; Kwafoa et al., 2014; Malabanan & Bayeng, 2019; Saikia & Gohain, 2013; Verma, 2016; Virumandi, Sivankalai, & Chellapandi, 2014).

Malabanan & Bayeng (2019) revealed that there is moderate satisfaction among the students and faculty at UPHSL with regards to the use of EBSCOhost. Also, the same study indicated that the level of satisfaction and usage are the same across gender, user type and educational status. The study again found a relationship between level of satisfaction and level of use of the EBSCOhost as the higher the level of satisfaction, the higher the usage.

Egharevba (2018) found out students at Igbinedion University were satisfied with the use of online databases compared to other ICT-based resources. Verma (2016) revealed in the survey there were high satisfactions with the browsing, interfaces and links of Science Direct, Springer Link, Web of Science, EBSCO and among others. Similarly, Kwadzo (2015) also found a high satisfaction of 87.5% among the postgraduates at the University of Ghana. Virumandi et al. (2014) and Kwafoa et al. (2014) also report of high levels of satisfaction among their

respondents in respective studies with regards to the use of online databases. Saikia & Gohain (2013) also reported of high satisfactions on the online databases resources.

With mode of access to the e-databases, there are certain technologies one has to get in order to facilitate the access to the various contents. Yusuf & Farouk (2017) found out that as many as 98 (89.1%) of faculty members at the Bayero University Library used personal computers to access the e-databases whereas 76 (69.1%) used their mobile phones. With regards to the use of internet café, the study revealed that 25 (22.7%) made use of it. Thus, access is not much with internet cafés. It was also seen that 92 (83.6%) indicated they do not access the e-databases via the library's e-learning computers. However, in Ghana, Akuffo & Budu (2019) found that 16 (48.5%) of the respondents accessed their respective e-resources at the library and ICT centre, with 11 (33.3%) getting them at the library. Amankwah (2014) also reported that 15 (45%) of the respondents in his study accessed the e-resources through the laptops only, 8 (24.2%) did it via iPads and/ or tablets only and then 4 (12.1%) mentioned they use all the mentioned devices.

2.7 Challenges related to the use of Academic Databases among students

The use of systems come with various challenges. Some can result from the users or the system itself. Using online academic databases is no different as certain skills, knowledge and technology are required. This in one or altogether can result in challenges that prohibit the use of the online academic databases. These various challenges that beseech the use of online academic databases have been seen in literature as indicated by different scholars. Some of the challenges identified have been reviewed below under the various identified themes.

2.7.1 Inadequate Computer Infrastructure

The online academic databases require the use of computer infrastructure and the lack of such thereof results in a challenge for the users. A number of studies have indicated inadequate computer infrastructure as a challenge to the use of e-resources (Agboola, 2010; Akinola et al., 2018; Dadzie, 2005; Hadagali, Kumbar, Nelogal, & Bachalapur, 2012; Manda, 2005b; Thanuskodi, 2011).

Manda (2005) indicated that the student population in many Tanzania institutions outnumbered the personal computers in each institution, thus, resulting in limited access to the computers. This is back by the findings of Harle (2009) which found out that African universities' ICT infrastructures are poorly developed. Since PCs are crucial tools to help one get access to the databases in order to get access to the electronic resources, such limitation restricts the use of the databases (Katabalwa, 2016). Also, Shija (2009) came out that Tanzania is facing a similar challenge with regards to computer infrastructure as there are limited computers to facilitate the use of the e-journals whereas there are those who do not even have the computers to enable access to the databases. Shija (2009) continued that not everyone in Tanzania is well resourced enough to have their own ICT devices such as the computers, mobile phones and among others to aid them to use the e-resources. Akinola et al. (2018) also found that inadequate infrastructure posed as the fourth most identified challenge in the use of e-databases by the postgraduates at the University of Ibadan with a mean of 2.78.

2.7.2 Issues with Bandwidth and the Internet

Since it is online, these academic databases need strong internet access to facilitate the use of them. However, there are studies that have identified the inadequacy of the internet to be a challenge. Studies have identified slow speed of the internet as being a challenge with the use

of e-resources (Manda, 2005). Manda (2005) indicated that most libraries in Tanzania had a bandwidth capacity of less than 1 MB/s whereas just a single library had 2 MB/s and this as a result resulted in constant complaints from the users. According to Shija (2009), most users in Tanzania had a bandwidth capacity from 16 to 32kbps, with even a few falling below this range and even few also above the range. This Shija (2009) opined that it leads to slow internet connections and prohibits access to the e-resources. Harle (2009) had the same findings in Tanzania where the study confirmed that there was slow internet connectivity which in turn made affected the access of the e-resources in the databases. This, then made them turn to commercial internet cafés in order to access the electronic resources (Harle, 2009). Ahmed (2013b, p. 301) with regards to slow internet led to a "major constraint significantly related to overall satisfaction with the university subscribed resources". Katabalwa (2016) indicated 51 representing (53.7%) and 48 representing (50.5%) of the respondents in the study of the use of e-journal resources by postgraduates had the challenge of inadequate bandwidth and slow download speed respectively. Low bandwidth often leads to slow internet and downloads (Katabalwa, 2016; Sharma et al., 2011). Madhusudhan (2010) reported 68% of the respondents in a study about research scholars in Kurukshetra University considered slow access speed as a challenge to the use of the e-resources. Other studies such as Akinola et al. (2018) also reported of slow internet connection to be the highest indicated challenge by the postgraduates at University of Ibadan with the mean of 2.98. In Ghana, Kwafoa et al. (2014) reported slow nature of the internet as third major challenge to the access of online academic resources at University of Cape Coast with a percentage of 35.92%.

2.7.3 Erratic Power Supply

Technology requires constant power to keep on functioning and as such irregular power supply is also a challenge found in various studies (Agber & Agwu, 2013; Akinola et al., 2018; Katabalwa, 2016; Manda, 2005). In Tanzania, Manda (2005) and Shija (2009) indicated that constant erratic power supply affected the internet availability and made it difficult for users to get access to the e-resources. It was reported in Nigeria by Agber & Agwu (2013) that constant erratic power supply affected power dependent machines like the computer not perform as expected. The study on postgraduates' use of electronic journal resources by Katabalwa (2016) reported that 67.4% of the respondents indicated that erratic power supply was a challenge to the use and access of the e-journals. This is supported by Akinola et al. (2018) who also found out that incessant power outrage was a well-known challenge at the University of Ibadan.

2.7.4 Lack of Searching Skills

Not having the needed searching skills to navigate the various databases in order to access the electronic resources posed as a challenge to the use of the databases by students and faculty (Adam, 2017; Akinola et al., 2018; Katabalwa, 2016; Manda, 2005b; Rehman & Ramzy, 2004). Shija (2009) indicated that one not possessing the requisite skills creates a challenge as one needs to find his or her way around the computer and the internet in order to access the e-journals, e-books and among others. Gakibayo, Ikoja-Odongo, & Okello-Obura (2013, p. 17) debated that "lack of retrieval skills and other computer skills limit student's ability to effectively access electronic resources" as such skills are the requirements needed for one to make effective use of the e-resources. A study by Ali (2005) at the IIT Delhi library indicated that 60% of the users had challenges when navigating through e-resources. Natarajan (2017) reported that due to the lack of searching skills, 62.2% of the undergraduate students were not

able to get the relevant information needed. Again, Adam (2017) in the findings at Kaduna State University came out with challenge of lack of skill as the second most chosen among the respondents.

2.7.5 Lack of Awareness of the Available Resources.

Lack of awareness of the subscribed databases to access the electronic resources posed as a challenge to the use of the electronic resources. When students are not well abreast or in the known with the subscribed databases in their respective institutions, they do not see how they electronic resources can help them in their studies and research activities (Ahmed, 2013b; Katabalwa, 2016). Thus, they see no need to make use of them. In Tanzania, Manda (2005) reported that issues of high levels of unawareness was a challenge to many institutions. Rosenberg (2008, p. 56) supported this claim as the study by the researcher indicated that "lack of awareness of the wide range of electronic resources available contributed to the low level of use of library resources".

2.7.6 Lack of Training

Training is crucial for the end-users to be made aware and being able to use and access the electronic resources. When this is lacking or inadequate, it poses as a challenge to the use of the databases to access the electronic resources. Kumar & Kumar (2010) indicated in their study that inadequate information on how to fully make use of the e-resources posed as a challenge to the use and access of the resources by 36% of the respondents. In the study by Manda (2005) it was seen that training and support for the use of the e-journals and other electronic resources was very low leading to the state of the end-users not being in the know of how to make use of them. Shija (2009) also saw that inadequate training with regards to ICT

and internet resulted in low access and use of the e-journal materials. Kinengyere (2007) made the argument that low usage of the e-resources may be from the low level of awareness of the subscribed resources or due to the fact that users cannot and do not have the needed skills to access them and in which the researcher suggested for a training based on information literacy to curb this challenge. Gakibayo et al. (2013, p. 17) raised the issue that "students need training in wider range of ICT applications for them to make full use of technology in utilizing e-resources". This is also affirmed by Judd & Kennedy (2011) that in order for students to make full use of online resources, there ought to be additional training to develop skills and competencies. Muzzammil & Ansari (2019) found out at Bar Library, their main setback with regards to the access and use of e-resources was the inadequate knowledge to make use of them.

2.7.7 Lack of Access outside the Institution

When access to the databases is limited to when one has to be on campus or the premise in order to get access, it can pose as a challenge as identified by studies (Katabalwa, 2016). Ahmed (2013b) reported that faculty considered inability to access from home a challenge. It is a limitation when access to the electronic resources is confined to the university campus' computer network architecture (Katabalwa, 2016). The study by Katabalwa (2016) found out when the e-journal resources access is within the IP range of the university's network, it posed as a challenge since the users could not access it aside being on campus.

2.7.8 Inadequate Funds

Academic and research institutions are battling the challenge of insufficient funds. Shija (2009) opined that adequate funds are crucial for the required training to aid users to improve upon

their skills in relation to ICT and applying them for effective usage of the e-journal. Again, functionalities such as the computers, network coverage and capacity improvement, that is, the bandwidth, subscriptions to the needed databases and among others all require funding in order to be fruitful and if the funding is lacking, then it becomes a challenge to facilitate the access and use of the e-materials (Katabalwa, 2016).

2.7.9 Underuse of Electronic Resources

The study by Harle (2009) reported that some libraries do not subscribe to the databases due to the issue that they do not have the capacity to make full of them effectively and efficiently. A study in Tanzania revealed that e-resources were not used to the maximum as they were underused to the extent that some libraries even advertised resources they have not subscribed to every year Harle (2009).

2.7.10 Difficulty to find relevant information

Difficulty in finding the relevant information is another recurring challenge found in different studies (Akinola et al., 2018; Deng, 2010; Katabalwa, 2016; Naughton, 2015; Tsakonas & Papatheodorou, 2007; Xie, 2006).

Ahmed (2013b) indicated that the inadequacy of faculty members to locate the needed information to satisfy their needs was reported as a challenge for them. Another study by Ahmed (2013a) confirmed the stand and further indicated that the student body also faced the same challenge of not getting the needed information and reported the same complaints. The study then pointed out that “there was a significant relationship between a difficulty in finding relevant information and opinion on overall satisfaction at the University” (as cited in

Katabalwa, 2016). Natarajan (2017) also revealed inadequacy of the undergraduate students to find the relevant information was their primary challenge in accessing the e-resources. Likewise, Akinola et al. (2018) indicated that irrelevant information was a barrier to the use of e-databases by the University of Ibadan postgraduates.

2.7.11 Access and coverage of contents

Sometimes issues of access to the contents in the e-resources such as the online databases pose as a challenge. Kwafoa et al. (2014) stated that due to the fact that the monies institutions have to pay for as subscriptions in order to get access keep on increasing, it becomes a challenge as when they are not able to continue with the subscription, access is denied. Again, Akinola et al. (2018) reported of the inaccessibility of some websites as it leads to denial of services to the e-resources. Ahenkorah-Marfo (2017) also revealed that when topical information in the databases are scattered, it posed as a challenge as access to some related contents becomes difficult.

2.8 Summary

The objective of the literature review was to find similar works to the study at hand and as such, this chapter has review works from the World view, African view and the Ghanaian view as well on the various themes relevant to this study.

It was seen in literature that there was high awareness of electronic resources with online databases been inclusive. However, this high awareness did not correlate with the usage of the e-resources as the population will be aware but there will be low usage of them.

It was again revealed in literature that users of online databases mostly use them for academic works, researches, getting up-to-date contents and increasing their knowledge base.

The main challenges revealed in literature concerning the use of online databases had to do with inadequate computer infrastructure, bandwidth and network issues, erratic power supply, lack of searching skills, lack of awareness, lack of training, limited access, inadequate funds, underuse of e-resources, difficulty in finding relevant information and access and coverage of contents.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter focused on the methods and procedures that was used to undertake this study. Research methodology refers to the various definite techniques used in the identification, selection, processing, and analysing information related to a study as it allows the reader to carefully analyse a study's overall validity and reliability as it seeks to show how data will be collected and the analysis of it (Heever & Drennan, 2020).

The various sub-themes under this section which were looked at are the research design, population of the study, sample size, sampling technique, instrumentation, data collection procedure, data analysis and presentation of data.

3.2 Research Design

Research designs refer to the various plans and procedures for research that brings out the idea about the methods of data collection and analysis. The choice here is to decide which design would be appropriate for a particular study. "Informing this decision should be the worldview assumptions the researcher brings to the study; procedures of inquiry (called strategies); and specific methods of data collection, analysis, and interpretation" (Creswell, 2013, p. 22). The selection of a research design can be influenced by the nature of the research topic, personal experiences, and the audiences for the study (Creswell, 2013). A research design provides a procedural plan used by researchers to answer questions validly, objectively, accurately and economically (Kumar, 2011).

This study adopted a case study design. Case study helps to achieve triangulation of data as it gives the researcher a chance to collect data using different techniques, such as interview, experiment and among other, inclusively under a single study (Teegavarapu, Summers, & Mocko, 2008).

3.2.1 Research Approach

The quantitative approach was employed for this study as it serves as a means for testing objective theories by looking at the relationship that exist among variables and helps in measurement, especially on instruments, to enable analysis using statistical procedures on numbered data. It helps in generalisations and duplication of findings (Creswell, 2013). Quantitative approach is a well-known method for large data collection from a sizeable population in an economical way. Questionnaires are mostly used in this approach for data collection as it aids in easy comparison (Acheampong, 2016). This approach can give quantitative description of attitudes and trends of a population (Creswell, 2013).

3.3 Research Environment

This section gives a short account of the place where the research was conducted.

3.3.1 Accra City Campus

This is a fee-paying campus of the University of Ghana under the college of Humanities and offers courses in the various departments under the College of Humanities and Education. Currently offers courses leading to the award of Certifications in BA and B.Sc. (Administration) (“University of Ghana Accra City Campus,” 2019).

3.4 Selection of subjects

The people chosen for a particular study are subjects and in this, the population, sample size and the sampling technique are looked at.

3.4.1 Population

The population refers to the group of people whose information the researcher needs for the study at hand. According to Agbofa (2012, p.32) “The target group which the researcher is interested in gaining information and drawing conclusions is known as the population”. It is defined by Sekaran & Bougie (2009, p.228) as “the entire group of people, events, or things of interest that the researcher wishes to investigate.”. Thus, the population refers to the people in whom we are interested in carrying out our study on as they meet the characteristics of the study being undertaken.

The population chosen for this study was all the undergraduate students at the Accra City Campus of the University of Ghana who offered Bachelor of Arts courses. They included all the levels, that is, from Level 100 to 400. The reason for their selection was to see if they make use of the various databases subscribed by the Balme Library and their awareness as well as they are all part of the institution even though they are not on the main campus. There was a total of 3005 students with all the levels combined and the various breakdowns are seen in Table 3.1.

Table 3.1: Bachelor of Arts Population at Accra City Campus

Bachelor of Arts (Accra City Campus)	Number
Level 100	1182
Level 200	566
Level 300	582
Level 400	675
Total	**3005**

Source: College of Humanities (2020)

3.4.2 Sample Size

According to Kumar (2011, p.177) "A sample is a subgroup of the population you are interested in.". It is the means of getting information about an overall population by taking and analysing only a part of it. It helps in generalisations as it must be a true representation of the characteristics of the population. It is mostly being done because it saves time and money compared to a census, produces faster results, it can give accurate measurements when done properly and helps one to estimate sampling errors (Kothari, 2004). This is a subset of the population (Sekaran & Bougie, 2009).

In this study, the sample size was selected based on the sampling ratios made by Alreck and Settle (2004) in which they came out that if the population at hand is huge, that is, it is more than 1000, then, 10% can be chosen to represent the entire populace. Inferring from this, 300.5 will be the sample size as it is 10% of the total population which is 3005 but we are dealing with human beings so, it was be rounded up to 301. This was calculated below:

Population=3005

Sample size=$\frac{10}{100} x\ 3005 = 300.5$ = 301

Therefore, the calculation of the sample size in each stratum is depicted below:

Level 100 = $\frac{1182}{3005} x\ 301$ = 118.4 = 118

Level 200 = $\frac{566}{3005} x\ 301$ = 56.7 = 57

Level 300 = $\frac{582}{3005} x\ 301$ = 58.3 = 58

Level 400 = $\frac{675}{3005} x\ 301$ = 67.6 = 68

The above computations are depicted on Table 3.2 below:

Table 3.2: Sample of the Bachelor of Arts Students

Bachelor of Arts (Accra City Campus)	**Number**
Level 100	118
Level 200	57
Level 300	58
Level 400	68
Total	**301**

3.4.3 Sampling Technique

Sampling is the process of selecting a certain number, that is, a sample from the large population to serve as the basis for predicting an outcome about the large population (Kumar,

2011). This study adopted both stratified sampling and convenient sampling. The various levels of the students represented for each as a stratum. Thus, they were placed in each stratum based on their level and convenience sampling was used to select each participant from the various strata. Due to the Covid-19 situation and since some details of the students are not let out to researchers by the University Authorities easily, convenient sampling was used to select the various students in each stratum. Convenience sampling involves the gathering of data from members of a population who are readily available to participate and to give information and it is one of the best ways of collecting information quickly and efficiently (Sekaran & Bougie, 2009).

3.5 Instrumentation

The researcher used questionnaire as the tool for collecting the data from the students for this study. A questionnaire according to Sekaran & Bougie (2009, p.174) is "a preformulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives". They are very efficient in data collection when the means and procedure to measure the variables of interest are known. They can be given in person, through mails and even electronically. A questionnaire is made up of questions arranged in a particular order on forms. They are mostly used because there are of low cost, free from biases, enough time for one to give answers and can help in large samples (Kothari, 2004). There were divisions of the questionnaire into various parts based on the objectives of the study.

3.6 Data Collection Procedure

The researcher collected the data used for this study at University of Ghana Accra City Campus. Questionnaires were distributed to the students who were among the participants of the study.

The distribution was done at their lecture halls where permission was sought from the Tutors and Teaching Assistances before given out to the students. After filling the questionnaires, the students handed over the papers to the course rep which after the lecture period, the researcher went for them. Again, distribution took place at the library at the Accra City Campus where most students were found to be before or after their lectures. The researcher after giving out the questionnaire to the students waited for them to finish and collect the questionnaires. Also, residential facilities of the students at the Accra City Campus were places the researcher went to and gave out the questionnaires to available students and collected them after them filling, where also, there were some who were given the questionnaires whom the researcher took their contact details later went for them as they could not fill at the given time.

Again, online version of the questionnaire was designed through the use of Google Forms and sent via WhatsApp and electronic mails to the participants for data to be collected due to the outbreak of the COVID-19. The researcher sent the Google Form link to the WhatsApp groups and personally through their mails which the students responded with a feedback after filling.

3.7 Data Analysis and Presentation of data

All completed questionnaires received were checked to ensure the right things were done. Incomplete questionnaires in which respondents failed to answer a number of critical portions was discarded. Afterwards, there was a manual coding of the various questions on the questionnaire and each response was given a special code which was used to enter into the computer using the software called the Statistical Package for Social Sciences (SPSS) version 21. This software is mostly used in analysing data statistically.

The output of the responses was generated from the SPSS and were transferred to Microsoft Excel 2016 to present them in the form of descriptive statistics such as frequency distribution tables, pie charts, bar charts and line graphs.

3.8 Validity and Reliability

According to Kumar (2011, p. 168) when "a research tool is consistent and stable, hence predictable and accurate, it is said to be reliable". Again, Kumar (2011) indicated validity to be when an instrument selected is able to measure what it is intended to measure. To achieve validity and ensure reliability, the questionnaire was first given out to faculty members and some library staff who have advanced knowledge in the online academic databases as well as four students from the UG City Campus (one for each level). From their comments and reviews, some of the questions were reframed whiles some were added and also the wordings of some sections were changed to suit the level of the respondents' understanding so they can provide the needed responses to the questions to meet the objectives of the study.

3.9 Ethical Consideration

An introductory letter was taken from the Department of Information Studies to the College of Humanities to permit the researcher to carry out the study. Due explanations were given to respondents explaining the intent and use of the study to seek their consent. Confidentiality and anonymity were the trademark of this study. All resources consulted in this study were duly acknowledged.

The researcher strictly abided by all the standards and code of ethics regarding academic research works in the University of Ghana.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

The emphasis of this chapter is on the data analysis, interpretation and discussion of findings in relation to the objectives of the study. Based on the sample size, 301 questionnaires were given out and expected to return, however, 256 questionnaires were returned giving the study a response rate of 85%. Based on the objectives of the study, the questionnaire sought to get information concerning the level of awareness of the online academic databases, the extent of use of the online academic databases, the purpose of use of the online academic databases, the ease of use of the online academic databases, the level of satisfaction of the use of the online academic databases, the mode of access to the online academic databases and the challenges related with the use of the online academic databases.

The Statistical Package for Social Science (SPSS) was used for the analysis of the responses given and transferred to Microsoft Excel 2016 for the graphical representations such as the bar charts, pie charts, line graphs and the table frequencies. Below present the results of the responses.

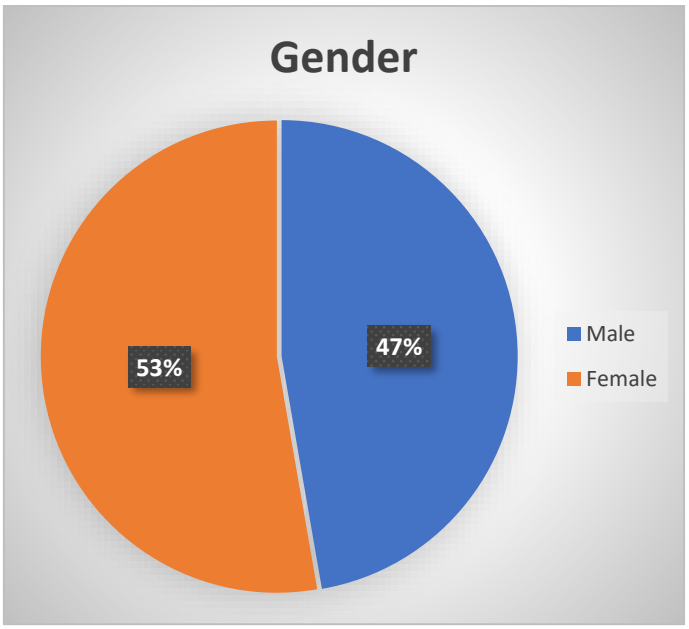
4.2 Biographic Data

This section of the questionnaire looked at the gender, age range, departments of respondents and the level of respondents. There are seen below.

4.2.1 Gender

The study enquired about the gender of the respondents and this is depicted in Figure 4.1. This is depicted in Figure 4.1.

Figure 4.1: Gender



Source: Field Data, 2020

As seen in Figure 4.1, out of the 256 responses, 135 representing 53% were females and 121 representing 47% were males. This shows there were more female respondents than the male counterpart.

4.2.2 Age Range

The study then sorted out to find the age ranges of the respondents and this is seen in Table 4.1.

Table 4.1: Age range

Age Range	Frequency	Percent
21-25	151	59
16-20	88	34.4
26-30	17	6.6
Total	**256**	**100**

Source: Field Data, 2020

Table 4.1 shows that 151 (59%) were within the age range of 21-25, followed by 88 (34.4%) within the age range of 16-20 and 17 (6.6%) within the age range of 26-30. This depicts most of the respondents were in the age range of 21-25.

4.2.3 Department

The population of the study were the Bachelor of Arts (BA) University of Ghana students at the Accra city campus and under the BA, a number of courses are run and as such, different departments. Students at Level 100 are given three (3) courses which they can drop some as they progress to higher levels. This is seen in Table 4.2.

Table 4.2: Department

Department	Frequency	Percent
Information Studies	156	60.9
Political Science and Information Studies	20	7.8
Psychology	18	7
Political Science	17	6.6
Psychology and Information Studies	10	3.9
Geography and Resource Development	6	2.3
Sociology and Information Studies	6	2.3
Economics	3	1.2
Sociology	3	1.2
Psychology and Linguistics	3	1.2
Information Studies and Philosophy and Classics	2	0.8
Information Studies and Study of Religions	1	0.4
Political Science and English	1	0.4
Political Science and French	1	0.4
Economics and Information Studies	1	0.4
Geography and Resource Development and Archaeology and Heritage Studies	1	0.4
Political Science and Philosophy and Classics	1	0.4
Political Science and Study of Religions	1	0.4
Political Science and Theatre Arts	1	0.4
Archaeology and Heritage Studies	1	0.4

Psychology, Information Studies and Linguistics	1	0.4
Social Work	1	0.4
Sociology and Philosophy	1	0.4
Total	**256**	**100**

Source: Field Data, 2020

As depicted in Table 4.2, out of the 256 responses, 156 (60.9%) indicated they belonged to the Information Studies Department only, 20 (7.8%) indicated they are in both the Political Science and Information Studies Departments, 18 (7%) belonged to the Psychology department only, 17 (6.6%) chose the Political Science Department only, 10 (3.9%) indicated they are in the Psychology and Information Studies Department, 6 (2.3%) were in the Geography and Resource Development Department, and again same for both Sociology and Information Studies, 3 (1.2%) each were in the Economics Department, Sociology Department and Psychology, and Linguistics, 2 (0.2%) were also in the Information Studies and Philosophy and Classics Department and the rest with 1 (0.4%) each belonged to Information Studies and Study of Religions, Political Science and English, Political Science and French, Economics and Information Studies, Geography and Resource Development and Archaeology and Heritage Studies, Political Science and Philosophy and Classics, Political Science and Study of Religions, Political Science and Theatre Arts, Archaeology and Heritage Studies, Psychology, Information Studies and Linguistics, Social Work and Sociology and Philosophy departments. It can be seen that most of the respondents had Information Studies as one of their departments.

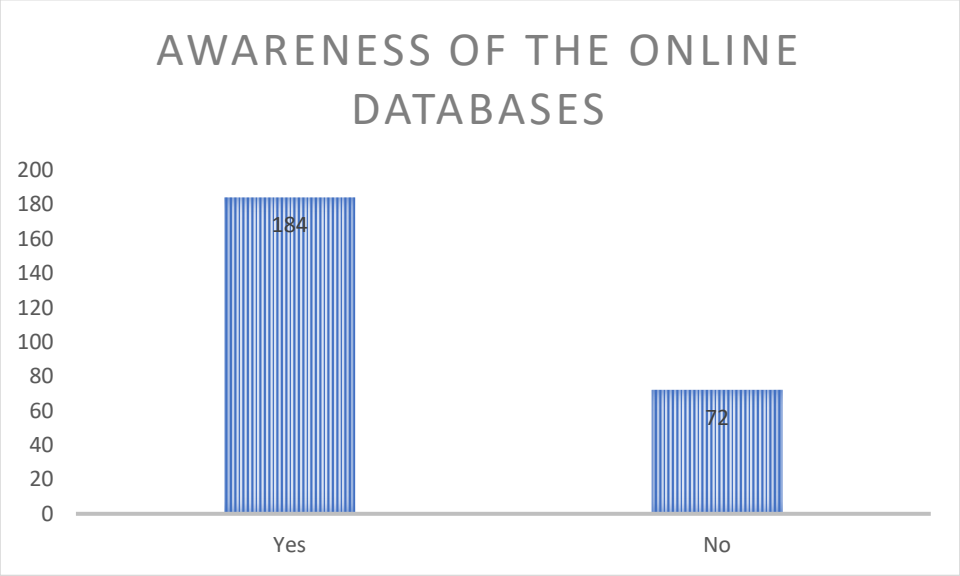
4.3 Awareness of Online Academic Databases

This section of the questionnaire looked at if the respondents were aware of the online databases, examples of online databases they are aware of, how they got to know, the ease of knowing the databases, and what has to be done to help know the online databases. The responses are represented below.

4.3.1 Awareness of the Online Databases Subscribed by the University Library

One of the objectives of the study was to find out the awareness level of the BA students in relation to the subscribed databases by the University Library and the responses are seen in Figure 4.3.

Figure 4.3: Awareness of the Online Databases



Source: Field Data, 2020

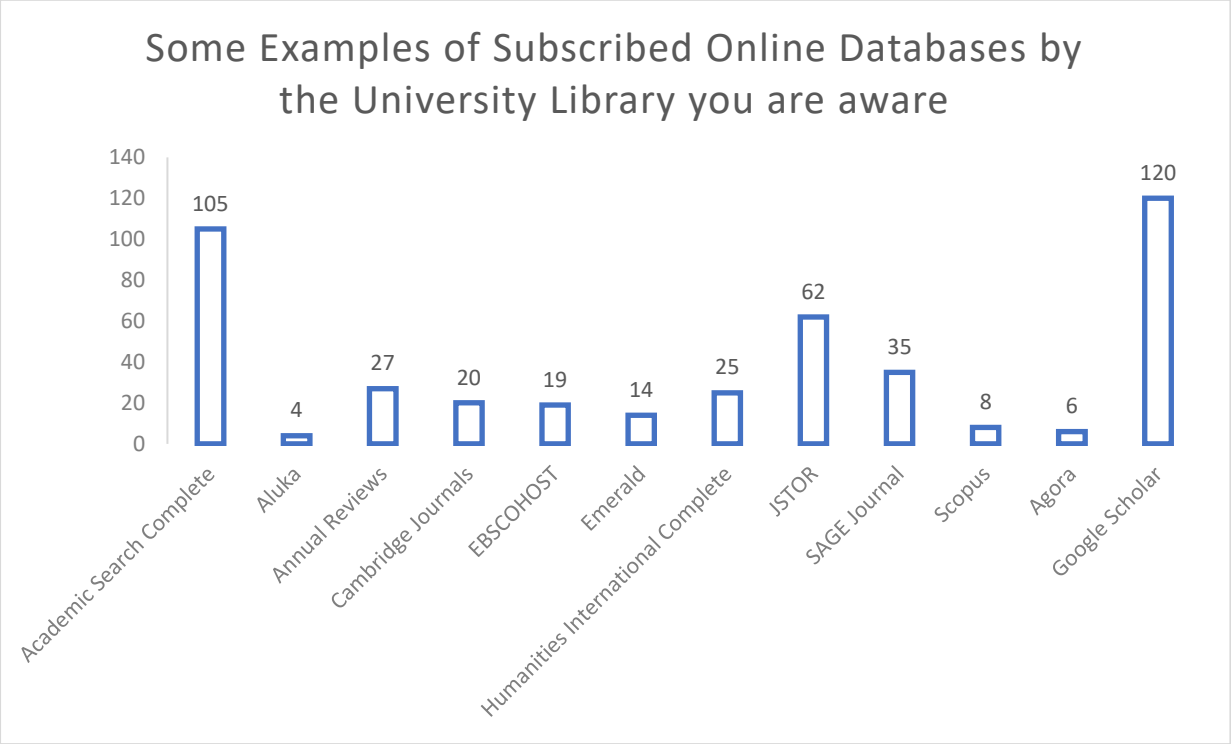
As seen in Figure 4.3, out of the 256 responses, 184 representing 72% were aware of the online databases subscribed by the University Library whereas 72 representing 28% were not aware

of them. This shows a high level of awareness.

4.3.2 Examples of Online Databases Subscribed by the University Library that you are aware of

There was a follow up question to know some examples of the online databases subscribed by the University Library that they were aware of and the responses are represented in Figure 4.4.

Figure 4.4: Subscribed Online Databases by the University Library you are aware



Source: Field Data, 2020

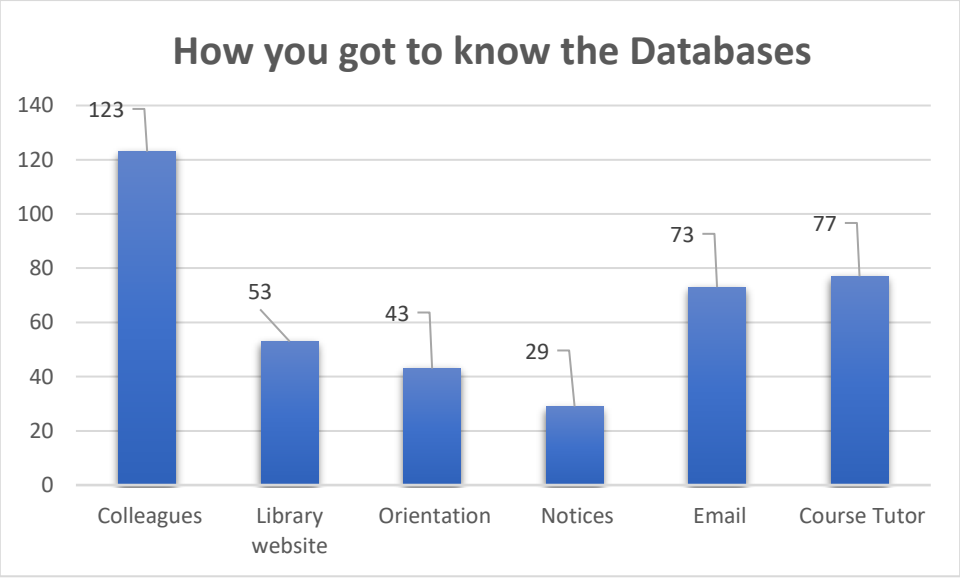
As represented in Figure 4.4, out of the 256 received questionnaires, with 256 responses for each, 120 (46.9%) were aware of Google Scholar, 105 (41%) were aware of Academic Search Complete, 62 (24.2%) were aware of JSTOR, 35 (13.7%) were aware of SAGE Journal, 27 (10.5%) were aware of Annual Reviews, 25 (9.8%) were aware of Humanities International Complete, 20 (7.8%) were aware of Cambridge Journals, 19 (7.4%) were aware of

EBSCOHOST, 14 (5.5%) were aware of Emerald, 8 (3.1%) were aware of Scopus, 6 (2.3%) were aware of Agora and 4 (1.6%) were aware of Aluka. This shows a high awareness for Google Scholar and Academic Search Complete compared to the other online databases.

4.3.3 How you got to know about the Online Databases

There are a number of media through which awareness about the online databases subscribed by the University Library are done in order to get the population to know about them. As such, the study enquired to find out how the students got to know about the databases and this is depicted on Figure 4.5.

Figure 4.5: How you got to know the Databases



Source: Field Data, 2020

As depicted in Figure 4.5, out of 398 responses due to the fact this was a multiple response question, 123 (30.9%) got to know through Colleagues, 77 (19.3%) got to know through their Course Tutors, 73 (18.3%) found out about the databases through their e-mails, 53 (13.3%) was a result of the Library's website, 43 (10.8%) got to know through Library orientations and

29 (7.3%) got to know through notices. The results are evident that most of them got to know through their colleagues.

4.3.4 Easy to know the Online Databases Subscribed by the University Library

The study wanted to know whether it was easy to know about the online databases subscribed by the University Library. The results are seen in Figure 4.6.

Figure 4.6: Easy to know the online databases

Source: Field Data, 2020

Out of the 256 received questionnaires as seen in Figure 4.6, 131 representing 51.2% deemed it easy to know about the online databases whereas 125 representing (48.8) indicated that it was not easy to know about the online databases. This shows a greater proportion of the students got to know about the online databases easily.

4.3.5 If No, what needs to be done

There was a follow-up question for the respondents who indicated No to it not being easy to know the online databases to share the reason so and the responses were grouped under common recurring themes. This is seen in Table 4.3.

Table 4.3: What needs to be done

What needs to be done	Frequency	Percent
Create more awareness	57	67
Intensified education	17	20
I do not know	7	8
Placed on the social media platforms	4	5
Total	**85**	**100**

Source: Field Data, 2020

As seen in Table 4.3, out of the 85 responses 57 (67%) wrote that more awareness ought to be created to help the online databases become known easily, 17 (20%) advocated for intensified education to help the respondents know about the online databases easily, 7 (8%) did not know what needs to be done to help with easy knowledge of the online databases and 4 (5%) suggested the of social media places to help make the respondents know. The results depicted that lack of awareness was the main reason for them not finding it easy to know the databases.

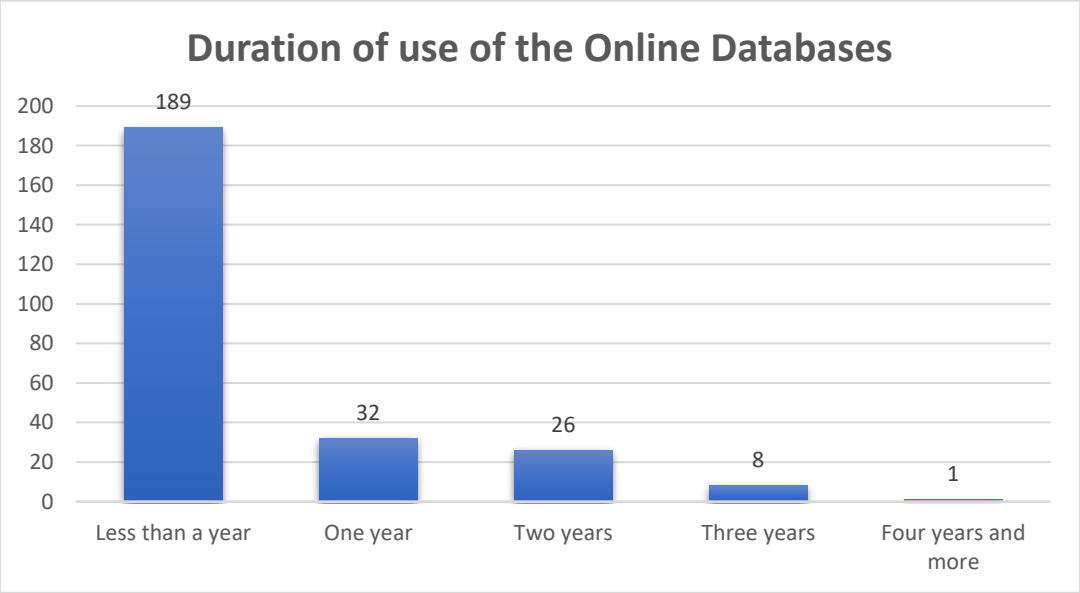
4.4 Extent of use of Online Academic Databases

This part of the questionnaire enquired about the duration of use of the online databases and the frequency of use. The results are seen below.

4.4.1 Duration of use of the Online Databases Subscribed by the University

Another major objective of the study was to find out about the usage of the online databases by the BA students and thus, the study posed this question to the respondents to find out how long they have been using the databases and the responses are seen in Figure 4.7.

Figure 4.7: Duration of use of the Online Databases



Source: Field Data, 2020

As seen in Figure 4.7, out of the 256 responses, 189 (73.8%) reported to have been using online databases for less than a year, 32 (12.5%) indicated they have been using the online databases for one year, 26 (10.2%) chose two years as the usage duration, 8 (3.1%) said they have been using the online databases for three years and 1 (0.4%) has been using it for four years and more. This shows most of the students have been using the online databases for less than a year.

4.4.2 Frequency of use of the Online Databases Subscribed by the University Library

The study again probed to see the frequency of use of the online databases among the BA students and the responses are seen in Table 4.4.

Table 4.4: Frequency of use

Frequency of use	Frequency	Percent
Rarely	179	69.9
Weekly	24	9.4
Monthly	21	8.2
Daily	18	7
Do not use it	12	4.7
When the need arises	1	0.4
When there is work to do	1	0.4
Total	**256**	**100**

Source: Field Data, 2020

As seen in Table 4.4, out of the 256 respondents, 179 representing 69.9% rarely used the online databases, followed by 24 representing 9.4% who used them weekly, then 21 representing 8.2% indicated they used them monthly, 18 representing 7% stated they used them daily, 12 representing 7 reported that they do not use them at all and 1 each representing 0.4% indicated to have been using them when the needs arise and when there is work to do. The findings show the students rarely use the online databases.

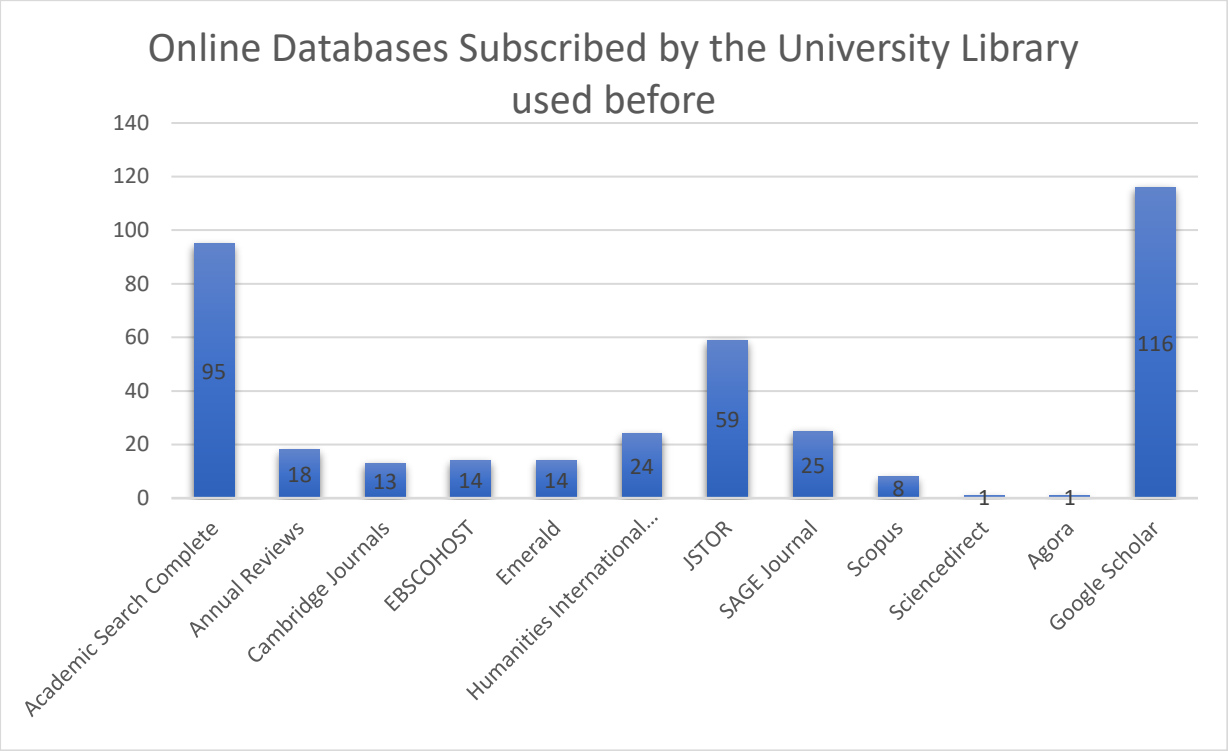
4.5 Purpose and ease of use of Online Academic Databases

In this section, examples of some online databases the respondents use or have used before were sought, reason(s) for using the online databases, ease of using the online databases, computer usage skills and knowledge, level of computer knowledge and skills, being able to formulate good search queries and the ease of getting the needed information from the online databases were asked by the study and the results are seen below.

4.5.1 Online Databases Subscribed by the University Library used before

The study wanted to match the usage to some examples of the online databases and as such the respondents were asked to tick among the options and also indicate any online database that the University Library has subscribed which they use or have used before and this is depicted on Figure 4.8.

Figure 4.8: Online Databases used before



Source: Field Data, 2020

As represented in Figure 4.8, from the 256 responses for each option, 116 (50.4%) indicated to use or have used Google Scholar before, 95 (24.5%) stated to use or have used Academic Search Complete before, 59 (25.7%) reported to use or have used JSTOR before, 25 (10.9%) stated they use or have used SAGE Journal before, 24 (10.4%) use or have made used of Humanities International Complete before, 18 (7.8%) use or have used Annual Reviews before, 14 (6.1%) each indicated they use or have used Emerald and EBSCOHOST before, 13 (5.7%) use or have used Cambridge Journals before, 8 (3.5%) use or have used Scopus before and 1 (0.4%) indicated to have used or use Agora and also aside the stated online databases, 1 (0.4%) stated to have used or use ScienceDirect. The findings spell out usage is high with Google Scholar, Academic Search Complete and JSTOR.

4.5.2 Reason(s) for usage of Online Databases Subscribed by the University Library

There are different reasons for which students make use of online databases and as a result, the study probed to find out the reason(s) why the students use the online databases subscribed by the University Library. The results are represented in Table 4.5.

Table 4.5: Reason for use

Reason for use	Frequency	Percent
To aid in my academics	167	42.6%
To get current information	90	23%
Expansion of my knowledge-base	83	21.2%
Personal development	40	10.2%
For entertainment	12	3.1%
Total	**392**	**100%**

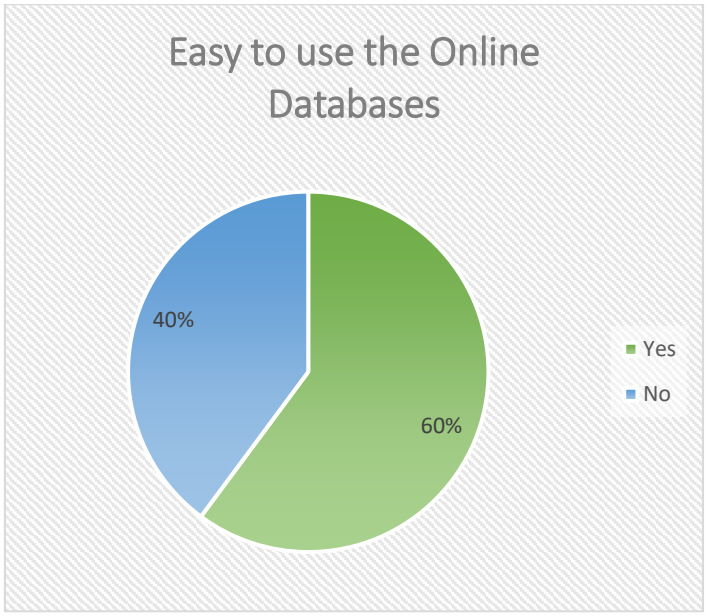
Source: Field Data, 2020

As seen in Table 4.5, out of the 392 responses due to the fact that it was a multiple response question as seen in Table 4.5, 167 (42.6%) used them to aid in their academics, 90 (23%) stated to use them to get current information, 83 (21.2%) indicated they use them to expand their knowledge-base, 40 (10.2%) used them for personal development and 12 (3.1%) used them for entertainment. It is clearly seen academics remain the major purpose for the use of the online databases.

4.5.3 Easy to use the Online Databases Subscribed by the University Library

The study wanted to know the whether or not the respondents found it easy to use the online databases subscribed by the University Library and this is illustrated in Figure 4.9.

Figure 4.9: Easy to use the Online Databases



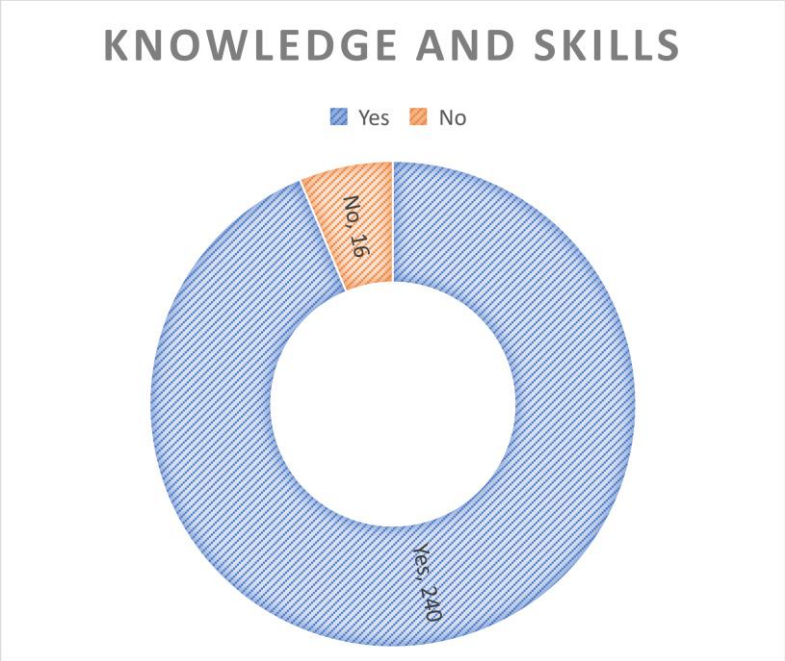
Source: Field Data, 2020

As illustrated in Figure 4.9, out of the 256 questionnaires received, 154 representing 60% find it easy to use the online databases whilst 102 representing 40% did not find it easy to use. This shows a greater proportion finds it easy to use the online databases.

4.5.4 Knowledge and Skills to use Computer and other related Technology

Their knowledge and skills to use computer and other related technology among the respondents can attribute to them being able to use the online databases and as such the study asked whether or not they possessed such knowledge and skills and this is seen in Figure 4.10.

Figure 4.10: Knowledge and Skills to use Computer and other related Technologies



Source: Field Data, 2020

As depicted in Figure 4.10, out of 256 responses, 240 (94%) said yes whereas 16 (6%) said no. The findings show the almost all the students have the knowledge and skills to use a computer and other related technology.

4.5.5 Level of Knowledge and Skills to use Computer and other related Technologies

There was a follow-up question to know the various levels they belonged to and the responses are seen in Table 4.6.

Table 4.6: Level of Knowledge and Skills of Computer and other related Technologies Usage

Level	Frequency	Percent
Intermediate	137	53.5
Advanced	68	26.6
Basic	41	16
Expert	9	3.5
NR	1	0.4
Total	**256**	**100**

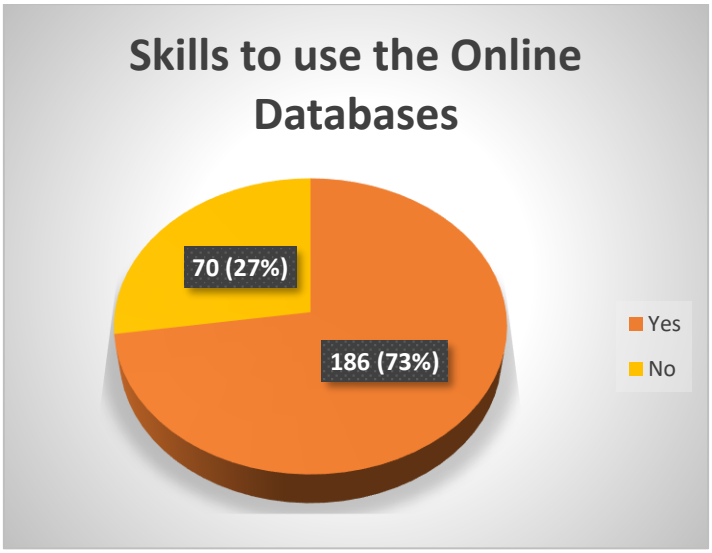
Source: Field Data, 2020

As illustrated in Table 4.6, out of the 256 responses received, 137 (53.5%) indicated they are intermediate users, 68 (26.6%) stated they are at the advanced level, 41 (16%) said they are at the basic level, 9 (3.5%) chose they are at expert level and 1 (0.4%) did not respond. This shows the most of the students are intermediate users.

4.5.6 Skills to use the Online Databases Subscribed by the University Library

The study after enquiring about the respondents' general computer related skills and knowledge proceeded to find out if they have the skills to use the online databases subscribed by the University Library and this is represented in Figure 4.11.

Figure 4.11: Skills to use the Online Databases



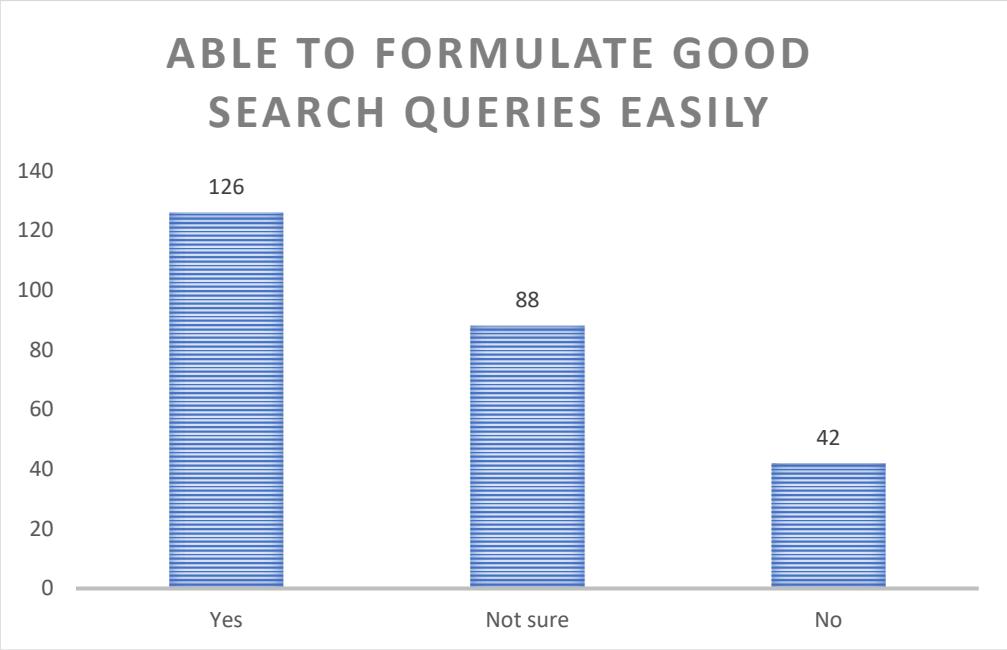
Source: Field Data, 2020

As represented in Figure 4.11, out of the 256 responses, 186 (73%) said yes, they have the skills to use the online databases whereas 70 (27%) said no they do not possess such skills. This shows that majority of the students have the skills to use the online databases.

4.5.7 Ability to formulate good search queries easily in the Online Databases Subscribed by the University Library

Good search queries enable one to retrieve the needed and relevant easily and as such the respondents were asked by the study to indicate if they were able to formulate good search queries easily and this is seen in Figure 4.12.

Figure 4.12: Able to formulate good search queries easily



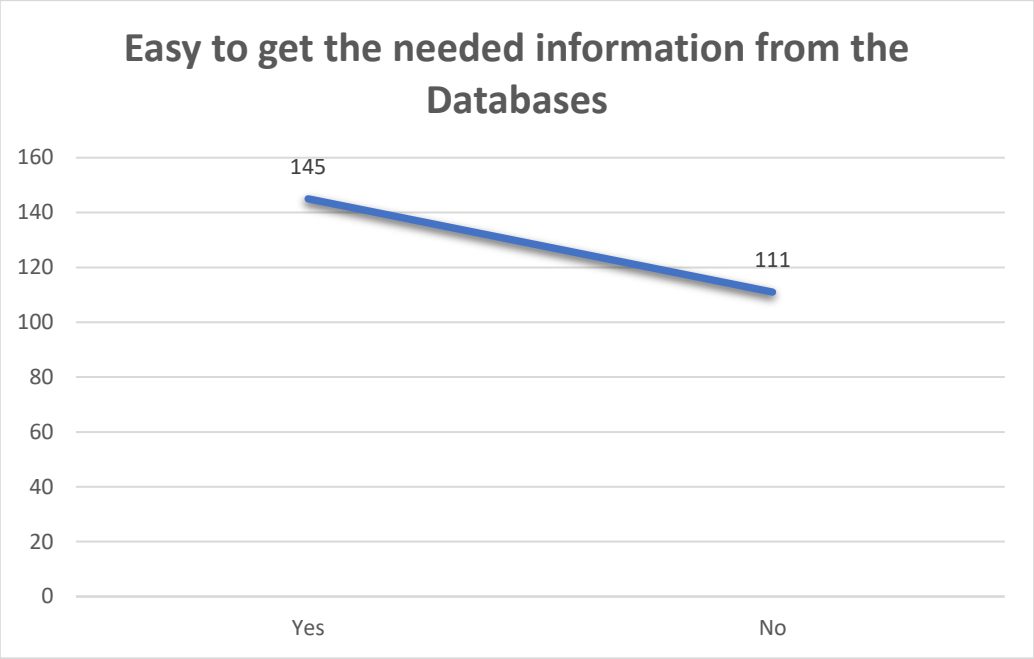
Source: Field Data, 2020

As depicted in Figure 4.12, out of the 256 questionnaires received, 126 representing 49.2 % said yes, they are able to formulate good search queries, 88 representing 34.4% were not sure whether they were able to do so or not whereas 42 representing 16.4% said they are not able to formulate good search queries. This shows a good number of the students are able to formulate good search queries.

4.5.8 Easy to get the needed information from the Online Databases Subscribed by the University Library

The study then probed to find out if getting information from the various subscribed online databases by the University Library was easy. The responses are represented in Figure 4.13.

Figure 4.13: Easy to get the needed information from the Online Databases



Source: Field Data, 2020

Out of the 256 respondents, as represented in Figure 4.13, 145 (56.6%) indicated yes, it was easy to get information from the databases whereas 111 (43.4%) said no, as they meant it was not easy to get information easily from the databases. The findings show a greater number of the students are able to get the needed information easily.

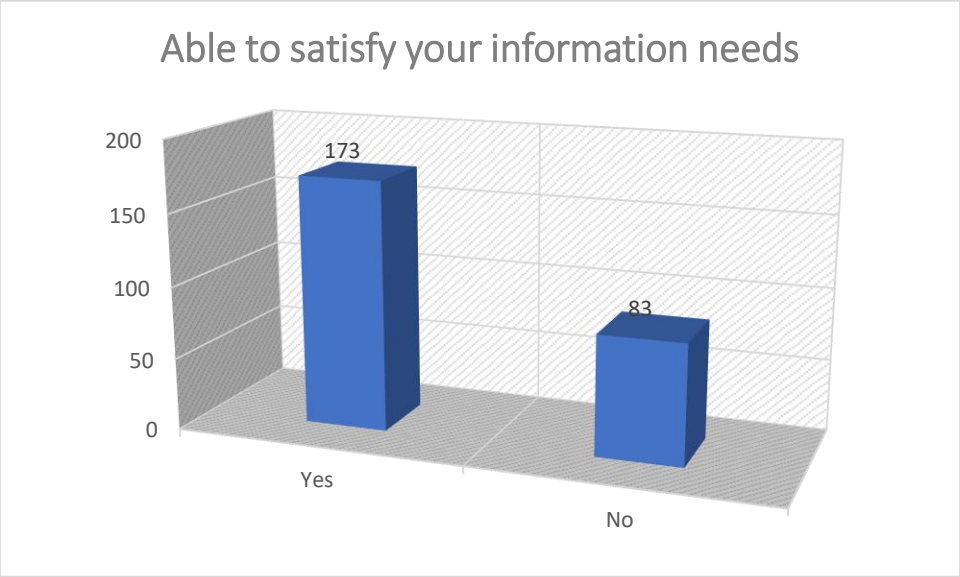
4.6 Level of Satisfaction with the Use of the Online Academic Databases

This section looked at if the online databases were able to satisfy the respondents' information needs, their level of satisfaction and the reliability of the online databases. The responses and their interpretations are seen below.

4.6.1 Ability to satisfy your information needs

Information needs satisfaction is crucial to facilitate continual usage. Thus, the study asked the respondents to indicate if the online databases subscribed by the University Library are able to satisfy their information needs and this is seen in Figure 4.14.

Figure 4.14: Able to satisfy your information needs



Source: Field Data, 2020

As seen in Figure 4.14, out of the 256 responses 173 representing 68% said yes, they are able to satisfy their information needs against 83 representing 32.4% who said no they are not able to satisfy their information needs. This reveals a high level of satisfaction of information needs from the databases by the students.

4.6.2 Level of Satisfaction in using the Online Databases Subscribed by the University Library

The study then probed to find out the level of the respondents' satisfaction in using the online databases subscribed by the University Library and this is depicted in Table 4.7.

Table 4.7: Level of Satisfaction

Level of Satisfaction	Frequency	Percent
Somewhat Satisfied	94	36.7
Mostly Satisfied	66	25.8
Neither Satisfied/ Dissatisfied	46	18
Completely Satisfied	19	7.4
Somewhat Dissatisfied	14	5.5
Completely Dissatisfied	12	4.7
Mostly Dissatisfied	5	2
Total	**256**	**100**

Source: Field Data, 2020

As depicted in Table 4.7, out of the 256 responses, 94 (36.7%) indicated they are somewhat satisfied with the use of the online databases, 66 (25.8%) ticked they are mostly satisfied with the use of the online databases, 46 (18%) showed they are indifferent with the satisfaction level as they are neither satisfied or dissatisfied, 19 (7.4%) chose they are completely satisfied with using the online databases, 14 (5.5%) said they somewhat dissatisfied with using the online databases, 12 (4.7%) said they are completely dissatisfied and 5 (2%) said they are mostly dissatisfied. This depicts a good level of satisfaction on the use of the online databases by the students.

4.6.3 Reliability of information accessed from the Online Databases Subscribed by the University Library

The respondents were asked by the study to indicate the reliability of the online databases subscribed by the University Library and the responses are seen in Table 4.8.

Table 4.8: Reliability of the online databases subscribed by the University Library

Reliability of the databases	Frequency	Percent
Reliable	120	46.9
Slightly reliable	65	25.4
Very reliable	54	21.1
I do not know	10	3.9
Not reliable	6	2.3
Inability to access them and get the preferred journal	1	0.4
Total	**256**	**100**

Source: Field Data, 2020

As seen in Table 4.8, out of the 256 received questionnaires, 120 (46.9%) indicated they are reliable, 65 (25.4%) said they are slightly reliable, 54 (21.1%) indicated they are very reliable, 10 (3.9%) stated they do not know, 6 (2.3%) chose they are not reliable and 1 (0.4%) wrote there is inability to access them and get the preferred journal. Majority of the students find the online databases at least reliable.

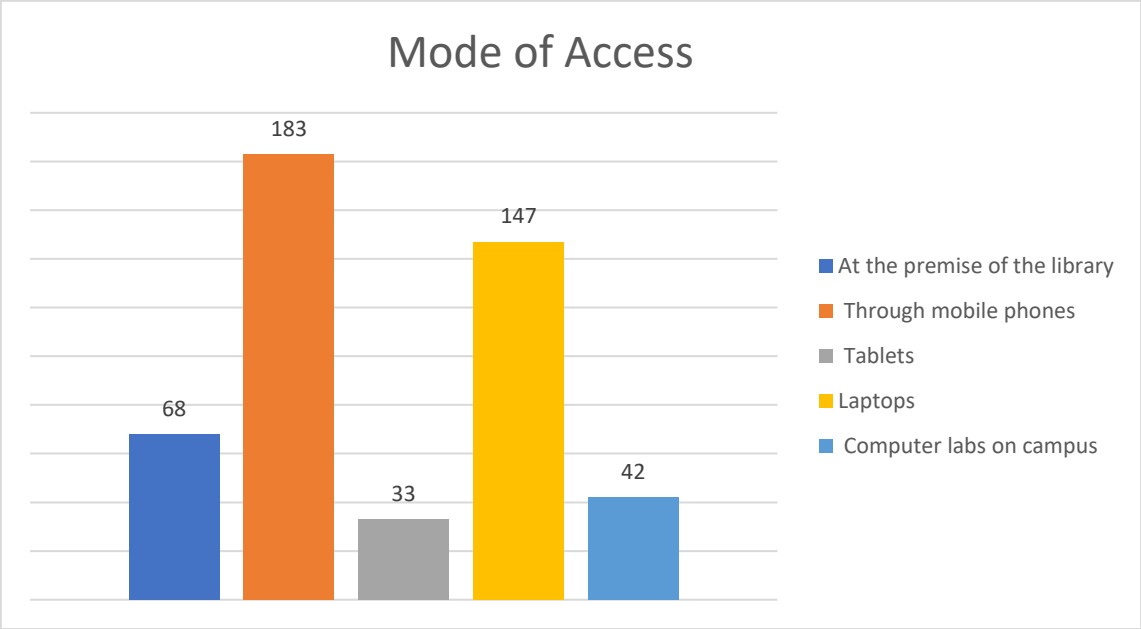
4.7 Mode of Access to the Online Academic Databases

This part of the questionnaire looked at the mode through which the respondents get access to the online databases and the below is the interpretation of the responses

4.7.1 Mode of Access to the Online Databases Subscribed by the University Library

The study probed to find out the mode of access to the online databases and the responses are represented in Figure 4.15.

Figure 4.15: Mode of Access



Source: Field Data, 2020

As represented in Figure 4.15, out of 256 responses for each option, 183 (72.3%) used their mobile phones to access the online databases, 147 (58.1%) used their laptops, 68 (26.9%) accessed the online databases at the library's premise, 42 (16.6%) access the online databases via computer labs on campus and 33 (13%) used their tablets for access. This shows the online databases are mostly accessed by the students through their mobile phones and laptops.

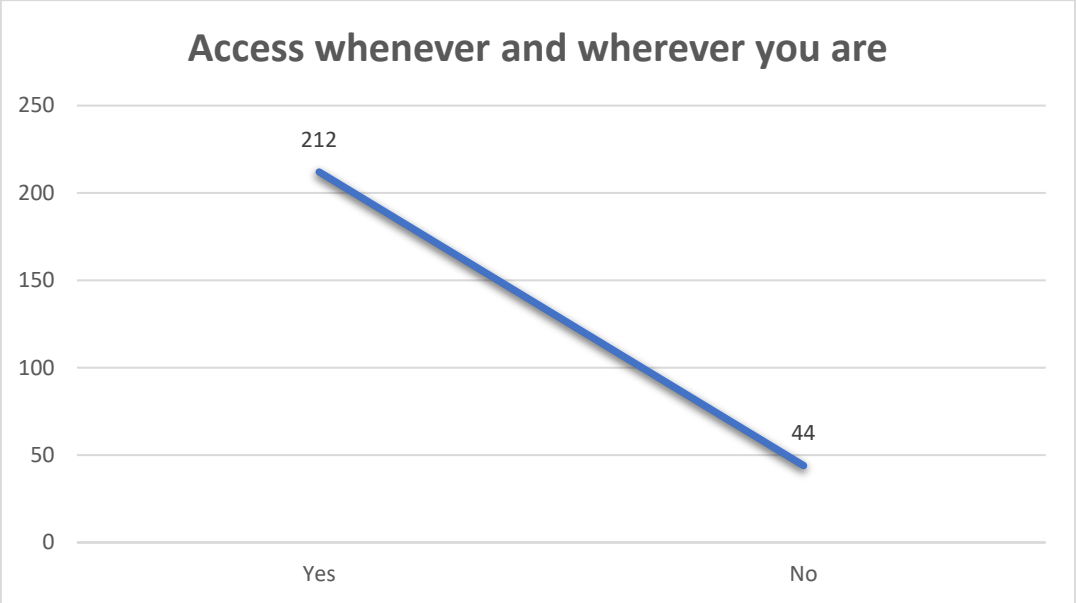
4.8 Challenges associated with the use of the Online Academic Databases

This was the last section of the questionnaire and this part sought to find out if access can be everywhere and whenever, if not why the respondents cannot access the online databases everywhere and whenever, the challenges faced when using the online databases, what the library's priority should be in relation to the online databases, how effective use of the online databases can be maintained and opinions about how the awareness and use of the online databases can be improved. The responses are interpreted below.

4.8.1 Access to the Online Databases Subscribed by the University Library whenever you want and wherever

The University Library has an off-campus access that enables the students to be able to get access to the online databases regardless of their location and as such the study asked the respondents if they were able to access the online databases whenever they want and wherever and this is seen in Figure 4.16.

Figure 4.16: Access whenever and wherever you are



Source: Field Data, 2020

As seen in Figure 4.16, out of the 256 responses, 212 representing 83% said yes, they can have access at any time and everywhere whereas 44 representing 17.2% said no they are not able to. This depicts almost all the students are able to get access to the online databases regardless of distance and time.

4.8.2 Reason for no Access whenever and wherever

There was a follow up question for the respondents who indicated that they do not get access to the online databases whenever and wherever they are to state the reason for that. This is depicted in Table 4.9.

Table 4.9: Reasons for no Access whenever and wherever

Reasons for no access	Frequency	Percent
Network issues	22	64.7
I have not tried it outside campus	4	11.8
Browser issues	1	2.9
Faces error challenges	1	2.9
Find it difficult	1	2.9
Formulating the queries	1	2.9
It only works when you're on campus	1	2.9
Limited time	1	2.9
Make it accessible to all students at anywhere and any place	1	2.9
Sometimes, you are not able to access the journal of interest	1	2.9
Total	**34**	**100**

Source: Field Data, 2020

As seen in Table 4.9, out of 34 respondents who gave out their reasons, 22 (64.7%) attributed it to network issues they face when access the online databases, 4 (11.8%) had not tried accessing them outside campus before and the rest with 1 (2.9%) each attributed it to browser issues as some of them did not facilitate access according to the respondent, error challenges when accessing, difficulty in accessing them, challenges with formulating queries, another stating it only works when on campus, limited time, not accessible everywhere and not being able to access the journal of interest. This reveals network issue to be a major hindrance to the access of the online databases.

4.8.3 Challenges faced when using the Online Databases Subscribed by the University Library

The study wanted to find out some of the challenges faced by the respondents when access the online databases and this is seen in Table 4.10.

Table 4.10: Challenges faced when accessing the Online Databases

Challenges	Frequency	Percent of cases	Percent
Slow internet	178	71.2	30.1
Difficulty in getting relevant information	80	32	13.5
Information overload on the internet	77	30.8	13
Takes too long for to view or download pages	67	26.8	11.3
Limited subscribed titles	62	24.8	10.5
Inadequate search skills	48	19.2	8.1
Difficult to use	48	19.2	8.1
Power cuts	32	12.8	5.4
Total	**592**	**236.8**	**100**

Source: Field Data, 2020

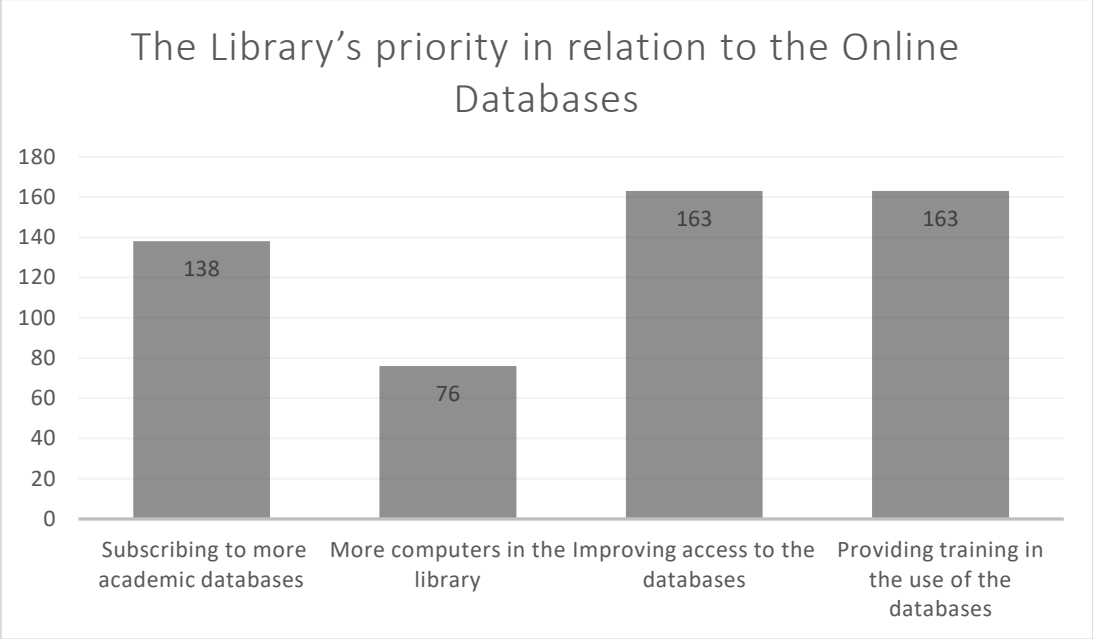
Out of 256 responses for each option as represented in Table 4.10, 178 (71.2%) faced the challenge of slow internet, 80 (32%) had difficulty in getting relevant information, 77 (30.8%) said the information overload on the internet for a problem for them, 67 (26.8%) indicated that it takes too long to view 62 (24.8%) indicated limited subscribed titles to be a challenge to them, 48 (19.2%) each found inadequate search skills and difficulty in usage and 32 (12.8%)

said power cuts was a challenge to them in using the online databases. The findings show slow internet to be the challenge facing most students.

4.8.4 The Library's priority in relation to the Online Databases Subscribed by them

The respondents were asked by the study to choose what should be the library's priority in relation to the online databases subscribed by them and this is seen in Figure 4.17.

Figure 4.17: The Library's priority in relation to the online databases



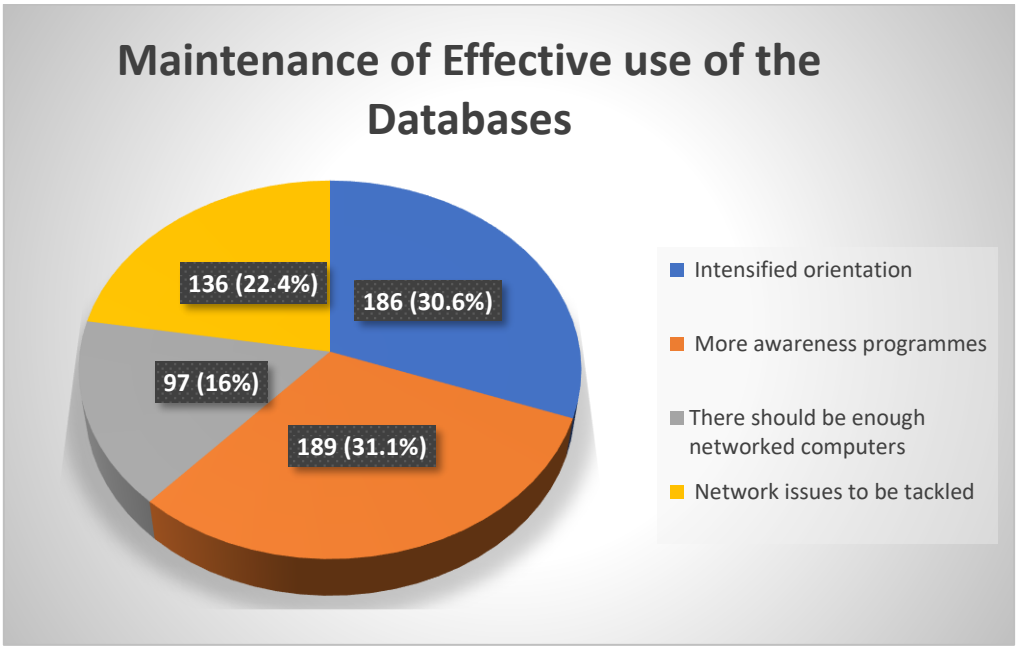
Source: Field Data, 2020

As seen in Figure 4.17, out of 540 responses due to the fact that it was a multiple response question, 163 (30.2%) each indicated that the library should provide training in the use of the databases and improve access to the databases, 138 (25.6%) chose the library should subscribe to more academic databases whiles 76 (14.1%) advocated for more computers in the library. This shows the students want trainings to be provided and access to the databases improved.

4.8.5 Maintenance of effective use of the online databases subscribed by the University Library

The study again asked how effective use of the online databases subscribed by the University Library can be maintained and this is seen in Figure 4.18.

Figure 4.18: Maintenance of effective use of the databases



Source: Field Data, 2020

As represented in Figure 4.18, out of 608 responses since it was a multiple response question, 189 (31.1%) said more awareness programmes can help maintain effective use of the online databases, 186 (30.6%) advocated for intensified orientation to be able to maintain the effective use, 136 (22.4%) wants the network issues to be tackled and 97 (16%) wants enough networked computers to be around in order to help maintain the effective use of the online databases. This shows more awareness, intensified orientations, and network issues addressed remain the way to maintain the effective use of the databases by the students.

4.8.6 Suggestions on how to create more Awareness and Use of the Online Databases Subscribed by the University Library

The study lastly, solicited the opinions of the respondents about what ought to be done to aid in more awareness and use of the online databases subscribed by the University Library. This is depicted in Table 4.11.

Table 4.11: Means for more Awareness and Use of the Databases

Means for more awareness and use of the Databases	Frequency	Percent
More awareness programmes	31	25
Sending emails often	21	16.9
Intensive orientations	20	16.1
Extensive education	19	15.3
Course Tutors informing and recommending them to students	11	8.9
Sharing through social media platforms	7	5.6
Improvement of the network connectivity	3	2.4
Improving access to the database program	2	1.6
Addition of other features	1	0.8
E-learning Tutors should be assigned to classes	1	0.8
Every department should have a slot for the study of the university's databases	1	0.8
Make the training a UGRC	1	0.8

Making videos available so that if one misses a training session, he or she can learn it later	1	0.8
More database should be provided	1	0.8
There must be improvement	1	0.8
There should be a compulsory course to enable all students partake and learn more about the online database	1	0.8
Training sessions	1	0.8
Work on information overload	1	0.8
Total	**124**	**100**

Source: Field Data, 2020

As depicted in Table 4.11 grouped under the various themes. Out of the 124 opinions expressed, 31 (25%) were about more awareness programmes to help make the students know there exist such databases, 21 (16.9%) stated regular sending of e-mails to them about the databases will help create awareness and use, 20 (16.1%) said intensive orientations can help, 19 (15.3%) advocated for extensive education about the databases, 11 (8.9%) said awareness and use can improve when Course Tutors keep on informing and recommending them to students, 7 (5.6%) think awareness and use will improve when information about the databases are shared on the social media platforms, 3 (2.4%) expressed improvement of the network connectivity can help in the awareness and use of the online databases, 2 (1.6%) stated there should be improved access to the database program and the rest of the opinions expressed with 1 (0.8%) from each respondents are addition of other features, E-learning Tutors should being assigned to classes, every department having a slot for the study of the university's databases, making the training a University of Ghana Required Course (UGRC), making videos available so that if one misses a training session, he or she can learn it later, provision of more database,

there must be improvement, having a compulsory course to enable all students partake and learn more about the online databases, training sessions and lastly, working on information overload.

4.9 Discussion of Findings

The discussion of findings is centered on the major objectives of the study which will be discussed under the following themes: level of awareness of the academic databases, the extent of use of the academic databases, the purpose of use of the academic databases, the ease of use of the academic databases, the level of satisfaction of the use of the academic databases, the mode of access to the academic databases and the challenges related with the use of the online academic databases.

4.9.1 Level of Awareness of the Online Academic Databases

The findings revealed a high level of awareness of the online databases subscribed by the University Library by the undergraduate BA students at the Accra City Campus as 184 (72%) were aware whereas 72 (28%) were not aware.

Again, the findings revealed that in terms of examples of the online databases, the students were highly aware of Google Scholar with 120 (46.9%) of them being aware, followed by Academic Search Complete with 105 (41%) being aware, then JSTOR with 62 (24.2%) being aware, followed by SAGE Journal with 35 (13.7%) being aware, then Annual Reviews with 27 (10.5%) being aware, then Humanities International Complete with 25 (9.8%) being aware, then Cambridge Journals with 20 (7.8%) being aware, followed by EBSCOHOST with 19 (7.4%) being aware, then Emerald with 14 (5.5%) being aware, followed by Scopus with 8

(3.1%) being aware, then Agora with 4 (1.6%) being aware and lastly Aluka with 4 (1.6%) being aware of it.

A number of studies supports the findings of the study where high levels of awareness of online databases were revealed among undergraduates (Adam, 2017; Chandran, 2013; Kaur & Verma, 2009; Natarajan, 2017), postgraduate (Akinola et al., 2018; Kwadzo, 2015; Kwafoa et al., 2014; Verma, 2016) and academic staff (Basiru & Okwilagwe, 2018; Borrego et al., 2007; Haridasan & Khan, 2009; Isibika & Kavishe, 2018; Velmurugan, 2009).

However, there are other studies that refute the finding of this study as Tlakula & Fombad (2017) revealed low awareness of the different e-resources resources by undergraduate students at the University of Venda. Again, a study by Angello (2010) revealed low awareness of e-databases by researchers of livestock in Tanzania. Also, awareness of databases available in the University of Namibia was low among the nursing students as they were not familiar to them (Ndinoshiho, 2010).

Also, the findings are supported by Aina (2014) who found out majority of the respondents were aware of Academic Journal followed by JSTOR. Furthermore, a study by Angello (2010) corroborates with the findings of the study as it was revealed there was low awareness of Agora.

Again, some of the findings of the study are supported by Akinola et al. (2018) who revealed most of the respondents were not aware of EBSCOHOST. However, in the same study, some findings contrast as JSTOR was the database they were aware most and also a good number of students were aware of Agora.

Also, “average” awareness of Elsevier Sciencedirect, JSTOR, EBSCOHOST and Agora by Yusuf & Farouk (2017) contrasts with the findings of the study. Again, the findings are not in agreement with Adam (2017) who revealed Science Direct was the database that the respondents were aware most, followed by JSTOR, then by Springer, followed by AGORA. Similarly, Verma (2016) found high awareness of ScienceDirect with 69 (95.83%) among the users, EBSCOHOST with 54 (75%) and 51 (70.83 %) Scopus in a survey of Central Science Library, University of Delhi.

In Ghana, study by Kwadzo (2015) contrast the findings of the study as it was found that JSTOR was the online database the students were aware of. Again, Swain (2010) findings contradicts the findings of the study as EBSCOHOST (62.5%) was known by majority of the students.

4.9.2 The Extent of Use of the Academic Databases

The findings revealed that with the frequency of use, the online databases are being rarely used by the students as 179 (69.9%) rarely use them, then 24 (9.4%) using them weekly, then 21 (8.2%) using them monthly, with 18 (7%) using them daily, again with 12 (7%) not using them at all and 1 (0.4%) each using them when the needs arise and when there is work to do.

The findings are corroborated by studies of Akinola et al. (2018) found an occasional use of the e-databases at the University of Ibadan by the postgraduates, Dukić & Strišković (2015) who found out that Croatian students due to the inability to get full-texts e-journals and e-books from the databases do not make use of them regularly. Also, by Ani & Edem (2012) whose survey revealed in the University of Calabar, Nigeria that the frequency of use was low as many (48%) respondents choose the occasional use of them. Also, Yusuf & Farouk (2017) in their

study of awareness, access and use of academic databases by faculty members found out that majority of them made rarely used the online databases. Again, in Ghana, Dadzie (2005) revealed that at Ashesi University, 5% of the respondents made use of scholarly databases always whereas 14% often made use of them and with 58% stating they hardly or have never made use of them.

However, some studies refute the findings as Muzzammil & Ansari (2019) indicated in their study at Bar library that e-databases are among the most used e-resources from 109 (55.6%) respondents. Again, Wu & Chen (2010) reported graduate students to be frequent users of e-resources. Also, Adam (2017) found high usage of online scholarly database by Academics of Kaduna State University, Nigeria. Furthermore, Natarajan (2017) similarly reported that the undergraduate students in Jimma University made use of e-resources daily. Also, in, a survey by Verma (2016) revealed in the Central Science Library that the use of online databases was high on daily basis with 41.6 while 34% for weekly basis. Also, Katabalwa (2016) revealed that most of the postgraduate students at the University of Dar es Salaam used the e-journal resources weekly. This is ascertained by the study of Vicente, Crawford, & Clink (2004) which revealed also that e-journals were accessed mostly weekly. Again, Egle, Smeenge, Kassem, & Mittal (2015) stated that e-resources are used frequently by them for quick searches, answers and studies. Also, Sharma, Singh, & Sharma (2011) found out that large number of their respondents made use of e-resources usually i.e. 58 (89.23%). Haridasan & Khan (2009) found high weekly access of e-resources among 55.56% social scientists of NASSDOC. Also, a survey undertook by Bar-Ilan, Peritz, & Wolman (2003) to know the use of e-databases and e-journals at Israeli Universities revealed high usage of online databases or e-journals.

4.9.3 The Purpose of Use of the Online Academic Databases

The findings brought out that most of the students use the online academic databases to aid in their academics with 167 (42.6%) of them. Other purposes for use revealed by the findings are getting current information with 90 (23%), expansion of their knowledge-base with (83 (21.2%), personal development with 40 (10.2%) and lastly, 12 (3.1%) using them for entertainment.

The findings are in agreement with Ahmed (2013b) who found out that faculty members used e-resources to help in their studies, teaching, research, personal development, increase knowledge-base and getting hold of up-to-date contents. Similar findings are revealed by Natarajan (2017) where one of the other purposes for using e-resources included getting current information.

Amjad et al., 2013; Manda (2005); and Yusuf & Farouk (2017) also revealed similar findings where electronic resources accessed from the various databases are used by the students as means to get information to aid them in their academic works and researches. Other similar findings are found in literature where students use electronic resources for their studies, getting up-to-date information and researches (Ahmed, 2013a; Ali, 2005; Egberongbe, 2011; Katabalwa, 2016; Kumar & Kumar, 2010; Pandita, 2012; Sudhier & Seethalekshmi, 2011).

Also, similar findings were revealed by Adam (2017); Aina (2014); and Akinola et al. (2018) were it was seen online scholarly databases are used for research, self-improvement, teaching and among others. Interestingly, similar findings are seen again among healthcare personnel in tertiary institutions by studies of Adesoye & Amusa (2013) and Rehman & Ramzy (2004) as

they found out that electronic resources are used by healthcare personnel in tertiary institutions for their work, research, teaching and getting current information.

4.9.4 The Ease of Use of the Online Academic Databases

The findings showed that large proportion of the students found it easy to use the online databases with 154 (60%) whereas 102 (40%) found it difficult to use them. This can be attributed to another finding in the study as majority, 240 (94%) indicated to possess knowledge and skills to use computer and other related technology whilst just 16 (6%) said they do not have such skills and knowledge.

Again, the findings revealed the students have the skills to use the online databases with 183 (73%) being able to with only 70 (27%) not being able to. This further revealed in the study that the students are able to get information easily from the online databases as 145 (56.6%) of them were able to as against 11 (43.4%) who could not.

The findings are in line with the findings of Madhusudhan (2010); Sharma (2009); Sharma et al. (2011); Wu & Chen (2010). Madhusudhan (2010) and Wu & Chen (2010) revealed the ease of use of e-resources by research scholar at Kurukshetra University and graduate students respectively.

Sharma et al. (2011, p. 809) revealed that "respondents of NBAGR 62 (100 per cent), and 55 (84.62 per cent) respondents of NDRI can access the various e-resources easily" and similarly finding Sharma (2009) found out 42 (80.77%) teachers and 26 (86.67%) research scholars found it easy to use the electronic resources.

4.9.5 The Level of Satisfaction of the Use of the Academic Databases

The findings showed that the online academic databases subscribed by the University Library were able to satisfy the information needs of most the students with 173 (68%) whereas 83 (32.4%) are not being satisfied.

The findings revealed that the students are somewhat satisfied with the use of the online 94 (36.7%) indicated they are somewhat satisfied with the use of the online databases, 66 (25.8%) ticked they are mostly satisfied with the use of the online databases, 46 (18%) showed they are indifferent with the satisfaction level as they are neither satisfied or dissatisfied, 19 (7.4%) chose they are completely satisfied with using the online databases, 14 (5.5%) said they somewhat dissatisfied with using the online databases, 12 (4.7%) said they are completely dissatisfied and 5 (2%) said they are mostly dissatisfied. This generally reveals a good level of satisfaction with the use of the online academic databases.

The findings of the study are similar to the studies of Malabanan & Bayeng (2019) who revealed that there is moderate satisfaction among the students and faculty at UPHSL with regards to the use of EBSCOhost. Again, Egharevba (2018) found out students at Igbinedion University were satisfied with the use of online databases compared to other ICT-based resources.

Similarly, Kwadzo (2015) also found a high satisfaction of 87.5% among the postgraduates at the University of Ghana. Virumandi et al. (2014) and Kwafoa et al. (2014) also reports of high levels of satisfaction among their respondents in respective studies with regards to the use of online databases. Saikia & Gohain (2013) also reported of high satisfactions on the online databases resources.

4.9.6 The Mode of Access to the Online Academic Databases

The findings revealed that most of the students used their mobile phones to access the online databases with 183 (72.3%), followed by their laptops with 147 (58.1%), then 68 (26.9%) of them using the premise of the library to access the database, then 42 (16.6%) using the computer laps on campus and 33 (13%) using their tablets.

The findings are similar to Yusuf & Farouk (2017) who revealed that greater number of faculty members at the Bayero University Library used their mobile phones and personal computers to access the e-databases. In the same study, a contrast was seen in the finding of large number of the respondents, 92 (83.6%) who did not access the e-databases via the library's e-learning computers.

However, similar findings are seen in Ghana, as Akuffo & Budu (2019) found that respondents accessed their respective e-resources at the library and ICT centre. Amankwah (2014) also revealed a similar findings as more of the respondents accessed e-resources through laptops more than tablets.

4.9.7 Challenges related with the use of the Online Academic Databases.

The findings revealed that the major challenge faced by most of the students is slow internet with 178 (71.2%). This is followed by difficulty in getting relevant information with 80 (32%), then information overload on the internet with 77 (30.8%), followed by the databases taking too long to view or download with 67 (26.8%), then 62 (24.8%) facing the challenge of limited subscribed titles, followed by 48 (19.2%) each for those who did not have the adequate search skills and those who had difficulty in usage and lastly 32 (12.8%) facing power cuts.

Similar findings have revealed slow internet to be a major challenge to the use of online databases (Akinola et al., 2018; Harle, 2009; Katabalwa, 2016; Kwafoa et al., 2014; Madhusudhan, 2010; Manda, 2005b; Shija, 2009). Shija (2009) and Harle (2009) reported in Tanzania that slow internet connectivity inversely affected the access and use of the e-resources in the databases. Manda (2005) found that the inadequate bandwidth led to complaints from users when accessing the e-resources in Tanzania. Katabalwa (2016) revealed that slow internet was a challenged faced by the postgraduate students when using the e-journal resources. Again, Madhusudhan (2010) reported 68% of the respondents in the study about research scholars in Kurukshetra University considered slow access speed as a challenge to the use of the e-resources. Similar to the findings of this study, Akinola et al. (2018) also reported of slow internet connection to be the highest indicated challenge by the postgraduates at University of Ibadan with the mean of 2.98 in Nigeria. Kwafoa et al. (2014) in Ghana also found slow nature of the internet to be a challenge to the access of online academic resources at University of Cape Coast.

Furthermore, similar findings have been reported on power cuts to be a challenge to the access of the online databases (Agber & Agwu, 2013; Akinola et al., 2018; Katabalwa, 2016; Manda, 2005) Shija (2009). Manda (2005) and Shija (2009) found out constant erratic power supply affected the internet availability and made it difficult for users to get access to the e-resources. Agber & Agwu (2013) in Nigeria that constant erratic power supply affected power dependent machines like the computer which prohibits access to the databases and also Akinola et al. (2018) affirms power outrage to be a well-known challenge at the University of Ibadan in Nigeria. Katabalwa (2016) reported erratic power supply to be a challenge to the use and access of the e-journals.

Also, similar findings agree with the challenge of inadequate skills (Adam, 2017; Ali, 2005; Natarajan, 2017). Ali (2005) found out at the IIT Delhi library 60% of the users had challenges when navigating through e-resources. Also, Natarajan (2017) revealed due to the lack of searching skills, 62.2% of the undergraduate students were not able to get the relevant information needed. Adam (2017) revealed that at Kaduna State University challenge of lack of skill as the second most chosen among the respondents though in this study it is not.

Again, Katabalwa (2016), similar to this findings revealed inadequate funds led to the challenge of limited subscribed titles. Also, a number of findings are in line with the difficulty to find relevant information (Ahmed, 2013b, 2013a; Akinola et al., 2018; Natarajan, 2017). Ahmed (2013a) and Ahmed (2013b) found out that the inadequacy of students and faculty members to locate the needed information to satisfy their needs was reported as a challenge for them. Natarajan (2017) also revealed inadequacy of the undergraduate students to find the relevant information was their primary challenge in accessing the e-resources. Likewise, Akinola et al. (2018) found out irrelevant information was a barrier to the use of e-databases by the University of Ibadan postgraduates.

In agreement to these findings is Ahenkorah-Marfo (2017) who revealed difficult to use the online databases as a challenge as when information in the databases are scattered.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary of major findings in relation to the objectives of the study, conclusion and recommendations based on the findings resulting from the study to help create more awareness and use of the online databases among the undergraduate students at the University of Ghana.

5.2 Summary of Findings

The study was to find out the awareness and use of online academic databases by the Bachelor of Arts undergraduate students of the University of Ghana at the Accra City Campus. The main objectives of the study was to find out the level of awareness of the online academic databases, the extent of use of the online academic databases, the purpose of use of the online academic databases, the ease of use of the online academic databases, the level of satisfaction of the use of the online academic databases, the mode of access to the online academic databases and the challenges related with the use of the online academic databases. The summary of major findings of the study are as follows.

5.2.1 Level of awareness of the online academic databases

The findings revealed a high level of awareness of the online databases subscribed by the University Library among the students as 184 (72%) were aware as against 72 (28%) who were not.

Again, in terms of examples of the online databases, those that the students were highly aware of included Google Scholar with 120 (46.9%) and Academic Search Complete with 105 (41%). Among those with least awareness revealed by the study included Scopus with 8 (3.1%), then Agora with 4 (1.6%) and lastly Aluka with 4 (1.6%).

5.2.2 The extent of use of the academic databases

The findings showed that the online academic databases are being rarely used by the students as 179 (69.9%) of them rarely use them. Few used weekly with just 24 (9.4%) of them, with even fewer using them monthly with 21 (8.2%). Daily usage was seen to be among just 18 (7%) students and 12 (7%) students not using them at all.

5.2.3 The purpose of use of the online academic databases

The findings revealed the primary purpose for the students using the online academic databases was to aid them in their academics with 167 (42.6%). Other purposes for use revealed by the findings are getting current information with 90 (23%), expansion of their knowledge-base with (83 (21.2%), personal development with 40 (10.2%) and lastly, 12 (3.1%) using them for entertainment.

5.2.4 The ease of use of the academic databases

The findings showed that large proportion of the students found it easy to use the online databases with 154 (60%) whereas 102 (40%) found it difficult to use them. This can be attributed to them having the needed skills as almost all 240 (94%) indicated to possess knowledge and skills to use computer and other related technology whilst just 16 (6%) who do not.

Again, the findings revealed the students have the skills to use the online databases with 183 (73%) being able to and further revealing 145 (56.6%) of the students being able to get information easily from the online databases.

5.2.5 The level of satisfaction of the use of the academic databases

The findings showed most of the students with 173 (68%) had their information needs satisfied through the use of the online academic databases whereas 83 (32.4%) were not being satisfied. With regards to the overall level of satisfaction, it was seen that they are highly satisfied as 179 (69.9%) indicated they are as against 31 (12.2%) who expressed as being dissatisfied with the use of the online academic databases.

5.2.6 The mode of access to the online academic databases

The findings revealed a greater proportion of students with 183 (72.3%) accessed the online databases through the use of their mobile phones and 147 (58.1%) through the use of laptops. Other modes of accessed revealed by the findings included the use of the library premise with 68 (26.9%), then through computer labs on campus with 42 (16.6%) and the least being through the use of tablets with 33 (13%).

5.2.7 Challenges related with the use of the online academic databases

The findings revealed that the major setback that prohibits most of the students from accessing the online databases is slow internet with a number of 178 (71.2%) reporting such challenge. Other challenges revealed by the study though not much frequencies from the highest to the least were difficulty in getting relevant information with 80 (32%), information overload on the internet with 77 (30.8%), long time to view or download with 67 (26.8%), limited

subscribed titles with 62 (24.8%), inadequate search skills and difficulty in using the online databases with 48 (19.2%) each and lastly power cuts with 32 (12.8%).

5.3 Conclusion

Online academic databases are good sources for scholarly information. Subscriptions to these e-resources keep on getting higher and higher. So, it is imperative for the University Library to ensure the needed awareness is created to facilitate more usage. Such will keep funding of such resources coming continually as the effects will be clearly seen in the academic lives of the students.

In this technological era where literally almost everything is computer-based, the demand for online academic databases will continually grow and as such, the University Library must put in the necessary measures to ensure continuity for the use of the online databases and also as evident from the study, get students involved to have value for money.

5.4 Recommendations

The following are the recommendations arising from the findings of the study.

5.4.1 Providing Training in the use of the databases

The study found out that most of the students were advocating for more training sessions to help them use the online databases. Thus, the library must put in efforts to add more training sessions which must be continual to keep the students aware and use the online databases. Again, videos of trainings must be accessible to the students for continual practice. Again, the

training should be both ways, as the library staff must be continually trained as well so they can assist the students very well.

5.4.2 Network issues should be addressed

Since the online academic databases require internet to access them, inadequate network coverage and connection will greatly prohibit the access of the online databases. Hence, the library and the University as a whole must make conscious efforts to give to the students good internet access so they can use it to access the various online academic databases.

5.4.3 Subscribing to more academic databases

If the resources and means are available, the library must continue to make subscriptions to more online academic databases so the students can have different types that suit their information needs to better serve them.

5.4.4 Intensified orientation

Orientations for students especially the first years as seen from the findings must be intensified and be continuous as well as when they are undated with it from their early stay on campus, it will become part of them. Again, for the continuous students, plans must be for them to be included in orientations as some may have not gotten the opportunity to be part when they were in their first year.

5.4.5 More awareness programmes

Awareness creation must be one activity the library and the University must continually do without ceasing throughout each semester. As seen in the findings, periodic e-mails can be sent to the students, organisations and bodies on campus such as the Student Representative Council (SRC) can be tasked to share and create awareness of the online databases. Course Tutors must be implored to make mention of them and give assignments requiring students to register and use the online databases.

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APPENDIX A: QUESTIONNAIRE

UNIVERSITY OF GHANA

DEPARTMENT OF INFORMATION STUDIES

Questionnaire on the Awareness and Use of Online Academic Databases among Undergraduate Students in the University of Ghana

Introduction

This questionnaire seeks to gather information on the awareness and use of academic databases among undergraduate students in the University of Ghana.

The researcher is a MA student of the Department of Information Studies, University of Ghana.

Information provided will be solely used for research purposes. Candid responses to the questions below will be greatly appreciated.

SECTION A

BIOGRAPHIC DATA

1. Gender: a. Male [ ] b. Female [ ]

2. Age Range: a. 16-20 [ ] b. 21-25 [ ] c. 26-30 [ ] d. 31 & above [ ]

3. Which Department(s) are you in? …….

4. Please select the Level you are in: a. 100 [ ] b. 200 [ ] c. 300 [ ] d. 400 [ ]

SECTION B

AWARENESS OF ONLINE ACADEMIC DATABASES

5. Are you aware of the online databases subscribed by the University Library

a. Yes [ ] b. No [ ]

6. If Yes, which of these online databases subscribed by the University Library are you aware of? Please tick as many as apply

a. Academic Search Complete [ ] b. Aluka [ ] c. Annual Reviews [ ]

d. Cambridge Journals [ ] e. EBSCOHOST [ ] f. Emerald [ ]

g. Humanities International Complete [ ] h JSTOR [ ] i. SAGE Journal [ ]

j. Scopus [ ] k. Agora [ ] l. Google Scholar [ ]

m. Other (please specify) …….

7. How did you get to know about the online databases subscribed by the University Library? Please tick as many as apply

a. Colleagues [ ] b. Library website c. Orientation [ ] d. Notices [ ] e. Email [ ]

f. Course Tutor [ ] g. Other (please specify) ……

8. Is it easy to know the online databases subscribed by the University Library?

a. Yes [ ] b. No [ ]

9. If No, what needs to be done?

……

……

SECTION C

EXTENT OF USE OF ONLINE ACADEMIC DATABASES

10. How long have you been using the online databases subscribed by the University?

a. Less than a year [ ] b. One year [ ] c. Two years [ ] d. Three years [ ]

e. Four years and more [ ]

11. How often do you use the online databases subscribed by the University Library?

a. Daily [ ] b. Weekly [ ] c. Monthly [ ] d. Rarely [ ]

e. Other (please specify) …….

SECTION D

PURPOSE AND EASE OF USE OF ONLINE ACADEMIC DATABASES

12. Which of these online databases subscribed by the University Library do you use or have used before? Please tick as many as apply

a. Academic Search Complete [ ] b. Aluka [ ] c. Annual Reviews [ ]

d. Cambridge Journals [ ] e. EBSCOHOST [ ] f. Emerald [ ]

g. Humanities International Complete [ ] h JSTOR [ ] i. SAGE Journal [ ]

j. Scopus [ ] k. Agora [ ] l. Google Scholar [ ]

m. Others (please specify) …….

13. For what reason(s) do you use the online databases subscribed by the University Library? Please tick as many as apply

a. To undertake researches on topics of interest [ ]

b. To get current information [ ]

c. Expansion of my knowledge-base [ ]

d. Personal development [ ]

e. To aid in my academics [ ]

f. For entertainment [ ]

g. Other (please specify) ……..

14. Do you find it easy to use the online databases subscribed by the University Library?

a. Yes [ ] b. No [ ]

15. Do you have knowledge and skills to use a computer and other related technology?

a. Yes [ ] b. No [ ]

16. If yes, which level will you belong to?

a. Basic [ ] b. Intermediate [ ] c. Advanced [ ] d. Expert [ ]

17. Do you have the skills to use the online databases subscribed by the University Library?

a. Yes [ ] b. No [ ]

18. Are you able to formulate good search queries easily in the online databases subscribed by the University Library?

a. Yes [ ] b. No [ ] c. Not sure [ ]

19. Is it easy to get the needed information from the online databases subscribed by the University Library?

a. Yes [ ] b. No [ ]

SECTION E

LEVEL OF SATISFACTION WITH THE USE OF THE ONLINE ACADEMIC DATABASES

20. Are the online databases subscribed by the University Library able to satisfy your information needs?

a. Yes [ ] b. No [ ]

21. Please indicate your level of satisfaction in using the online databases subscribed by the University Library

Completely Satisfied	**Mostly Satisfied**	**Somewhat Satisfied**	**Neither Satisfied/ Dissatisfied**	**Somewhat Dissatisfied**	**Mostly Dissatisfied**	**Completely Dissatisfied**

22. How reliable are the information accessed from the online databases subscribed by the University Library?

a. Reliable [ ] b. Very reliable [ ] c. Slightly reliable [ ] d. Not reliable [ ]

e. Other (please specify) ……

SECTION F

MODE OF ACCESS TO THE ONLINE ACADEMIC DATABASES

23. How to do you access the online databases subscribed by the University Library? Please tick as many as apply

a. At the premise of the library [ ] b. Through mobile phones [ ] c. Tablets [ ]

d. Laptops [ ] e. Computer labs on campus [ ]

f. Other (please specify) …….

SECTION G

CHALLENGES ASSOCIATED WITH THE USE OF THE ONLINE ACADEMIC DATABASES

24. Can you have access to the online databases subscribed by the University Library whenever you want and wherever you are?

a. Yes [ ] b. No [ ]

25. If No, can you specify why?

…….....

…….

…….

26. What are some of the challenges you face when using the online databases subscribed by the University Library? Please tick as many as apply

a. Slow internet [ ] b. Limited subscribed titles [ ] c. Inadequate search skills [ ]

d. Difficult to use [ ] e. Information overload on the internet [ ]

f. Difficulty in getting relevant information [ ]

g. Takes too long to view or download pages [ ] h. Power cuts [ ]

i. Other (please specify) …….

27. What should be the Library's priority in relation to the online databases subscribed by them? Please tick as many as apply

a. Subscribing to more academic databases [ ]

b. More computers in the library [ ]

c. Improving access to the databases [ ]

d. Providing training in the use of the databases [ ]

e. Other (please specify) ……..

28. How can effective use of the online databases subscribed by the University Library be maintained? Please tick as many as apply

a. Intensified orientation [ ]

b. More awareness programmes [ ]

c. There should be enough networked computers [ ]

d. Network issues should be tackled [ ]

e. Other (please specify) …….

29. In your opinion, what do you think must be done in order to create more awareness and

use of the online databases subscribed by the University Library?

……

……

……

Thank you very much for your help and co-operation.