

Electronic Databases Availability and Use for Scholarly Research Work by Postgraduates in Obafemi Awolowo University, Ile-Ife, Nigeria

Femi Oguntuase
Hezekiah Oluwasanmi Library
Obafemi Awolowo University
Ile-Ife, Nigeria
fzoguntuase@oauife.edu.ng

Omobolade Adeagbo
Hezekiah Oluwasanmi Library
Obafemi Awolowo University
Ile-Ife, Nigeria
omoboladeadeagbo@oauife.edu.ng

Ejoro Jamogha
Hezekiah Oluwasanmi Library
Obafemi Awolowo University
Ile-Ife, Nigeria
ejamogha@oauife.edu.ng

Abstract— E-databases contain information resources that can be used to support scholarly research works of a university. Obafemi Awolowo University (OAU), Ile-Ife is committing much money to e-databases subscription; therefore, e-databases are expected to be available and useful. Hence, this study investigated e-databases availability and use for scholarly research work by postgraduates in OAU, Ile-Ife, Nigeria. The study adopted descriptive survey research design. From a population of 3,064 PG students of OAU, a sample size of 340 respondents were selected using purposeful and simple random sampling techniques. The instrument for data collection was questionnaire that was administered to 340 respondents out of which 272 returned copies were used for data analysis. The study findings revealed that available e-databases include: ScienceDirect, JSTOR, HINARI, AGORA, and IR, and they are used for thesis writing, article download, conferences and seminars preparation. E-databases were fairly used; at least once in two weeks. The challenges to e-databases use were password constraint and the inability to access IP-based databases outside the university's network. It was therefore, recommended that the university/library management can have a plan "B" where password can be used to access the e-databases that are IP-based and more awareness should be created for subscribed e-databases.

Keywords—*electronic databases, e-databases availability, e-databases use, scholarly research work, Obafemi Awolowo University*

I. INTRODUCTION

One of the major activities that universities all over the world engage in is research and the key players are the academic staff and students. The research are scholarly in nature and their end product could be in the form of thesis, journal articles, conference proceedings, technical reports among others. Research being a systematic investigation of an identified problem with the aim of providing solution, often require the researcher to search for needed information that would unravel or lighten any grey area in the course of the investigation. The first port of call for information search before the advancement in ICTs was the library, and the researcher usually rely on the information resources that are domicile in the library. However, with the advancement in ICTs, information users can now access and use information in diverse ways for their scholarly research work.

Scholarly research works are generally referred to works resulted from formal research in the field of the researcher. These are works that are properly researched using academic resources and can include bibliographies or lists of works cited, depending on the style of citation used. Scholarly materials that support research works includes books, academic journals and conference publications among others. These materials are available in the electronic format in databases. Science Direct, AGORA (Access to Global Online Research in Agriculture), MEDLINE, LexisNexis, HINARI, OARE (Online Access to Research in the Environment), EBSCOHOST are examples of databases [1]. Libraries in addition to printed information resources now provide information resources in electronic formats to their users. One of the electronic resources that contain information resources that can be used for scholarly research work is electronic database.

Electronic database (e-database) was simply defined by [2] as an organized collection of information on a subject or multidisciplinary subject. Also, [3] define an e-database as computerized information records consisting of organised pieces of information placed into records. Reference [4] described e-database as specialized records of related published information documents which are not available on Google or other common search engines, especially in a full text. E-databases include products such as periodical indexes, abstracts, encyclopedias, directories, dictionaries and other reference works; e-databases provide facility that enable users to search for information by subject, type and title or key word with the Boolean logic features [5].

E-databases are important reservoir of information resources that can be used to support the research activities of a university. Reference [5] opined that e-databases enhance new research, mechanize the preservation and conservation, as well as adding value to the collection of library's parent organisation. The university who is the parent organisation of their library often commit much funds to acquire and have access to subscription databases. As such, the university expects that the e-databases subscribed to are available and useful to members of the university community. Thus, the observation that, libraries provide e-databases for better services and satisfying numerous needs of its users, and that e-databases have a great impact on the quality of research

output in any academic activities [6] has therefore necessitated this study.

The target location for this study is Obafemi Awolowo University (OAU), Ile-Ife, Nigeria, and the population of the study are the postgraduate (PG) students. Apart from the academic staff in the university, [7] opined that among all categories of students within a university, the PG students require information for academic and research purposes the most. It therefore, suffice to say that the PG students may likely make good use of e-databases for scholarly research works once they are available. Examples of e-databases that OAU subscribed to through the library include the Biomedical & Life Sciences Collection, Science Direct, EBSCOHOST, JSTOR, AGORA, HINARI, OARE, GOALI among others. If these e-databases are available and useful, then their subscription can be justified. Hence, this study seeks to investigate e-databases availability and use for scholarly research work by postgraduates in OAU, Ile-Ife, Nigeria.

II. OBJECTIVES OF THE STUDY

The general objective of this paper is to investigate the availability and use of electronic databases for scholarly research work by postgraduates in OAU. While the specific objectives of the study are to:

- i. Determine the e-databases available to PG students in OAU
- ii. Ascertain the frequency of use of the e-databases by the PG students
- iii. Determine the purposes for which e-databases are used by the PG students
- iv. Determine the challenges of e-databases use by the PG students in OAU

III. RESEARCH QUESTIONS

The following research questions were used to guide the study:

- i. What are the e-databases available to PG students in OAU?
- ii. What is the frequency of use of the e-databases by the PG students?
- iii. What are the purposes for which e-databases are used by the PG students?
- iv. What are the challenges of e-databases use by the PG students in OAU?

IV. LITERATURE REVIEW

The availability of e-database is a necessary prerequisite for their access and use for scholarly research works. Studies have identified several e-databases that are preferred by scholars; prominent among these e-databases are EBSCOHost, JSTOR, AGORA, HINARI, OARE, ARDI, Medline, Science Direct, ERIC Online, ProQuest, , Springer Link and Magiran [8], [9], [10], [11]. A study conducted by [12] that investigated the “availability of electronic information resource databases in university libraries in South-South, Nigeria”, found that the subscription to electronic databases by government owned universities was very low and that most of the available databases were free based. From the study it implies that most of the available e-databases in must public university libraries in Nigeria are mostly free-based as the subscription to e-databases is very low.

In India, [13] conducted a study that investigated the “utilization of electronic databases among students in Kurukshetra University Library, India”, they found that majority of the e-databases subscribed to by the Kurukshetra University library were DOAJ, HINARI, AGORA, JSTOR, OARE, EBSCOHOST resources, Proquest, ScienceDirect and Elsevier EIR databases. Similarly, in a study conducted by [14] that investigated the “availability of use of electronic information resources for research by students in Francis Sulemanu Idachaba Library, University of Agriculture, Makurdi”, they found that e-databases such as EBSCOHOST, Science Direct and reference databases were available to students for research. This shows that when university libraries subscribe to e-databases, they have the intention of making them available to their users.

On the purposes for why libraries subscribed to e-databases, several literatures have reported that e-databases facilitate easy access to resources that are online, and also enhance the capabilities and manipulation of information, supplement traditional print resources, supports e-learning and online research, and they ensure that collections are available and accessible, round-the-clock irrespective of location [15], [16], [17]. Reference [5] reiterated that the advancements in ICTs have resulted in continued gain in the prominence of e-databases in tertiary institutions all over the world as it avails researchers the opportunity to exploit and access relevant, current and up-to-date information for diverse purposes. Reference [18] observed that university libraries subscribed to e-databases for users to have access to information and to update their knowledge for the purposes of teaching, learning and research work. This was justified by [6] who noted that students used e-databases to search current literature and this has enable them to understand the value of these databases to their research and in the enhancement of their academic performance.

Furthermore, evidence of postgraduate students’ interest in e-databases abound in literature. For instance, [19] found in their study that most postgraduate students use e-databases: for research work, to generate new information, for literature searching, to update knowledge, for doing course assignment and for writing seminar/conference papers. In the same vein [7] reported that postgraduates students use e-databases for the purpose of “preparing for seminars, preparing for examinations, writing of thesis, for group discussion, sharing of knowledge, update of their knowledge, for recreation and leisure and preparing for conferences”. In addition, [20] reported that a greater percentage of postgraduate students used electronic databases to write their assignments.

In India, [21] investigated the “use of electronic databases by postgraduate students and research scholars in GBPUAT Library, India” and found that e-databases such as AGRICOLA, AGRIS, agriculture & natural resources and CAB abstract were highly utilized by postgraduate students. Reference [19] in their study that investigated “Awareness and use of electronic databases by postgraduates in the University of Ibadan” noted that the preference for certain e-databases over others affected usage frequency, as most users often use certain e-databases and neglected others that could be providing related information. For instance, they found that JSTOR was the most popularly used e-databases, whereas AJOL that could provide related information was never used by the respondents.

In a study conducted by [6] that investigated the “perception, access and use of electronic databases among undergraduates’ students-users of Umaru Yar’adua University Library, Kastina State, Nigeria” found that e-database was highly accessed by the students. Reference [7] observed in his study that the frequency of using subscribed e-databases was relatively low when compared to other electronic resources like multimedia and online magazines that freely available. This observation by the scholar could be the result of some challenges.

Reference [22] identified the challenges of using e-resources such as e-databases to include: technical problems, low speed connectivity, unavailability of sufficient e-resources, doubts in permanency, high purchase price, lack of awareness about statutory provision for accessing e-resources by the institutions and lack of legal provision. Reference [23] in their study found slow internet connectivity and the lack of user education and guidance on use of databases as the topmost of the challenges users faced with the use of electronic databases. Reference [24] found poor infrastructure, lack of training; and high cost of usage as the barrier to effective utilization of electronic databases.

Reference [25] found that insufficient time and poor information retrieval skills were the main hindrances to using e-sources. Also, [26] observed in their study that the lack of basic search skills were hindrance to the use of e-databases. Reference [27] identified some challenges to the use of e-databases to include: the inability to access some websites and the difficulties in navigating through e-resources, acquisition cost and maintenance cost in addition to time wastage. All these inhibit quick and easy access to electronic resources in the university or at least restrict access to some relevant materials.

From the literature reviewed, most of the studies focused generally on e-resources that encompasses ICTs relating to the provision and use of information, and where e-databases were investigated both the subscribed and free-based e-databases were considered thereby resulting to reports that may not truly reflect the state of subscribed databases in terms of their availability and use for scholarly research work. This study intend to fill this gap as it is limited to e-databases subscribed to by the institution under study.

V. METHODOLOGY

The study adopted descriptive survey design. The population of the study comprises three thousand and sixty-four (3,064) postgraduate students in OAU of which a sample size of three hundred and forty (340) were selected for the study. The sampling size was based on [28] table. In order to select the respondents for the study, a multistage approach (which was in two stages) was adopted. The first stage involved using a purposeful sampling to decide on category of respondents needed for the study. Thus, the PG students that make use of OAU library were purposefully chosen because, the library is the major player in the subscription, availability and accessibility to electronic databases that the university subscribed to and there is a better chance for users of the library to have better knowledge of the electronic databases made available through the library when compared to their counterparts that do not use the library. While the second stage involved randomly sampling the PG students who visited the Postgraduate or Electronic Library section of

the library. The PG students were identified by their library identity cards or by mere inquiry.

In order to capture data from the respondents for the study, a structured questionnaire was designed and administered to the respondents. The questionnaire was divided into four sections lettered A to D. Section A was on the available electronic databases, Section B was on the frequency of electronic databases usage, Section C was on the purpose of electronic databases usage, while Section D was on the challenges of electronic databases usage.

The captured data were coded and analyzed using Statistical Package for Social Sciences (SPSS). For better presentation, the results of the analysis were presented using tables. The research questions were answered using statistical tools like simple frequency, percentage and mean distribution. Thus, the findings of the study were either refuted or supported using available literature.

VI. RESULTS AND DISCUSSION

A. Questionnaire administration and response rate

A total of three hundred and forty questionnaires were administered to the respondents. However, two hundred and seventy two copies of the returned questionnaires were found useful for the study, thus, giving 80% response rate. Table 1 presents data on the questionnaire administration and response rate.

TABLE I. QUESTIONNAIRE ADMINISTRATION AND RESPONSE RATE

Respondents	Number of Postgraduate Students	Number of Questionnaire Administered	Number of Questionnaire Returned	Percentage of Returned Questionnaire (%)
Postgraduates	3,064 ^a	340	272	80

^aSource: Planning and Budgeting Unit, OAU

B. Gender demography of the respondents

Table 2 presents data on the gender distribution of the study. From Table 2, most of the respondents were male 160(58.8%) while the female respondents were 112(41.2%). This implies that male PG students were the most contributor to this study, and this may have slightly affected the response pattern of the respondents.

TABLE II. GENDER OF THE RESPONDENTS

Gender	Frequency (Freq)	Percentage (%)
Male	160	58.8
Female	112	41.2
Total	272	100

Source: Field Survey, 2021

Research question 1: What are the electronic databases available to postgraduates in OAU?

TABLE III. AVAILABILITY OF ELECTRONIC DATABASES

Electronic Databases	No		Yes	
	Freq	%	Freq	%
OAU Institutional Repository	82	30.1	190	69.9
Science Direct	105	38.6	167	61.4

Electronic Databases	No		Yes	
	Freq	%	Freq	%
AGORA	105	38.6	167	61.4
HINARI	108	39.7	164	60.3
GOALI	113	41.7	158	58.3
JSTOR	121	44.5	151	55.5
ARDI	131	48.2	141	51.8
EBSCOHOST	137	50.4	135	49.6
OARE	141	51.8	131	48.2
Biomedical & Life Sciences Collection	168	61.8	104	38.2
Average Percentage		44.5		55.5

N=272

SOURCE: FIELD SURVEY, 2021

The availability of electronic databases is a prerequisite for their usage, hence, based on the responses of the respondents in this study, Table 3 presents data on the availability of electronic databases in OAU. From the responses, the electronic databases available includes: OAU institutional repository, Science Direct, AGORA, HINARI, GOALI, JSTOR and ARDI as these were indicated by over 50% of the respondents in this study. This was affirmed by the

findings of [13] that found majority of the databases subscribed to by the Kurukshetra University library were, DOAJ, HINARI, AGORA, JSTOR, OARE, , EBSCOHOST resources, Proquest, ScienceDirect and Elsevier EIR databases. While electronic databases such as Biomedical & Life Sciences Collection, OARE and EBSCOHOST were considered unavailable. However, with a positive average percentage response of 55.5% as against negative average response of 44.5% in Table 3, it can be concluded that the electronic databases subscribed to by the institution under study were adjudged by the respondents to be available. This was corroborated by findings of [14] that electronic databases such as EBSCOHOST, Science Direct and reference databases where available to students for research. However, this was negated by the findings of [12] that the subscription to electronic databases by government owned universities was very low.

From the Table 3, the results shows that most of the PG students indicated that most of the e-databases subscribed to by the university under study were available for their use.

Research question 2: What is the frequency of electronic databases usage by the postgraduates in OAU?

TABLE IV. FREQUENCY OF ELECTRONIC DATABASES

Electronic Databases	Never	Monthly	Once in two weeks	Weekly	Daily	Mean
	Count	Count	Count	Count	Count	
OAU Institutional Repository	15	49	127	59	22	3.09
Science Direct	11	70	129	54	8	2.92
AGORA	32	95	42	80	23	2.88
HINARI	10	75	138	41	8	2.86
GOALI	12	76	132	47	5	2.84
JSTOR	13	79	135	32	13	2.83
ARDI	14	77	135	40	6	2.81
EBSCOHOST	25	111	50	65	21	2.80
OARE	10	112	85	56	9	2.79
Biomedical & Life Sciences Collection	13	91	131	35	2	2.71
N=272, Calculated mean= 2.9						

Note: Criterion mean response range; Never ($1 < \bar{x} \leq 1.8$), Monthly $1.8 < \bar{x} \leq 2.6$, Once in two weeks ($2.6 < \bar{x} \leq 3.4$), Weekly ($3.4 < \bar{x} \leq 4.2$), Daily ($4.2 < \bar{x} \leq 5.0$)

Source: Field Survey, 2021

The frequency with which electronic databases are consulted or used are pointers to how relevant those database are to the users, thus, Table 4 presents data on frequency at which postgraduates make use of the electronic databases subscribed to by the institution under study. From Table 4, more than half of the respondents, use electronic databases at least once in two weeks. Therefore, the frequency of use is relatively fair. This was affirmed by the study of [7] who found that the frequency of using subscribed e-databases was relatively low when compared to other electronic resources like multimedia and online magazines that were freely

available. However, this was negated by the findings of [6] who found that e-database was highly accessed by the students. However, their findings did not reveal whether the major contributors to the high access was either subscribed or free-based databases.

From Table 4 it can be concluded that the frequency at which PG students use e-databases that were subscribed to by the university under study is relatively fair as the result do reflect an extreme position of either low or high frequency of use.

Research question 3: What are the purposes of electronic databases usage by postgraduates?

TABLE V. PURPOSE OF ELECTRONIC DATABASES USAGE

Items	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean
	Count	Count	Count	Count	
Thesis writing	0	8	93	171	3.60
Download articles	0	18	176	78	3.22
Knowledge update	5	20	164	83	3.19
Preparation for seminar	6	30	162	74	3.12
Assignment/term papers	6	30	162	74	3.12
Preparation for conference and workshop	19	108	95	50	2.65
Knowledge sharing	2	170	100	0	2.36
Generating trending topics	86	139	40	7	1.88
Group discussion	136	125	10	1	1.54
Recreation and leisure	242	27	2	1	1.13
N=272, Criterion mean= 2.5, Calculated mean=2.6					

Source: Field Survey, 2021

The subscription to electronic databases by Nigerian universities is aimed at serving purposes that are relevant to the teaching, learning and researching activities of the university, and the PG students by reasons of their engagements in the university are expected users of the e-databases. Hence, an investigation to know the purposes for which electronic databases are used by the postgraduates will help to justify the essence of subscribing to electronic databases. Therefore, Table 5 presents data on the purpose of electronic databases usage by postgraduates in OAU. The purposes for which PG students use electronic databases include: thesis writing, downloading articles, updating knowledge, preparation for seminar, conference and workshop, and for assignment/term papers; as these purposes were indicated by most of the respondents, as the mean scores for these purposes ranges between “3.6 to 2.65”.

This findings was supported by [18] observation that the purpose why university libraries subscribed to e-databases is to allow users have access to information and to updating their knowledge that are necessary for teaching, learning and research work. Similarly, [14] found that e-databases were available to students for purpose of research. However, it was revealed in this study that most of the respondents do not use electronic databases for knowledge sharing, generating trending topics, group discussion, recreation and leisure. This was negated by the findings of [7] who reported that PG students use e-databases for the purpose of group discussion, sharing of knowledge, update of their knowledge, for recreation and leisure.

From Table 5, it can be concluded that the purposes (thesis writing, downloading articles, updating knowledge, preparation for seminar, conference and workshop, and for assignment/term papers) for which electronic databases are used by PG students align with the core activities (teaching, learning and researching) of the university system.

Research question 4: What are the challenges confronting the usage of electronic databases by postgraduates in OAU?

TABLE VI. CHALLENGES OF ELECTRONIC DATABASES USAGE

Items	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean
	Count	Count	Count	Count	
Password constraints	2	33	97	140	3.38
Inability in accessing IP-based databases (e.g. JSTOR) outside the university's network	29	83	150	10	2.52
Erratic power supply	24	110	115	23	2.50
Poor level of e-database awareness	98	111	63	0	1.87
Technical know-how in navigating e-databases	117	116	37	2	1.72
Poor Internet accessibility	154	104	9	5	1.50
N=272, Criterion mean= 2.5, Calculated mean=2.3					

Source: Field Survey, 2021

The usage of electronic databases is aimed at serving certain purposes, albeit, their usage could be hampered by certain challenges which could be relative, thus, Table 6 present data on the challenges that respondents in this study face with the use of e-databases subscribed to by the university under study. From Table 6, the main challenges faced according to the respondents are password constraints, inability to accessing IP-based databases (e.g., JSTOR) outside the university's network and erratic power supply as these challenges had a mean response ranging from “3.38 to 2.5”. While the other items such as poor (Internet connectivity and technical know-how in navigating e-databases) posed as possible challenges to electronic databases usage where not considered as challenges to the respondents.

However, this was negated by the findings of [22] that identified the challenges of using e-resources to include technical sufficient e-resources, doubts in permanency, high purchase price, lack of awareness about statutory provision for accessing e-resources by the institutions and lack of legal provision. Similarly, the findings of [23] that slow internet connectivity and the lack of user education and guidance on use of databases as challenges users faced with the use of electronic databases negate the findings of the study.

The results in Table 6 therefore, showed that the main constraint to the use of e-databases subscribed to by the university under study were password constraints, the inability of users to access IP-based databases (e.g., JSTOR) outside the university's network and erratic power supply.

VII. RECOMMENDATIONS

For those electronic databases subscribed to by the university and yet most of the respondents indicated their unavailability; shows a low level of awareness of these electronic databases, hence, the management of libraries should ensure that once subscription is made for any database, a massive campaign through current awareness strategies should be employed to increase awareness.

Most of the respondents use the electronic databases at least twice in a month. Although this is fair but this can be improved on by the library management if there are handful numbers of staff dedicated to providing support to users when the need arises.

Since the purposes for which the PG students use the electronic databases are in line with the core activities of the university system, the management should sustain the continuous subscription to electronic databases as this may contribute in enhancing the academic performance of the PG students.

Password constraint to accessing electronic databases was a major challenge identified in this study, hence, university and library management should work out a modality that would bypass the use of password to access the database once one is within the university network.

IP based databases are inaccessible once a user is outside the university network, hence, the university and library management can have a plan "B" where password can be used to access the electronic databases subscribed to once one is not within the university network.

VIII. CONCLUSION

Electronic databases are very important to any library that desire to serve their patrons beyond the physical collections that are domiciled within the buildings of the library and to also serve as a gateway to the vast collection of electronic information resources that are located in various database servers across the globe. As such, the university under study had subscribed to some electronic databases that they deem fit for supporting the teaching, learning and researching activities of the university.

This study served as a way to re-evaluate through the indications by PG students' on electronic databases availability, frequency of use, purposes of use and the possible challenges, and to establish if the subscription to the databases were necessary or there is need for better approaches that would justify the scarce budget that is directed at subscribing to these databases.

The results of the study justify the subscription to e-databases as the PG students indicated that the e-databases were available and that their main purposes for accessing them were scholarly reasons; that are in line with the core mandate of the university which are teaching, learning and research. The challenges to e-database use were identified and thus, recommendations were given that may enhance the availability and use of subscribed e-databases to PG students in particular and other users in general.

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