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EVALUATION OF PERCEPTION AND UTILIZATION OF ELECTRONIC DATABASES BY UNDERGRADUATE STUDENTS IN UNIVERSITY LIBRARIES IN AKWA IBOM, STATE, NIGERIA

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ABSTRACT

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The study investigated the perception and utilization of electronic databases by undergraduate students in university libraries in Akwa-Ibom State, Nigeria. It adopted a descriptive survey design with a study population of 1,116 registered undergraduates-users of Akwa Ibom State University (AKSU) Library and Ritman University Library, out of which 224 undergraduate students were sampled using the proportionate stratified sampling technique. Data was collected using a combined instrument of observation checklist, structured questionnaire and unstructured interview. 224 copies of the questionnaire were distributed, and out of which, 186 (83%) were retrieved with valid information. Analysis of data was done using chart, frequency count, simple percentage, mean scores and standard deviations, with a criterion mean of 2.50. The study revealed that HINARI, EBSCOHOST, JSTOR, Science Direct, AGORA, AJOL, OARE, ARDI, and GOALI were available in the university libraries studied. It further reported a positive perception of the students toward electronic databases; while revealing that electronic databases are utilized by the students in carrying out their research project, performing assignments/term-papers, preparing for examinations, seminar papers, etc. Lack of adequate awareness of available electronic databases, erratic power supply, poor search and retrieval skills, poor Internet connectivity, etc., were among the factors affecting their perception and utilization. It was however, recommended, among other measures, that the management of universities should provide adequate funds for university libraries to subscribe to more relevant and useful electronic databases across various academic disciplines, while university libraries should enhance their user education and information literacy programmes to sensitize the students on available electronic databases and how to effectively utilize them in meeting their information, educational and research needs.

Keywords: Perception, Utilization, Electronic Databases, Undergraduate Students, University Libraries.

INTRODUCTION

The prevalence of electronic databases as vital components of information resources in university libraries has continued to gain prominence over recent years. University libraries are the single most essential organ that supports the entire fabric of a university system through the provision of information resources in print and non-print formats, including electronic databases. University libraries serve the information, educational, research and recreational needs of undergraduate and postgraduate students as well as other information users within the university community (Amadi et al., 2020; Ibegwam, 2015). They are pivotal in encouraging intellectual enquiries and discoveries, providing impetus for research and studies, as well as serving the broad educational needs of various stakeholders within the university environment. As an important information bank, university libraries are duty-bound to acquire and provide seamless access to electronic databases in a manner that galvanizes high-quality and sustainable university education.

These electronic databases are fundamental information resources in modern university libraries aim at supporting effective academic achievements. They are products of advancement in Information and Communication Technology (ICT), the digital revolution and the increasing craving for knowledge (Udoh et al., 2023). They represent crucial innovative information resources for enhanced learning (Mensa et al., 2023); and are often used interchangeably with online databases, real-time databases or internet-based databases (Edesiri, 2018; Udoh et al., 2023). Basiru et al. (2018) defined electronic databases as collections of e-books and e-journals that provide cost-effective access to electronic information resources to the end-users such as undergraduates. They are a collection of electronic information resources by publishers from various fields and disciplines that can be accessed online via computer networks or offline via CD-ROMs. Lawal and Yahaya (2020) posited that electronic databases (e-databases) are valuable aids for students' effective learning; containing large and regularly updated files of digitized information, bibliographic records, abstracts, full-text, documents, directory entries, images, statistics, and other information related to a specific subject or field, consisting of records of uniform format organized for ease and speed of search and retrieval. Electronic databases are digital information sources that are managed with the use of Database Management System (DBMS) software, with contents revised regularly to provide current and relevant information on specific subject matters.

Electronic databases are easier, faster and more convenient to access and utilize for varied academic activities. They include Health Internet work Access to Research Initiative (HINARI), Access to Global Online

Research in Agriculture (AGORA), The Essential Electronic Agricultural Library (TEEAL), Research Paper in Economics (REPEC), BIOLINE International, Library Index (LIBDEX), Online Public Access Catalogue (OPAC), Online Access to Research in Environment (OARE), Public Library of Science (PLOS), eGranary Digital Library, High Beam, PubMed, Questia, Journal Storage (JSTOR), EBSCOHost, Access to Research for Development Innovation (ARDI), MIT Open CourseWare, Directory of Open Access Journals (DOAJ), World Public Library, LexisNexis, among many others (Abubakar et al., 2021; Aina, 2014; Dadzie, 2014; Das, 2016; Edesiri, 2018; Udoh et al., 2023). They are veritable teaching, learning and research aids that are useful and helpful to undergraduate students for enhanced academic performance and knowledge acquisition, their usefulness can be maximally harnessed if students are adequately aware of their existence as well as perceive that they are useful in their academic works.

Perception of electronic databases entails how undergraduate students recognize, organize and interpret sensory information about electronic databases in the university libraries. It deals with the human senses that generate signals from the environment through the five sense organs of sight, hearing, touch, smell and taste (Lawal & Yahaya, 2020). It practically determines the undergraduates' mental picture to positively or negatively decide whether or not they should utilize electronic databases in university libraries. From the above perspectives, it could be deduced that awareness and perception precede the utilization of electronic databases by undergraduate students, while utilization of electronic databases is the culmination of the whole essence of acquiring and making available electronic databases in the university libraries. Utilization of electronic databases involves the extent to which undergraduate students can access, apply, or benefit from electronic databases in university libraries to achieve their academic purposes. Nwankwo et al. (2019) asserts that utilization is the ability of students, or other information users to adopt and adapt new technologies like electronic databases to achieve defined purposes or set goals. This is even as Usoro et al. (2018) also noted that the utilization of library information resources in both print and non-print is influenced by age and gender. It is the practical application or use of electronic databases by undergraduate students in the university libraries to achieve academic goals.

Utilization of electronic databases is dependent on the level of awareness, positive disposition of students to electronic databases and the digital literacy skills of the undergraduate students. This underscores the reason why Udoh et al. (2020) emphasize on the need for university libraries to create adequate sensitization on available electronic information resources including electronic databases in the libraries while training

students on the necessary digital literacy skills to enable them to understand, locate, organize, analyze, create and utilize electronic databases. Therefore, based on the above background, it becomes imperative to investigate the perception and utilization of electronic databases by undergraduate students in universities in Akwa Ibom State, Nigeria.

STATEMENT OF THE PROBLEM

Electronic databases are products of the advancement in information and communication technology (ICT) that offer greater, faster, easier and more convenient access to current and relevant information across academic disciplines with little or no serious barrier to geographical location or time zone. Akinola et al (2018) in their studies found that the majority of students used electronic databases to enhance their learning, carry out research work, literature search, generate new information and update their knowledge. However, despite the usefulness of electronic databases to students, it is not certain if university libraries in Akwa Ibom State subscribe to adequate relevant electronic databases as well as create sufficient awareness to enable undergraduate students to utilize available electronic databases in their university libraries. On the part of the undergraduates, it is not clear how their perception vis-à-vis like or dislike of electronic databases affect the utilization of electronic databases in university libraries since the utilization of electronic databases is typically dependent on certain factors, such as perception. Also, though there are vast pieces of evidence of research efforts on the subject matter, there is no available literature within the reach of the researchers that investigated perception and utilization of electronic databases by university undergraduates in Akwa Ibom State, Nigeria. Therefore, based on this background, this study becomes imperative to fill the observed knowledge gap.

RESEARCH OBJECTIVES

The study broadly examined perception and utilization of electronic databases by undergraduate students in university libraries in Akwa Ibom State, Nigeria. Specifically, the study:

- i. Identified the electronic databases available in university libraries in Akwa Ibom State.
- ii. Found out the perception of electronic databases among the undergraduate students in university libraries in Akwa Ibom State.
- iii. Ascertained the purposes for utilizing electronic databases by undergraduate students in university libraries in Akwa Ibom State.
- iv. Examined the factors affecting the perception and utilization of electronic databases among

undergraduate students in university libraries in Akwa Ibom State.

LITERATURE REVIEW

The concept of electronic databases is characteristically attracting the attention of scholars and researchers occasioned by the advancement in ICT, and the apparent preference for electronic information resources by information users. Kwadzo (2015) states that electronic databases are collections of electronic information resources by publishers from various fields and disciplines, accessible online or offline. In the same vein, Abubakar et al. (2021) posit that electronic databases are a collection of e-journals, e-books and other digital information available through computer network and the Internet, accessible free of charge, or through subscription by universities and other organizations. They are valuable and convenient sources of information containing textual, numerical, open source, commercial, bibliographic, non-bibliographic, online and offline information that facilitate teaching, learning, research and other academic goals (Abubakar et al., 2021).

Studies revealed that electronic databases include: Access to Global Online Research in Agriculture (AGORA), Health Inter-Network Access to Research Initiative (HINARI), Elton B. Stephens Company HOST (EBSCOHOST) resources, African Journal Online (AJOL), Online Access to Research in the Environment (OARE), Database of African Theses and Dissertations (DATAD), The Essential Electronic Agricultural Library (TEEAL), Online Public Access Catalogue (OPAC), Research Paper in Economics (REPEC), Access to Research for Development and Innovation (ARDI), Library Index (LIBDEX), Global Online Access to Legal Information (GOALI), International Network for the Availability of Scientific Publications (INASP), Massachusetts Institute of Technology (MIT) Open CourseWare, Directory of Open Access Journals (DOAJ), Journal Storage (JSTOR), World Public Library, LexisNexis, Questia, Ebrary, The Observatory, eGranary Digital Library, High beam, PubMed, Oxford Online Journal, Biomed Central, among others (Abubakar et al., 2021; Abubakar & Akor, 2017; Aina, 2014; Dadzie, 2014; Edesiri, 2018; Scott, 2022; Tondo et al., 2020; Udoh et al., 2023).

Meanwhile, perception and utilization of information resources, including electronic databases are fundamental considerations in library and information services. Aina (2014) observed that awareness of electronic databases is a precursor to the effective utilization of electronic databases. Akpojotor (2016) asserts that awareness and use of electronic information

resources like databases are very essential to alert students of the available media through which they can access needed information. This is even as Prangya and Rabindra (2013) corroborate that awareness is core to the usage of electronic information resources like electronic databases, while utilization of library resources is highly influenced by students' age and gender (Usoro et al., 2018). Omelusor et al. (2016) state that the perception of library users like undergraduate students about library resources such as electronic databases is of utmost importance because, to a large extent, it determines the level of information resources usage in academic libraries. Perception helps undergraduate students to form impressions about the information resources such as electronic databases available in the university libraries and it either propels or impedes utilization. It ranks among the important cognitive factors of students' behaviour or psychological mechanism that enables them to understand their environment, including resources available in the university libraries.

However, Udoh et al. (2023) investigated university undergraduates' awareness and utilization of electronic databases in university libraries in Akwa Ibom State, Nigeria. The study revealed that electronic databases available for utilization by students in the libraries include HINARI, EBSCOHost, JSTOR, Science Direct, AGORA, AJOL, OARE, ARDI, and GOALI. It also indicated that the overall extent of awareness and utilization of electronic databases in the libraries is low due to several factors including erratic power supply, poor search and retrieval skills, poor Internet connectivity, inadequate electronic databases in relevant fields of studies, among others.

Similarly, Abubakar et al. (2021) conducted a study on the adoption and utilization of electronic databases by postgraduate students in selected universities in North-central, Nigeria. The study examined 1,726 postgraduate students from five (5) universities in North-central, Nigeria, and found that Internet facilities, e-journals, e-books, science direct, AGORA, DOAJ and TEEAL are the major e-databases available and accessible, while EMERALD, HINARI, EBSCOHOST, OARE, and JSTOR are seldom accessed in the university libraries. The study also identified poor interregional networking and Internet connection, high cost of e-databases, epileptic power supply and insufficient funds to subscribe to e-databases as major challenges confronting the use of adopted e-databases.

Emmasiegbu and Anaehobi (2021) also surveyed the challenges to the use of electronic databases by lecturers in government-owned university libraries in Anambra State, Nigeria. The study revealed that while electronic databases are essential information resources for teaching and research, the major challenges hampering the use of electronic databases in university libraries are: a lack of user education and guidance on

the use of databases as well as slow internet connectivity. It recommended that greater publicity should be provided for lecturers to increase awareness while internet connectivity should be improved in the university libraries.

In another study, Lawal and Yahaya (2020) investigated the perception, access and use of electronic databases among undergraduate students-users of Umaru Musa Yar'adua University Library, Katsina State, Nigeria. The study revealed that e-databases have very positive impacts on quality academic work by the students through enhanced learning like doing assignments, research activities and preparation for examinations. It showed that the majority of the students positively embraced the use of electronic databases for their ease of use and usefulness in getting electronic information sources, faster information retrieval from electronic databases, and serving as a hundred per cent replacement for print resources in meeting student's information needs. It also revealed that the overall extent of access to e-databases by the students was low, even as some students indicated a negative perception towards e-databases due to a lack of adequate search skills and poor internet services in the library. It, however, recommended that students' orientation on the use of e-databases should be organized by the library management at the beginning of every academic year.

Basiru et al. (2018) investigated knowledge of electronic databases as predictors of research productivity of academic staff in Nigerian private universities. The study revealed that the knowledge of academic staff on the use of electronic databases includes the ability to effectively use input devices like mouse or arrow keys to locate and download files in e-database; ability to limit e-database search; peruse contents from open access journals, repositories, electronic theses and dissertations; retrieve scholarly contents from e-database; use truncation search techniques; navigate the internet through functional keys like back, forward, reload, stop, refresh, go, home, and compare or evaluate information obtained from different e-database sources. It also showed that the academic staff used e-databases in their research and teachings. The study also revealed that downloading of files is easy from an online database since there is no restriction to the number of articles that can be downloaded. The study identified that electronic databases are user-friendly and flexible to navigate but the internet needs to be available before a person can use e-database. The study eventually recommended specific training/re-training and user education of academic staff on the acquisition of ICT skills in their various disciplines for research.

Daramola (2016) also investigated the perception and utilization of electronic resources (e-resources) by undergraduate students of the Federal University of Technology library, Akure. The study examined 180

undergraduate students randomly selected among those students who visited the e-resources section of the university library within a period of eight months in 2015 Obande BO et al (2024). Digitization of digital resources also poses a challenge for electronic libraries, as it requires a significant amount of information to be converted into digital format. Additionally, there is a need for a unified agreement on standards issues and a stable economy to fund maintenance and management.

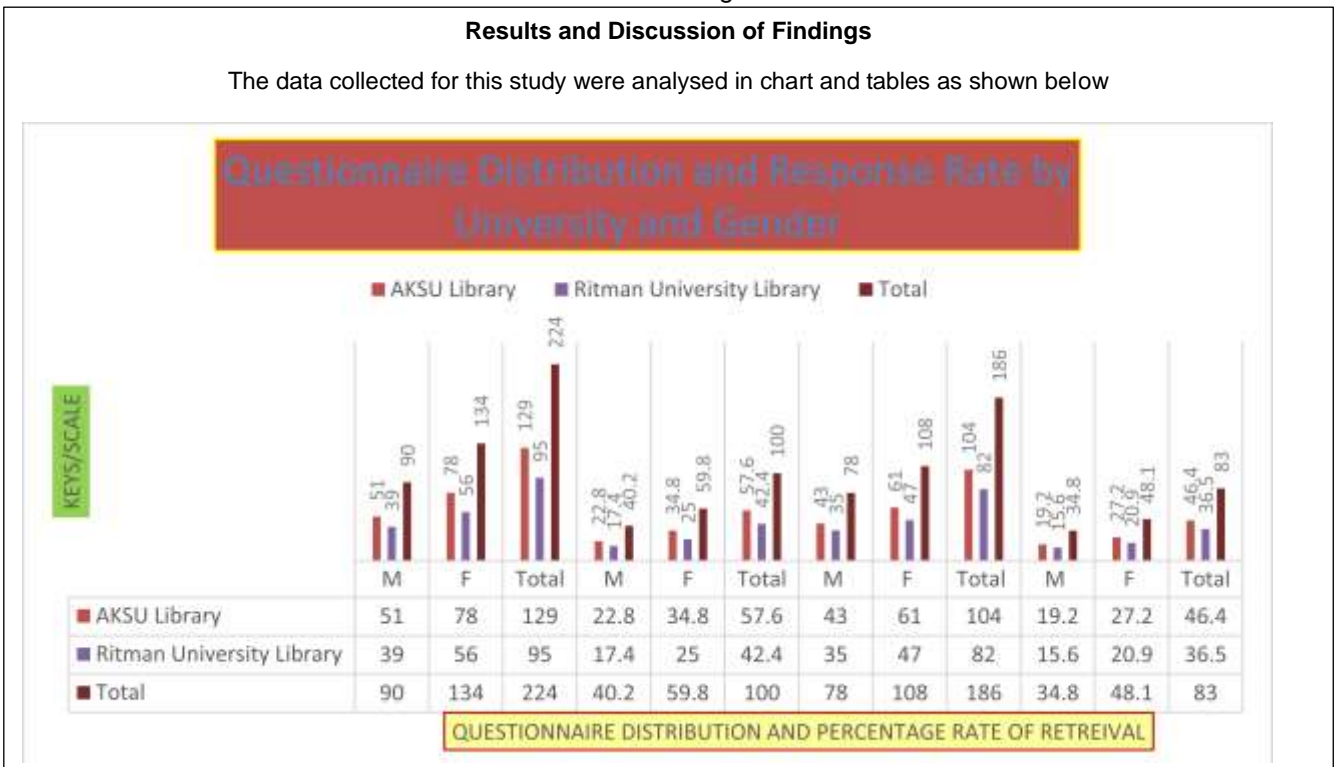
from January to August. It revealed that the major reasons for utilizing e-resources include: carrying out assignments and research purposes with the most frequently utilized e-resource including e-journals, e-books and e-magazines. The study also showed that although the students have a positive perception of e-resources, the most significant challenge hampering their utilization of e-resources includes insufficient computers in the e-library section of the university library.

In studying students' perception, use and challenges of electronic information resources at the Federal University of Petroleum Resources Efurun Library, Nigeria, Omeluzor et al. (2016) pointed out that users' perception influences the use of e-resources in academic libraries, while lack of awareness, lack of training, unreliable Internet connectivity, insufficient e-resources in various study areas, unavailability of e-resources on 24/7 and difficulty of identifying relevant information to meet users' needs are challenges hindering the use of e-resources.

The study adopted a descriptive survey design to examine university undergraduate students' perception and utilization of electronic databases in Akwa Ibom State. Akwa Ibom State has six (6) universities comprising three (3) public universities, namely; Akwa Ibom State University (AKSU), Ikot Akpaden; Federal University of Technology, Ikot Abasi (FUTIA); and University of Uyo (UNIUYO), Uyo, as well as three (3) private universities, namely: Obong University, Etim Ekpo; Topfaith University, Essien Udim and Ritman University, Ikot Ekpene. Out of the six (6) universities, two (2) university libraries, namely: Akwa Ibom State University (AKSU) library and Ritman University library were used for the study. The reason for using only two (2) university libraries was to enhance the quality of the study considering time and financial factors in covering the six (6) universities. However, the population of the study consisted of 1,116 registered undergraduate-users of the university libraries, comprising 643 from AKSU library and 473 from Ritman University library. The proportionate stratified sampling technique was used to select the sample of 224 registered undergraduates-users, representing 20% of the study population. That is, 129 from AKSU library and 95 from Ritman University library. From the above review, it is established that although several studies have been conducted separately on availability, awareness and utilization of electronic databases in academic libraries within and outside Nigeria, no one has investigated the blend of perception and utilization of electronic databases by undergraduate students in universities in Akwa Ibom State, Nigeria. Thus, this study is carried out to fill the observed gap in knowledge.

Results and Discussion of Findings

The data collected for this study were analysed in chart and tables as shown below



A combined instrument of observation checklist, structured questionnaire and unstructured interview was used to generate data for the study. The observation checklist contained 21 electronic databases while the questionnaire was designed under four (4) clusters with 32 items based on the modified 4-point rating scale. The questionnaire was titled, "Perception and Utilization of Electronic Databases by Undergraduate Students in University Libraries Questionnaire (PUEDUSULQ)". 224 copies of the questionnaire were distributed but 186 copies representing 83% response rate were completed and retrieved with valid information. The data was analyzed using descriptive statistical tools of chart, percentage counts, mean scores and standard deviations and presented in tables. The criterion mean score of 2.50 was used to reach a decision.

Figure 1: Questionnaire Distribution and Response Rate by University and Gender

The chart above shows the total copies of the questionnaire distributed to the respondents in the two university libraries based on their gender and the overall response rate. It specified that out of a total of 224 copies distributed, 186 copies were completed and returned with valid information for the analysis. It further reveals that out of the 129 copies representing 57.6% shared to the respondents at AKSU library, 104 copies (46.4%) were retrieved, while 95 copies (42.4%) were administered at Ritman University library from which 82 copies representing 36.5% were retrieved. Based on gender, the table unveils that out of 90 copies representing 40.2% distributed to the male respondents in both libraries, 78 copies (34.8%) were retrieved, while 134 copies representing 59.8% were shared to the female respondents, from which 108 making up 48.1% were retrieved. Therefore, the tool of 186 respondents representing 83% response rate was used for the analysis and for drawing inferences.

Research Objective 1:

To identify the electronic databases available in university libraries in Akwa Ibom State.

Table 1: Checklist of available electronic databases in university libraries in Akwa Ibom State.

Data on Table 1 shows the available electronic databases in the university libraries under investigation. It reveals that out of the 21 electronic databases investigated, 9 e-databases, which include: HINARI, EBSCOHost, JSTOR, Science Direct, AGORA, AJOL, OARE, ARDI, and GOALI are available for utilization by the undergraduates. On the other hand, 12 e-databases such as: Academia.edu, CAB ABSTRACT, Emerald, OPAC, REPAC, LIBDEX, PLOS, eGranary Digital Library, High Beam, PubMed, Questia, and TEEAL are not available for utilization by students in the libraries. The finding agrees with previous studies conducted by Abubakar et al. (2021); Azubuike et al. (2021); Tondo et al. (2020); as well as Udoh et al. (2023), which revealed that the

most commonly available electronic databases in Nigerian university libraries are: AGORA, OARE, HINARI, JSTOR, AJOL, etc. From observation, it was considered that high subscription rate, poor financial condition of Nigerian university libraries and lack of interest in providing more specialized electronic databases by management of university libraries are issues that university libraries are grappling with.

The result on Table 2 reveals an overall affirmation with the items investigating the perception of electronic databases among the undergraduate students in university libraries in Akwa Ibom State, with a higher grand mean of 3.01 against the 2.50 criterion mean. It clearly indicates that the general perception of the undergraduate students toward electronic databases in university libraries in Akwa Ibom State is positive. The result specifically shows that the students perceived that: electronic databases enhance their ease of completing assignments (3.26); improve project's quality (3.23); increase the ease of seminar works (3.18); widen their scope of learning and understanding (3.18); provide round-the-clock (24/7) access to information (3.09); provide current and up-to-date answers to academic queries (3.07); and serve as vital components of library information resources (3.05). It also reveals that the students perceived electronic databases as: time saving than printed resources (3.02); enhance studies and learning abilities (3.01); reliable and valuable sources of information (2.85); nice experience by providing better relaxation (2.84); obtaining adequate information from available electronic databases in the library (2.73); and obviously challenging during utilization (2.57). The finding aligns with the studies conducted by Daramola (2016); Lawal and Yahaya (2020); Omeluzor et al. (2016), which revealed that majority of students positively perceived and embraced electronic databases for its ease of use and usefulness in getting electronic information sources, faster information retrieval and serving as wonderful complement of print resources in meeting student's information needs. However, the students' overall perception towards electronic databases is observed to be affected by lack of adequate training of the students by university libraries, lack of adequate searching skills and poor internet services to support effective utilization of electronic databases in university libraries.

Data on Table 3 shows the mean and standard deviation responses on the purposes of utilizing electronic databases by undergraduate students in university libraries in Akwa-Ibom State. It revealed a grand mean of 2.84 against the 2.50 criterion mean to confirm the agreement of the students on the items of investigation. It specifically shows that utilization of electronic databases facilitates the students' possibility of executing project works (3.05), performance of assignments/term papers (2.99), preparation for examinations (2.95), preparation of seminar papers (2.91), reading for leisure and enjoyment (2.81), as well as preparation of additional personal study materials (2.80). The finding corroborates previous studies conducted by Daramola (2016); Tondo et al. (2020), which found that undergraduate students used databases for carrying out assignments, conduct research

projects, improve academic performances, and get latest and current information to enhance effectiveness in learning.

The data on Table 4 indicates the factors affecting the perception and utilization of electronic databases among undergraduate students in university libraries in Akwa Ibom State. It reveals a higher grand mean of 2.92 against the 2.50 criterion mean, and specifies that out of the 12 items investigated, 9 items were agreed upon by the students while 3 were disagreed upon. The table shows that the factors affecting the perception and utilization of electronic databases among undergraduate students in the university libraries include: lack of adequate awareness of available electronic databases (3.40); erratic power supply in the library (3.28); poor search and retrieval skills (3.16); poor Internet connectivity and access (3.13); and inadequate electronic databases in relevant fields of studies (3.09). Others are: insufficient computer systems in the library (3.03); unfriendly attitude of library staff towards students (3.03); lack of conducive library environment (2.96); and inadequate ICT skills to search relevant contents from electronic databases (2.94). On the contrary, the table found that fear of technology related issues (technophobia) (2.48); lack of personal interest in utilizing available electronic databases (2.30); and lack of personal interest in knowing available electronic databases (2.18) are not problems associated with the awareness, perception and utilization of electronic databases among undergraduate students.

The finding agrees with previous studies conducted by Akinola et al. (2018); Emmasiegbu and Anaehobi (2021); Udoh et al. (2020), which revealed that the major challenges hampering the utilization of electronic databases in the university libraries include: lack of user education and guidance on use of databases, slow internet connectivity, lack of browsing skills, insufficient ICT infrastructure, etc. However, from the findings, it is typically seen that the factors affecting the perception and utilization of electronic databases by undergraduate students in university libraries in Akwa Ibom State, are both of external and internal impediments caused by inadequacies in diverse fronts on the part of the universities and university libraries, as well as the undergraduate students. For instance, electronic databases are practically automated resources requiring internet access and electricity power supply, as well as ICT skills to access, locate, evaluate and utilize. Thus, in the absence of these necessary factors, the essence of acquiring electronic databases through subscription by the university libraries will mean a waste of resources and counterproductive, if the students are not trained or given adequate orientation on how to access and utilize the resources.

Research Objective 1: To identify the electronic databases available in university libraries in Akwa Ibom State.

Table 1: Checklist of available electronic databases in university libraries in Akwa Ibom State.

S/N.	Items	Available	Not Available
1.	Health Internet work Access to Research Initiative (HINARI)	✓	
2.	EBSCOHost	✓	
3.	Journal Storage (JSTOR)	✓	
4.	Science Direct	✓	
5.	Academia.edu		✓
6.	CAB ABSTRACT		✓
7.	Access to Global Online Research in Agriculture (AGORA)	✓	
8.	African Journals Online (AJOL)	✓	
9.	Online Access to Research in Environment (OARE)	✓	
10.	Access to Research for Development and Innovation (ARDI)	✓	
11.	Global Online Access to Legal Information (GOALI)	✓	
12.	Emerald		✓
13.	Online Public Access Catalogue (OPAC)		✓
14.	Research Paper in Economics (REPEC)		✓
15.	Library Index (LIBDEX)		✓
16.	Public Library of Science (PLOS)		✓
17.	eGranary Digital Library		✓
18.	High Beam		✓
19.	PubMed		✓
20.	Questia		✓
21.	The Essential Electronic Agricultural Library (TEEAL)		✓

Source: Researchers' Field Survey, 2024

Research Objective 2: To find out the perception of electronic databases among the undergraduate students in university libraries in Akwa Ibom State.

Table 2: Mean and standard deviation responses on the perception of electronic databases among the undergraduate students in university libraries in Akwa Ibom State (n = 186)

S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remarks
1.	Electronic databases are reliable and valuable sources of information	29	113	31	13	2.85	0.763	Agreed
2.	Electronic databases enhance studies and learning abilities	43	112	20	11	3.01	0.760	Agreed
3.	Electronic databases provide round-the-clock (24/7) access to information	42	119	25	-	3.09	0.595	Agreed
4.	Electronic databases improve project's quality	61	106	19	-	3.23	0.617	Agreed
5.	Electronic databases increase the ease of seminar works	67	91	23	5	3.18	0.749	Agreed
6.	Electronic databases are vital components of library information resources	49	102	31	4	3.05	0.718	Agreed
7.	Electronic databases enhance the ease of completing assignments	73	89	24	-	3.26	0.674	Agreed
8.	Electronic databases provide current and up-to-date answers to academic queries	38	123	25	-	3.07	0.579	Agreed
9.	I obtain adequate information from available electronic databases in the library	40	73	56	17	2.73	0.902	Agreed
10.	Electronic databases save time than printed resources	44	111	22	9	3.02	0.742	Agreed
11.	Utilization of electronic databases are obviously challenging	51	48	43	44	2.57	1.128	Agreed
12.	It is a nice experience utilizing electronic databases as it provides better relaxation	42	84	49	11	2.84	0.840	Agreed
13.	Knowing and utilizing electronic databases widen my scope of learning and understanding	70	84	28	4	3.18	0.763	Agreed
Grand Mean						3.01		Agreed

Source: Researchers' Field Survey, 2024

Criterion Mean = 2.50

Research Objective 3: To ascertain the purposes for utilizing electronic databases by undergraduate students in university libraries in Akwa Ibom State.

Table 3: Mean and standard deviation responses on the purposes of utilizing electronic databases by undergraduate students in university libraries in Akwa Ibom State (n = 186)

S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remarks
1.	I utilize electronic databases for assignments/term papers	54	77	55	-	2.99	0.768	Agreed
2.	I utilize electronic databases to prepare for examinations	49	79	58	-	2.95	0.759	Agreed
3.	I utilize electronic databases to prepare for seminar papers	62	66	38	20	2.91	0.983	Agreed
4.	I utilize electronic databases to carry out project works	54	88	44	-	3.05	0.726	Agreed
5.	I utilize electronic databases to read for leisure and enjoyment	45	81	39	21	2.81	0.933	Agreed
6.	I utilize electronic databases to prepare additional personal study materials	27	95	64	-	2.80	0.672	Agreed
7.	I utilize electronic databases to prepare for quizzes and other academic competitions	22	49	90	25	2.37	0.861	Disagreed
Grand Mean						2.84		Agreed

Source: Researchers' Field Survey, 2024 Criterion Mean = 2.50

Research Objective 4: To examine the factors affecting the perception and utilization of electronic databases among undergraduate students in university libraries in Akwa Ibom State.

Table 4: Mean and standard deviation responses on the factors affecting the perception and utilization of electronic databases among undergraduate students in university libraries in Akwa Ibom State (n = 186)

S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remarks
1.	Insufficient computer systems in the library	43	105	38	-	3.03	0.661	Agreed
2.	Inadequate electronic databases in relevant fields of studies	65	85	24	12	3.09	0.856	Agreed
3.	Poor Internet connectivity and access in the library	47	117	22	-	3.13	0.596	Agreed
4.	Poor search and retrieval skills	56	104	26	-	3.16	0.646	Agreed
5.	Inadequate ICT skills to search relevant contents from electronic databases	49	93	27	17	2.94	0.880	Agreed
6.	Lack of adequate awareness of available electronic databases in the library	85	91	10	-	3.40	0.592	Agreed
7.	Epileptic power supply in the library	68	103	15	-	3.28	0.606	Agreed
8.	Lack of personal interest in knowing available electronic databases	20	49	61	56	2.18	0.984	Disagreed
9.	Lack of personal interest in utilizing available electronic databases	35	49	39	63	2.30	1.127	Disagreed
10.	Fear of technology related issues (technophobia)	42	59	32	53	2.48	1.131	Disagreed
11.	Unfriendly attitude of library staff towards students	66	75	30	15	3.03	0.918	Agreed
12.	Lack of conducive library environment	58	76	39	13	2.96	0.897	Agreed
Grand Mean						2.92		Agreed

Source: Researchers' Field Survey, 2024 Criterion Mean = 2.50

The data on Table 4 indicates the factors affecting the perception and utilization of electronic databases among undergraduate students in university libraries in Akwa Ibom State. It reveals a higher grand mean of 2.92 against the 2.50 criterion mean, and specifies that out of the 12 items investigated, 9 items were agreed upon by the students while 3 were disagreed upon. The table shows that the factors affecting the perception and utilization of electronic databases among undergraduate students in the university libraries include: lack of adequate awareness of available electronic databases (3.40); erratic power supply in the library (3.28); poor search and retrieval skills (3.16); poor Internet connectivity and access (3.13); and inadequate electronic databases in relevant fields of studies (3.09). Others are: insufficient computer systems in the library (3.03); unfriendly attitude of library staff towards students (3.03); lack of conducive library environment (2.96); and inadequate ICT skills to search relevant contents from electronic databases (2.94). On the contrary, the table found that fear of technology related issues (technophobia) (2.48); lack of personal interest in utilizing available electronic databases (2.30); and lack of personal interest in knowing available electronic databases (2.18) are not problems associated with the awareness, perception and utilization of electronic databases among undergraduate students. The finding agrees with previous studies conducted by Akinola et al. (2018); Emmasiegbu and Anaehobi (2021); Udoh et al. (2020), which revealed that the major challenges hampering the utilization of electronic databases in the university libraries include: lack of user education and guidance on use of databases, slow internet connectivity, lack of browsing skills, insufficient ICT infrastructure, etc. However, from the findings, it is typically seen that the factors affecting the perception and utilization of electronic databases by undergraduate students in university libraries in Akwa Ibom State, are both of external and internal impediments caused by inadequacies in diverse fronts on the part of the universities and university libraries, as well as the undergraduate students. For instance, electronic databases are practically automated resources requiring internet access and electricity power supply, as well as ICT skills to access, locate, evaluate and utilize. Thus, in the absence of these necessary factors, the essence of acquiring electronic databases through subscription by the university libraries will mean a waste of resources and counterproductive, if the students are not trained or given adequate orientation on how to access and utilize the resources.

Practical Implications of the Findings

Generally, electronic databases are veritable sources of information even as the results indicated that the utilization of electronic databases virtually affects all areas of the undergraduate students' academic activities. It is also seen that the students are quite positively perceptible to the utilization of electronic databases for

enhanced learning, studies and knowledge acquisition. This is even as effective utilization of available electronic databases is impeded by several factors such as: poor internet connectivity and access, lack of adequate awareness of available electronic databases, erratic power supply in the libraries, poor search and retrieval skills, unfriendly attitude of library staff towards students, etc. However, the practical implications of this finding are that university libraries have much work to do in ensuring that students are trained to acquire necessary skills to utilize available electronic databases while more relevant electronic databases are subscribed and made accessible to the students. In this way, the essence of the university libraries will be fulfilled and justification for the financial and other investments put in the libraries met.

CONCLUSION AND RECOMMENDATIONS

From the findings of the study, it is concluded that electronic databases which include: HINARI, EBSCOHost, JSTOR, Science Direct, AGORA, AJOL, OARE, ARDI, GOALI, etc., are established fundamental ICT induced resources with the aims of providing students with wider, faster and more convenient spectrum to meet their information needs for better academic activities. Thus, based on the findings of the study, the following recommendations are put forth:

- i. Management of universities should provide adequate funds for university libraries to subscribe for more relevant and useful electronic databases in order to cater for the needs of various academic disciplines.
- ii. Management of universities should provide adequate infrastructure such as constant power supply and internet bandwidth to university libraries to facilitates the utilization of electronic databases by students and other users of the university libraries.
- iii. Management of university libraries should enhance their user education and information literacy services to sensitize students on available electronic databases and how to utilize them in meeting their information needs.
- iv. University library staff should exhibit more friendly attitude towards the students by providing necessary assistance for students to enable them utilize electronic databases in the university libraries.
- v. Management of university libraries should educate their students on relevant copyright issues in order to equip them with the knowledge of how to utilize electronic databases without infringing on the rights of authors.

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Conflict of Interest

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