



**THE IMPACT OF ELECTRONIC ACADEMIC LEARNING MATERIALS ON
ACADEMIC PERFORMANCE AMONG UNDERGRADUATES
AT THE UNIVERSITY OF IBADAN, NIGERIA**

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Abstract

The reliance on electronic academic learning materials among students in tertiary institutions has become increasingly prevalent. However, this trend has led to unintended consequences, such as a declining reading culture and reduced use of traditional college libraries. This study investigated the use and accessibility of electronic academic learning resources and their impact on undergraduate academic performance at the University of Ibadan. Employing an exploratory cross-sectional research design, a sample of 600 undergraduate students was selected using the Yamane statistical formula, and data were collected through accidental sampling. A structured, closed-ended questionnaire was administered, and the data were analysed quantitatively using both descriptive and inferential parametric statistics. Findings revealed that 100% of respondents regularly accessed electronic academic learning materials, with no significant relationship between access and class background ($R^2 = .034$, $p > .68$).

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Regarding utilisation, 83.2% of the students relied on these resources for academic reading and assignments. The use of electronic academic learning materials significantly predicted utilisation patterns ($R = .74$, $R^2 = .84$, $p < .000$), with a mean utilisation score of $M = 2.0$. However, increased reliance on electronic materials was associated with reduced intention to use the library ($M = 1.1$) and a weakened reading culture ($M = 2.0$). The study concludes that undergraduate students at the University of Ibadan heavily rely on electronic academic learning materials, which may negatively impact library use and reading habits. It is recommended that university libraries adopt electronic-based models to attract student patronage and encourage library engagement. Furthermore, a systemic integration of technology into teaching, learning, and assessment practices is advocated to promote the effective and balanced use of academic resources, ultimately enhancing students' academic performance.

Keywords: *electronic academic learning materials; utilisation; access; undergraduate students; library use; academic performance.*

Introduction

The availability of electronic academic learning materials, also known as internet sources, offers significant benefits to users (Akuffo & Budu, 2019). It is commonplace in post-industrial society to access academic documents online using different search engines and/or AI tools. These search tools offer users leverage to access and retrieve electronic academic learning materials that could be useful for academic purposes or otherwise (Akuffo & Budu, 2019; Bremer, 2005). In most cases in the educational system, electronic academic learning materials are accessed for academic needs by students, teachers, lecturers, and professionals, which aid learning and teaching methodology (Okongo et al., 2015; Maatuk et al., 2022; Sharma, 2009). Interestingly, online sources provide a quantum of materials in text, pictorial, graphic, and animation, which make academic activities convenient and suitable at every corner, time, place, and space. Students of higher learning in universities, polytechnics, and colleges rely heavily on internet sources to solve assignments, update knowledge, and download materials for project work, lecture notes, and research purposes (Apuke & Iyendo, 2018; Dadzie, 2005; Mishra et al., 2020). The interest in students' usage of electronic academic learning materials is usually derived from the assumption that online sources are quick, readily available, easily retrievable, downloadable, and easy to copy and paste. The source offers relatively cheap access, and it can be transmitted from one search tool to another (Ray & Day, 2018). Similarly, the vast utilisation of electronic academic learning materials is not unconnected with the volume of content that can be retrieved from the internet and the global significance attached. Electronic academic learning materials can be retrieved as Microsoft Word material, portable

document files (pdf), books, abstracts, and journals. These materials are generally useful for academic activities in tertiary institutions. Electronic academic learning materials also serve as a reference point for lecturers and course instructors, which increases search interest for students (Ali, 2005; Maatuk et al., 2022; Manca & Meluzzi, 2020).

Notwithstanding the significant intention of electronic academic learning materials, their unbridled search and utilisation among students are the subject of debate in the community of learning. There is a question about the quality of academic work found in most electronic academic learning materials. The writers in this context identified a lack of verifiability, scanning, and quality control of electronic academic learning materials, which now widely substitute the use of libraries by students (Achenbach & Becker, 2008; Kuss & Griffiths, 2011). The foregoing scholars punctured the availability of “garbage-in-garbage-out” found in electronic academic learning materials and their preponderance to build a lazy academic generation. There is a largely expressed fear that internet materials undermine utilisations among students (Anderson & Rainie, 2017; Darling-Hammond et al., 2009). The scholars in this context expressed anxiety that the ease and quickness of access associated with online materials built a lazy generation of students who were lackadaisical and lacked the possibility to innovate shortcuts to success. There is growing concern that students are gradually losing the reading culture associated with real academic behaviour during the period that preceded the widespread availability of online sources (Dargahi & Razavi, 2007; Schleicher, 2020). Again, the scholars pointed out that electronic academic learning materials diminished interest in reading textbooks, print journals and abstracts, novels, library searches, and lecture compendiums found in library stock. The anxiety of scholars is derived from evidence that university libraries are shadows of themselves and no longer patronized in the era of internet access (Carlile, 2007; Morahan-Martin & Schumacher, 1997; Ojo & Akande, 2005). Unfortunately, the impact of electronic academic learning materials has created unintended consequences that were never envisaged.

It is worth noting that although the works of the scholars cited above were conducted in a different context than the current study, a similar focus is aimed at for this study. Also, the time frame and space in time between previous studies and the current study differ. This aims to check the reliability of previous outcomes with the current intention of the work; hence, the rationale for this study. The study endeavours to investigate the influence of electronic academic learning materials on undergraduate academic performance, focusing specifically on the case of the University of Ibadan in Nigeria. Considering technology's recent pervasive

disruptions across all human activities, it is imperative to scrutinize its effects on academic achievement. To this end, the study seeks to ascertain the extent to which electronic academic learning materials contribute to the academic success of undergraduates. By scrutinizing the relationship between electronic academic learning materials and academic performance, this study aims to shed light on the potential benefits of electronic academic learning materials for students and their academic progress. Given the importance of exploring the impact of electronic academic learning materials on academic performance, this study promises to provide valuable insights into the role of technology in higher education and contribute to the ongoing discourse on the use of electronic academic learning materials in academic settings.

Research Questions

Against the backdrop of the above problem statement, the study sets out to answer the following research questions:

1. To what extent do undergraduate students at the University of Ibadan have access to electronic academic learning materials?
2. How are the undergraduate students at the University of Ibadan utilising electronic academic learning materials?
3. What are the effects of electronic academic learning materials on performance among undergraduates at the University of Ibadan?

Literature Review

The surfacing of new technologies has brought about substantial changes in communication technologies that have influenced the global community, particularly in scholarly communication. Information processing using computers has given rise to a number of new goods and services (He, Zhang & Li, 2021). As a result, the academic community has experienced significant transformation, taking on new aspects shaped by technology-driven applications (Ajuwon 2003; Zamir et al., 2020). In light of the way that libraries have responded to electronic media, both the growth of their collections and their service models, have undergone significant change. Libraries leverage technology to enhance the way they manage academic information, thereby strengthening and expediting access to scholarly materials that are not stored locally. Over the course of the twenty-first century, there has been a noticeable shift in the policies and practices surrounding the development of electronic academic learning materials and their collection. Electronic media is gradually replacing print media as the

primary source of information (Sharma, 2009; Tabassum, 2018). Ani et al. (2018) claim that migrating from print to electronic media increased the amount of information available to users and gave them access to new tools and apps for locating and obtaining information.

In a traditional library system, print-based resources are complemented by invaluable electronic resources for research purposes. Akussah et al. (2015) and Dadzie (2005) assert that, in a normal library setting, print-based resources are complemented with invaluable electronic resources for study. These benefits comprise receiving more recent information, having access to material that could otherwise be unavailable to them due to their location or financial position, and having numerous links to related content from other sources (Maaatuk et al., 2022). It is now feasible to imagine completely new arrangements for the collections and services that libraries have historically offered because of the quick development and introduction of electronic information technology. Libraries are about to reach a breaking point in terms of funding the expansion of their collections, but the use of new technology may be able to save expenses and transform how people access information (Akussah et al., 2015; Okello-Obura & Magara, 2008).

The significance of electronic resources and their widespread use for communicating generally, sourcing information, and delivering research and pedagogical activities in university educational institutions is widely acknowledged (Ray & Day, 2018). Users of electronic resources generally agree that these are good tools that students like using and rarely run into problems with. According to Ray and Day's (2018) study, 83% of students that participated in their study indicate that it is easy to use electronic resources and it also saves time. The study also indicates that even when the students' CD-ROM is busy, they prefer to be patient for the CD-ROM to be free instead of using the printing option. Nevertheless, Orsu (2017) found that a sizable portion of users face a number of difficulties when browsing electronic information, including inadequate terminals, a lack of trained staff, and ignorance of available resources. Research has been done on how academics, researchers, and instructors at universities and research institutions use electronic resources. Seventy-eight percent (78 percent) of the participants believed that using e-journals had increased their reliance on their research; therefore, they needed electronic document supply services and current article alert services (Vogels, 2019). Okello-Obura and Magara's (2008) study at Makerere University found that electronic information in developing nations improves academic performance by providing a wider variety of material and higher-quality information access.

Chisenga's 2004 survey revealed that while most African public library services have internet access, few offer web-based information services. Four obstacles hinder efficient electronic resource supply: inadequate finance, strategic planning, internet inefficiency, and inconsistent user training. A study on electronic material retrieval and accessibility at the University of Agriculture Library in Nigeria found that 525 respondents found it easy to use and were satisfied with results but noted limitations like insufficient electricity supply (Oduwole & Akpati, 2003). Similarly, a study about the awareness and access of students to academic electronic information resources at the University College Hospital in Ibadan, Nigeria, using 350 respondents, found that there was little use of academic electronic information resources (Ojo & Akande, 2005). Nevertheless, one significant issue found was that medical students used relatively few electronic resources because they lacked the information retrieval abilities necessary to take advantage of them. Jagboro (2013) also highlighted how users' attitudes and dependence on technological resources are changing. According to a survey the author carried out in a few Nigerian universities, 45.2% of participants used cybercafés to access electronic resources. However, Jagboro (2013) states that this attitude resulted from the cybercafés' close proximity to user facilities. Ajuwon (2003) also conducted research at the University College Hospital in Ibadan on how ICTs are used by health science students. This study found that 57% of the students were unable to utilize a computer and that low database utilization was brought on by a lack of experience, restricted computer access, insufficient training, and exorbitant service provider charges. The related literature study supports the idea that accessing electronic resources is of great importance since it promotes efficiency for workers, learners, educators, and researchers.

However, there is suspicion that reliance on electronic academic learning materials for academic works is abused and poses several consequences among users, especially in terms of utilisation, use of college libraries, and security of personal documents. Worldwide, there are over three billion daily internet users, with young adults being the most regular users (Bremer, 2005). Evidence-based medicine, research and teaching, online and medical database access, patient care in rural settlements, and academic aims in the medical and healthcare fields are all made possible by the internet (Dargahi & Razavi, 2007; Swaminath, 2008). Interchangeable references like “compulsive internet use”, “problematic internet use”, “pathological internet use”, and “internet addiction” are ubiquitous terms found in literature. One of the most respected experts in the field of addictive behaviour, psychologist Mark Griffiths, posited this view of the internet: “Internet addiction is a non-chemical behavioural addiction that involves

human-machine (computer-internet) interaction” (Griffiths, 2000, p. 211; Tereshchenko & Kasparov, 2019, p. 62). According to Kuss and Griffiths (2014), the behavioral issue of internet addiction has garnered growing scientific acknowledgment in the literature; nonetheless, some experts even claim that it is an epidemic in the 21st century. Addiction to the internet can lead to psychopathologic symptoms such as negligence at the workplace, constant anticipation, inability to control oneself, and salience, and it can compromise performance, cause anxiety, and lead to isolation from colleagues and functions (Kaya et al., 2016; Young, 2009; Zenebe et al., 2021).

Adolescent experiences have a significant impact on an individual's growth and are instrumental in shaping their beliefs and behaviours in adulthood (Backes & Bonnie, 2019; Blos, 2006). Teens frequently struggle with authoritative figures as well as social conventions related to culture and morality. As a result, some developmental processes may set off a chain reaction of defence mechanisms (Karacic & Oreskovic, 2017). Adolescents are more likely to experience emotional crises during this time, which are frequently accompanied by mood swings, anxious or depressed episodes, and addictive behaviour. Some teenagers try to cope with these emotional crises by withdrawing from social interactions, avoiding prolonged social interactions, acting aggressively, or engaging in addictive behaviour (Achenbach & Becker, 2008; Zenebe et al., 2021). During this time, adolescents are very sensitive and open, and they may find solace surfing the internet. This may eventually result in addiction (Kuss & Griffiths, 2011). Two of the many ways that the internet contributes to the development of addictive behaviour are social networking and easy access (Kuss & Griffiths, 2011; Zenebe et al., 2021). Addiction to the internet is a recently identified adult behavioural issue that was brought to light following the proposal of the problem behaviour theory (Ko et al., 2008). The standard addiction model is modified to explain how behavioural addictions function (Bradley, 1990; Holden, 2001; Kim & Hodgins, 2018). Others have noted that people frequently suffer from many addictions such as gambling, smoking cigarettes, drinking alcohol, internet browsing, working out, and watching television (Alavi et al., 2012; Miele et al., 1990; Sussman et al., 2011). Regretfully, there is rising worry that university students' propensity for internet addiction may be having unfavorable effects. This is a significant social problem that has become the norm in universities and other similar learning institutions. The availability of electronic academic learning materials now exposes students to unreliable and unverified academic works.

This study relies on the theoretical foundations of Robert Merton's manifest and latent functions. Merton was preoccupied with justifying the function of prescribed social institutions and the benefits they offer to the progress of society (Ritzer, 2016). This theory posits that the institutions of society serve unique functions and roles to maintain sustainability. There are predicted functions associated with distinct institutions; for example, family is predicated on reproduction and socialisation of young ones, education is predicted to propagate knowledge and skills of individuals, and religion offers checks for moral beliefs and conscience. This is called the manifest function of social institutions (Giddens, 2016). Manifest function delineates the boundaries of function and overlaps that exist between one institution and another. It offers identical characteristics associated with a distinct institution. Similarly, Merton was conscious of the fact that the function of social institutions could sometimes be manipulated at the expense of society. The manipulation creates tension and an undesirable state of being, which overrides a cohesive society. This is called the latent function. This means distinct institutions could be overstretched to function abnormally. This undesirable condition yields unintended consequences for social institutions. Merton was aware that the unintended consequences of institutions create social tension, distort social cohesion, and undermine social progress (Ritzer, 2016). It is expected on this note that every institution creates a mechanism for adjustment that neutralizes unintended consequences.

Interestingly, the application of electronic academic learning materials for learning and research in the university creates easy access, is cheap, available in quantum, and is time-friendly. It offers opportunities to access global academic learning materials in the form of textbooks, journals, abstracts, academic magazines, visual learning, and other activities that can be accessed online. Electronic academic learning materials provide significant breakthroughs in the history of learning in tertiary institutions. It lessens the burden of crowds in and around physical libraries (Jagboro, 2013). Abundantly, the invention of electronic learning in schools and universities was not to attenuate the culture of persistent search for knowledge and learning. It could also be to derail the culture of utilisation, cross-checking facts, sieving junk, and lackadaisical learning behaviour. Unfortunately, the unintended consequences associated with electronic academic learning materials raise urgent concern (Ko et al., 2008). This is a measure to identify the problem, the gap in policymaking, and socialisation to check the suspicions.

Methodology

This study adopted an exploratory research design using the quantitative survey method. The exploratory design was aimed at capturing respondents in the convergence location of campus activities, which included a sports complex centre, a student relaxation centre, and lecture halls. The survey captured male and female undergraduate students in a full-time degree program at the University of Ibadan. The sample size was 600, and this was derived using the Taro Yamane statistical formula, $N/1+N(e^2)$. The population of undergraduate students was obtained and consisted of 15,000, which spread across faculties in the university. The sampling procedure that was adopted for the study was accidental sampling. The research site, the University of Ibadan, is a premier university and one of the first-generation tertiary colleges in Nigeria. The university is built around an interconnected web of internet services and free access for registered students who update course registration. Besides, the university offered leveraged access and data collection, which suited the needs of the researcher. The location was therefore selected purposefully. Accidental sampling was adopted to draw the attention of participants to the purpose of the study. The respondents who were willing and interested in participating in the study were selected as samples. Prior to the survey exercise, the researchers outlined a convergence centre for students, which could make data collection easy and cheap. These locations consisted of sports complexes, lecture halls, and relaxation zones. A survey was carried out at the location identified. Data were collected quantitatively using a closed-ended questionnaire that was self-designed. Questionnaires were used as a means of primary data collection and were physically administered to the respondents. The intention of the questionnaire was to seek an opinion poll regarding the impact of electronic academic learning materials on performance among undergraduate students. The question items were closed-ended and classified by sub-section, which consisted of demographics, access to electronic academic learning materials, utilisation and effect. Descriptive and inferential parametric statistics were used in analysing the data. Data were coded in numeric form and input into a computer-aided program, also known as the statistical package for social science (SPSS) version 23.0.

Similarly, the reliability and validity of the instrument were verified. The reliability method used the test-retest method with a pilot survey. This was done using 60 participants in a pilot survey to cross-check items in the questionnaire. Strenuous questions were expunged prior to the second test in the pilot survey. The result of the test in the first survey was similar in the second survey. The score was estimated at 0.85 using the Cronbach estimate. At the level of

validity, the content method was applied. This was done by cross checking each item of the questionnaire to ensure that it fitted accurately to the variable items of the study. The researcher ensured that there was no disparity between question items and variable items. Also, respondents that participated in this study kept their identities anonymous, and the consent of participants was identified before the application of the instrument.

Results and Discussion

Table 1: Demographic Characteristics of Respondents

Question	Option	Frequency N=600	Percentage %=100
Sex	Male	318	53.0
	Female	282	47.0
Age range (in years)	16-19	199	33.2
	20-23	172	28.7
	24-27	111	18.5
	28 years and above	118	19.7
Marital status	Single, never married	412	68.7
	Married	98	16.3
	Single parent	90	15.0
Monthly income (in naira)	less than 10,000	198	33.0
	10000-20000	279	46.5
	20001-30000	98	16.3
	30001 and above	45	7.5
Religious affiliation	Traditional religion	72	12.0
	Islam	198	33.0
	Christian	330	55.0
Ethnic origin	Yoruba	340	56.7
	Igbo	201	33.5
	Hausa	29	4.8
	Others	30	5.0
Faculty	Education	110	18.3
	Social science	102	17.0
	Science	78	13.0
	Engineering	89	14.8
	Arts	85	14.2
	Pharmacy	70	11.6
	Environmental	66	11.0
Level	100	120	20.0
	200	154	25.7
	300	101	16.8
	400	132	22.0
	500	93	15.5
Parent(s) social class class	Middle class	301	50.2
	Working	299	49.8

Source: Researcher's Field Survey, 2021

The demographic characteristics of respondents were listed for the purpose of discussion. The study was a cross-sectional survey of undergraduate students at the University of Ibadan. Demographic characteristics identified some items of biography associated with the students. At the level of sex, 47.0% were female and 53.0% were male. Age distribution showed that 33.2% were between 16 years and 19 years; 28.7% were 20 years but less than 24 years; 18.5% were 24 years but less than 28 years; and 19.7% were 28 years and above. The mean age was 19.4. This indicated that the majority of participants in the study were over the age of 19. At the level of income, 33.0% earned below N10,000; 46.5% indicated that monthly income was above N10,000; 16.3% earned above N20,000; and 7.5% earned above N30,000. The placement of income was the amount of stipend available to students for daily survival and other expenditures. Participants were asked about their marital status to show whether they were married or otherwise. Results showed that 68.7% were single, 16.3% were married, and 15.0% were single parents. It is a commonplace phenomenon that some students prefer to engage in marriage or have children out of wedlock due to risky sexual adventures. This finding corroborated the work of Ko et al. (2008) and Karacic and Oreskovic (2017), which raised concern about the moral implications for young adult students in the ivory tower. Measuring religious affiliation among the students, 12.0% were worshippers of traditional religion; 33.0% practiced Islamic religion; and 55.7% were Christians. There were multiple religious beliefs among the participants in the study.

Ethnic affiliation showed that 56.7% were Yoruba, 33.5% were Igbo, and 4.8% were of Hausa ethnic origin. Some 5.0% identified other ethnic groups, such as Urhobo, Ijaw, and Ebir. The indication is that undergraduate students at the University of Ibadan are composed of multiple ethnic groups, and the university accommodates ethnic interests that cut across varieties of ethnic groups. Nevertheless, Yoruba ethnicity was predominant among the students since the university is hosted in a Yoruba-dominated community, Ibadan, in southwest Nigeria. Furthermore, students were classified by faculties of learning in the university. There was a cross-section of students in education (18.3%), social science (17.0%), science (13.0%), and engineering (14.8%). Other participants were drawn from the arts (14.2%), pharmacy (11.6%), and environmental science (11.0%). Also, participants were further classified by academic levels at the university. This consisted of 100 levels (20.0%), 200 levels (25.7%), 300 levels (16.8%), and 400 levels (22.0%). 15.5% were identified as 500-level students. Basically, students at the 400 or 500 level were final-year undergraduates who were either specialized in a four-year degree programme or five years, respectively. Faculties of education, science, arts,

and social science consist of a four-year programme, while faculties of engineering, environmental science, and pharmacy run five-year degree courses. In addition, students were classified by parental social class. This measured whether or not students had middle-class parents or working-class parents. Results showed that 50.2% of undergraduates had middle-class parents; 49.8% had working-class parents. Overall, the demographic identities of respondents showed that participants in the survey had background characteristics in terms of age, social class, and income, which endeared access to and utilisation of internet services. This made it convenient to access electronic academic learning materials for learning purposes.

Table 2.1: Respondents' Access to Electronic academic learning materials

Question	Option	Frequency N=600	Percentage %=100
Do you know about electronic academic learning materials?	Yes	600	100.0
	No	---	---
Do you have access to the materials?	Yes	600	100.0
	No	---	---
How do you access electronic academic learning materials?	Cell mobile phones	301	50.2
	University Wi-Fi connection	179	29.8
	Personal browsing data	90	15.0
	Network sharing through friends	30	5.0
What is your perception of cost of accessing electronic academic learning materials?	Relatively expensive	142	23.7
	Relatively cheap	458	76.3
Do you think electronic academic learning materials are readily available and accessible?	Yes	417	69.5
	No	170	28.3
	Not sure.	13	2.2
What search engine do you apply to access electronic academic learning materials?	Google	370	61.7
	Yahoo	201	33.5
	Web page	29	4.8
What types of electronic gadgets do you possess to store electronic academic learning materials?	Mobile phones	310	51.7
	Desktop computer	102	17.0
	Laptop computer	103	17.2
	Storage devices	95	15.8

Source: Researcher's Field Survey, 2021

Table 2.1 lists items that measure access to electronic academic learning materials among undergraduates in the study location. Access was measured in terms of the availability of electronic academic learning materials and the possibility for students to access the materials for academic use. Here, respondents were asked about their knowledge of electronic academic learning materials. All respondents (100.0%) were aware that electronic academic learning materials were useful for academic work. Again, all respondents, 100.0%, showed that they had access to electronic academic learning materials, which aided academic activities. Means of accessing electronic academic learning materials among the students were listed, and these consisted of cell phones (50.2%), university internet service or Wi-Fi (29.8%), personal browsing data (15.0%), and network sharing (5.0%). There were multiple means by which students at the University of Ibadan accessed electronic academic learning materials, and this made access widespread. Interestingly, 76.3% pointed out that the cost of accessing electronic academic learning materials was relatively cheap, and 23.7% identified that the cost was expensive. More than three-quarters of respondents rated the cost of access as cheap, and this contributed to the widespread availability of access. Against this background, 69.5% held that electronic academic learning materials were readily available for access, and this was achieved using the Google electronic engine (61.7%), Yahoo search engine (33.5%), and the Web page method (4.8%). The indication is that undergraduates at the University of Ibadan used a variety of means to access electronic academic learning materials. This was replicated in the availability of electronic gadgets applied by the students as storage devices in the form of mobile phones (51.7%), desktop computers (17.0%), laptop computers (17.2%), and other storage devices (15.8%).

Table 2.2: Demographic status on access to electronic materials

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.044 ^a	.034	.016	.30315	.050	1.403	9	240	.197

a. Predictors: (Constant), social class, faculty, income, ethnic, and sex

Table 2.3: Coefficients (a)

Model Coefficients						
Mode 1		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.031	.150		6.885	.060
	Age	.042	.040	.729	1.049	.295
	Social class	.013	.016	.312	.418	.676
	Income	.010	.021	.216	.353	.724
	Ethnic	.014	.014	.185	1.245	.214
	Sex	.010	.016	.112	.613	.541

Dependent Variable: Access

Tables 2.2 and 2.3 tested a regression model between demographic characteristics and access to electronic academic learning materials. In Table 2.2, the regression estimate R was .54, or 54% possibility, while R^2 was .050, or 50%. The demographic characteristics of undergraduates at the University of Ibadan moderately predicted access to electronic academic learning materials. A similar trend was found in the coefficients of regression in Table 2.3. Demographics and access were not significant at $p > .05$. At the level of individual independent variables, no predictor was significant using the standard error. Access did not vary with demographic characteristics.

Table 3.1: Respondents' Utilisation of Electronic academic learning materials

Question	Option	Frequency N=600	Percentage %=100
When you access electronic academic learning materials, do you study them?	Yes	310	51.7
	No	290	48.3
Do you apply electronic academic learning materials to complement lecture notes?	Yes	258	43.0%
	No	342	57.0%
Do you apply electronic academic learning materials to cross-check further referencing?	Yes	301	50.1
	No	299	49.9
	Yes	499	83.2

Do you consult electronic academic learning materials for completing your class assignment?	No.	101	16.8
Do you apply electronic academic learning materials as your major lecture notes?	Yes	417	69.5
	No	160	26.7
	Not sure.	23	3.8

Source: *Researcher's Field Survey, 2021*

Table 3.1 identifies the utilisation of electronic academic learning materials among undergraduates. Some utilisation patterns were identified. Respondents were asked about their intention of using electronic academic learning materials when they were accessed. In this case, 51.7% held that electronic academic learning materials were accessed for the purpose of study. On the other hand, 48.3% accessed the materials, but they were not intended for study. A further probe showed that 43.0% applied electronic academic learning materials to complement lecture notes, whereas 57.0% accessed electronic academic learning materials for other purposes different from academic interest. Again, 50.1% utilized electronic academic learning materials to cross-check further referencing of academic works, yet 49.9% accessed the materials for purposes contrary to academic referencing. There were 83.2% that did consult electronic academic learning materials while completing their class assignment, and 69.5% utilized electronic academic learning materials as major lecture notes.

Results in Table 3.1 showed that students' intentions associated with the utilisation of electronic academic learning materials differed, and this could be understood from the background intention that the utilisation was desired. It has been verified that all participants in the study accessed electronic academic learning materials. It is also true to state that the intention associated with it differs. Some students accessed the materials to cross-check further referencing; some applied them as lecture notes; and some applied the materials to aid study. However, some intentions among the undergraduates at the University of Ibadan can be implied. The table below offers some further explanation.

Table 3.2: Demographic status on utilisation of electronic materials

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.744 ^a	.784	.016	.30315	.050	1.403	9	240	.677

a. Predictors: (Constant), social class, faculty, level, marital status, and sex

Table 3.3: Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.031	.150		6.885	.000
	Faculty	.082	.040	.729	1.049	.045
	Social class	.043	.016	.312	.418	.036
	Level	.090	.021	.216	.353	.044
	Marital status	.054	.014	.185	1.245	.054
	Sex	.080	.016	.112	.613	.051

a Dependent Variable: utilisation

Tables 3.2 and 3.3 tested a regression model of prediction between demographic variables and the utilisation of electronic academic learning materials. At the level of regression model summary in Table 3.2, the R value was .744, or 74%, and R² was estimated to be .784, or 78%. The estimate at the level of regression R was sufficient to predict the influence of demographic items on utilisation associated with electronic academic learning materials. This suggests that R², the variance of prediction, was at least three-quarters certain, or 78% confident, that demographic items predicted the utilisation of electronic academic learning materials. Similarly, Table 3.3 shows coefficient estimates; independent variables were significant ($p < .000$) and predicted the dependent variable, utilisation. Also, independent variables were significant using the standard error in the standardized coefficients. The Beta value for each independent variable was positive and consistent.

Table 4.1: Effect of Electronic academic learning materials on respondents' performance

Question	Option	Frequency N=600	Percentage %=100
Do you think electronic academic learning materials contributed to your performance?	Yes	279	46.5
	No	321	53.5
Do you rely on electronic academic learning materials to achieve understanding in your study?	Yes	289	48.2
	No	311	33.5
	Yes	201	66.5

Do you consult books in the university library to complement electronic academic learning materials?	No	399	49.9
Do you read textbooks despite the availability of electronic academic learning materials?	Yes	192	32.0
	No	408	68.0
How would you describe your interest in the online search of academic learning materials?	Frequent	400	66.7
	Interval	177	29.5
	Rare	23	3.8

Source: *Researcher's Field Survey, 2021*

The focus of Table 4.1 was to clarify some of the identical effects of electronic academic learning materials on respondents' performance. The intention was to identify positive and negative consequences for users. Respondents were asked about their perceptions of the contribution of electronic academic learning materials to academic performance. In this case, 46.5% felt that the application of electronic academic learning materials contributed to performance, while 53.5% thought otherwise. Again, 48.2% relied on electronic academic learning materials to achieve understanding; 33.5% utilized university libraries to complement electronic academic learning materials; and 32.0% were keen to study textbooks despite the availability of online materials. However, the concern is woven around the tendency that some students in the study location have lost interest in reading print texts and desire to consult the physical library, which houses verified academic learning materials. Curiously, 68.0% lacked the desire to study print text, and 66.5% lacked interest in consulting the university library for academic reference. Evidently, the lack of interest in consulting a physical library was reinforced by the level of keenness attributed to online materials by students in the study location. Here, keenness in online consultation was described as frequent (66.7%), interval (29.5%), and rare (3.8%). The majority of the undergraduates were keen on online academic learning materials. Further probes are engaged in the table below.

Table 4.2: Descriptive statistics showing effects of electronic academic learning materials on performance among undergraduates

Items	Mean	Standard Deviation	N
Do you think electronic academic learning materials contributed to your performance?	2.0060	.30535	600
age	1.3560	.50043	600
Social class	1.4440	1.47225	600

Income	1.6520	1.07458	600
Faculty	2.6210	1.53094	600
sex	1.1120	1.24933	600

Above Table 4.2 are the descriptive mean statistics of respondents and the effects of electronic academic learning materials on performance among undergraduates. Performance was mixed with demographics to identify the possibility of occurrence in each case. At the level of performance, the mean estimate was ($m = 2.0$). The indication here is that there was a possible occurrence where electronic academic learning materials contributed to performance. The result identified that at least two users in every case used electronic academic learning materials to enhance their academic performance. Using the demographic estimate of age ($m = 1.4$), class ($m = 1.4$), income ($m = 1.7$), faculty ($m = 2.6$), and sex ($m = 1.1$), there was no possible occurrence that suggested performance was dominant among the respondents. Only faculty, at 2.6, was above the average estimate (2.0), suggesting that electronic academic learning materials complement performance, which varied with faculty. The implication is that not all undergraduates in the study relied on electronic academic learning materials for their performance; some still used other sources like handwritten lecture notes and textbooks.

Discussion of Finding

This study aimed to explore the impact of electronic academic learning materials on performance among undergraduates at the University of Ibadan, Nigeria. The research findings indicate a high level of awareness among undergraduates regarding the availability and utility of electronic academic learning materials. Notably, the study uncovered that undergraduates commonly access electronic academic learning materials through Google and Yahoo search engines, as well as web page methods using the university's internet service, personal data, and network sharing. It was observed that students employ diverse devices, including mobile phones, desktop computers, laptop computers, memory sticks, and hard drives, to store their academic learning materials in electronic formats. This multi-device approach highlights the adaptability and flexibility of students in integrating technology into their academic routines. Moreover, the study sheds light on the perceptions of undergraduates regarding the cost of accessing electronic academic learning materials. Remarkably, students generally consider the expenses associated with accessing these materials to be affordable and cost-effective. This positive perception is indicative of the students' recognition of the value offered by electronic

resources in enhancing their academic experience. Previous literature found that online materials were cheap to access and found in every corner of the university environment (Ali, 2005; Josep, 2022; Madhusudhan, 2008; Sharma, 2023).

The research findings underscore a noteworthy awareness among undergraduates regarding the accessibility of electronic academic learning materials. Moreover, the respondents demonstrated a profound recognition of the substantial utility of these materials for a myriad of purposes. Their opinions elucidate that electronic academic learning materials were harnessed to fulfill diverse study-related objectives, showcasing the versatility of these resources in the educational landscape. The identified purposes for utilizing electronic academic learning materials extend beyond the mere supplementation of lecture notes. Respondents reported leveraging these materials for cross-referencing academic works, completing class assignments, and even considering them as primary lecture notes. This multiplicity of applications speaks to the evolving significance of electronic learning materials, positioning them as integral tools that actively contribute to and streamline the academic progression of students. The research findings unveil a shifting academic landscape wherein electronic resources play a pivotal role in shaping the study habits and strategies of undergraduates. As students increasingly incorporate electronic academic learning materials into various facets of their academic pursuits, it becomes evident that these resources are not just supplementary but have become indispensable elements in the contemporary educational journey, fostering efficiency and enriching the overall learning experience. The utilisation of electronic academic learning materials among University of Ibadan undergraduates was distinctly aligned with the intention of augmenting academic learning. This was evidenced by the substantial proportion of students actively accessing these materials for educational purposes. The findings of this study resonate with established literature, mirroring similar conclusions reached by Dadzie (2005), Sharma (2009), and Sharma (2023). Notably, the research revealed that electronic academic learning materials played a pivotal role in enhancing academic performance. Beyond mere academic achievement, these materials were identified as catalysts for diversifying sources of knowledge, surpassing the confines of traditional class-based learning. The significance of electronic resources in promoting a multifaceted approach to knowledge acquisition became apparent, aligning with broader educational trends. The acknowledgement of their positive impact on academic performance underscores the evolving role of electronic academic learning materials in shaping the learning landscape at the University of Ibadan. As students increasingly rely on these resources, the

educational paradigm continues to shift, embracing a more dynamic and inclusive model of knowledge exploration and application.

However, this study differs in some ways. There are two dimensions of manifest consequence and latent consequence. The adoption of this theoretical model is a departure from the existing literature. It can be shown that electronic media offers leverage for academic activities, which students rely on to accomplish many academic activities. The use becomes an essential model and gratification of benefits. Electronic academic learning materials appear to be common sense, as do everyday life activities on campus and the culture of behavioural modelling exhibited by students. This channel of academic behaviour is a consumption culture and forms the whole-life structure. It can be inferred as an institution that imposes normative patterns on its users. But such institutions also create undesirable consequences. This is replicated in the gap between the application of the media and the use of libraries. There is an associated culture with the use of libraries, which is conceived as a universal culture of learning. This is because library institutions provide the foundation for a reading culture and the search for academic learning materials that can be verified and are reliable (Ani et al., 2018). But the utilisation of electronic academic learning materials is progressively gaining traction in the academic domain. However, the proliferation of electronic resources has brought forth unprecedented consequences that veer away from traditional academic standards. Regrettably, there are now substandard materials available in this novel culture of electronic academic learning materials. These materials may pose a significant risk to the quality of education students receive and may even jeopardize their academic success. As such, it is imperative for lecturers and students alike to exercise due diligence when it comes to selecting appropriate electronic academic learning materials to ensure optimal learning outcomes.

Conclusion and Recommendations

Although the availability of academic learning materials online offered leverage and expansion of capacity to access academic learning materials in quantum, this study showed that the use left some strokes of concern. This covers aspects of the ability to verify content, referencing the quality of the content, over-reliance on media content, and lack of interest in consulting the physical university library. Undergraduates at the University of Ibadan demonstrated widespread application of electronic academic learning materials, and the students maximized the use of the application to solve assignment tasks, lecture notes, and accessing the materials using multiple means in Google search and webpages and storage devices used to preserve the

materials. But there is a gap between use and the ideal situation in terms of utilisation, referencing, quality of content, and desire to search the library. Against this backdrop, the following recommendations are listed:

In light of the University of Ibadan undergraduates' shift from utilizing traditional library materials to relying on the availability, accessibility, and utilisation of electronic academic learning materials, it is evident that there has been a decline in students' interest in utilizing library resources and engaging in serious intellectual work at the university center. To address this shift, it is recommended that university libraries adopt an electronic model to attract students and internalize a renewed library culture. This entails enhancing electronic resources, creating user-friendly platforms, and actively promoting the benefits of library engagement in the digital era. University librarians and administrators should strategically integrate technology into library services, ensuring that electronic resources are not only readily available but also effectively communicated to students. This approach aims to revitalize students' interest in utilizing library services and foster a renewed appreciation for the wealth of academic resources available in both traditional and electronic formats.

Similarly, it is recommended that the university education system systematically integrate technology into teaching, learning, and student assessment. This holistic approach aims to foster students' effective and efficient use of technology across all facets of their academic pursuits, ultimately contributing to improved academic performance. Embracing technology in a systemic manner will not only enhance the learning experience but also empower students with the digital skills necessary for success in contemporary educational and professional environments. This recommendation underscores the importance of creating an environment where technology becomes an integral and seamlessly integrated tool, propelling students towards academic excellence.

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