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# **Factors Predicting The Utilization Of Internet Resources For Academic Purposes By Business Education Post-Graduate Students In South-East Universities**

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## **ABSTRACT**

The purpose of this study is to determine the factors predicting utilization of internet resources for academic purposes by business education post-graduate students' in South- East Nigerian Universities. Three research questions and three hypotheses guided the study. The correlational research design was adopted for the study. The population of the study comprises all the 250 post-graduate business education students in public universities in the area of study. The entire population was used for the study because of its manageable population size. A structured questionnaire was used to collect data. Three experts validated the instrument. The reliability of the instrument were established using Cronbach alpha statistics. Coefficients of 0.79, 0.80, 0.81 and 0.77 were respectively obtained for different sections of the instrument. Data collected were analyzed using Pearson Moment Correlation Coefficient for research question and simple linear regression of r was used to test hypothesis. The findings of the study revealed a negligible positive relationship exist between each of this factor (personal and institutional) and students utilization of internet resources while technological factors have moderate negative relationship between them. The findings of the study also revealed that each of this factor (personal and institutional) factors have no significant predictive role on post-graduate business education post-graduate students' utilization of internet resources while technological factors have significant predictive role on business education utilization of internet resources. it was concluded that technological factors play a crucial role in students' use of internet resources for academic purposes, while personal and institutional factors have minimal impact. Lastly, it was recommended among others that University administrations should allocate more funding to improve ICT infrastructure and ensure consistent internet availability across campuses.

**Keywords:** Internet resources, business education, students, utilization

## **INTRODUCTION**

The information and communication technology (ICT) is rapidly changing how people communicate, teach and learn. Over the past decades, the growth of internet usage has significantly impacted and transformed the lives of millions worldwide. According to Apuke and Tunca (2020), the internet has become an essential part of daily life, enhancing the way people search for information, conduct research and drive business transformations. Its integration into higher education has significantly improved access to a vast range of

information resources from around the world making it the primary resource for students and others seeking knowledge. (Apuke and Iyendo, 2018). Internet is also the gateway for information centers and libraries to electronic information resources and provides information generated by different organizations, institutes, research centers, and individuals all over the world. Specifically, Apuke and Tunca (2020) noted that students and teachers reported that the internet is becoming an essential part of the educational system. Okogwu (2019) noted that it has been regarded as an excellent study tool which has pertinent information that is easily accessible, and increasingly utilized by university education students. This supports the research assertion which submits that the use of internet has become a fundamental part of general students' life (Deniz and Geyik, 2015). The internet students are provided with, aid in their daily academic activities.

Many colleges and universities provide internet access to their students to foster educational activities of research, instruction, and literature searching and to serve as a source of information to meet other needs. Kilimci (2018) observed that the internet has become one of the most powerful resources in accessing information, collecting and analyzing data, conducting interviews, chatting, downloading materials. Typically, in most university campuses, students have access to the Internet almost any time and almost anywhere on campus through institutional wireless facilities or directly from commercial internet providers. Since its emergence in 1990s, the Internet has been a major global tool with capacity to provide data and information for teaching, learning and research. The Internet provides access to the most diversified source of information hosted by individuals and various organizations world-wide on a vast network of servers (Ogungbeni et al, 2016). Furthermore, the internet offer students the possibility to acquire knowledge without time and space constraints. It is an excellent academic resource and contains wealth of useful, easily accessible information for students of university education in all disciplines across the globe. It is a functional tool that has immensely changed the way students interact with others and shared information with respect to their studies. The internet is the largest, most powerful computer network in the world. It encompasses 1.3 million computers with internet addresses that are used by up to 30 million people in more than fifty countries. As more and more colleges, universities, schools, companies and private citizens connect to the internet either through affiliations with regional not-for-profit networks or by subscribing to information services provided by for-profit companies, more possibilities are opened for distance educators to overcome time and distance to reach students including business education post-graduate students.

Post-graduate (PG) business education students are the second category of students in the universities. The PG business education students belong to the category of students who undergo any course in the universities (either part-time or full-time) after obtaining the first degree. In Nigeria, any student who is pursuing a Post-graduate Diploma in Education (PGDE), Masters (M.Sc. or M.Sc. Ed) and Doctor of Philosophy Degree (Ph.D) in any field of specialization is called a post-graduate student. Post graduate business education students undergo training that gives an occupational identity in business education at advanced level such as in Post-graduate Diploma in Business Education (PGDBE), Masters (M.Sc. or M.Sc. Ed) and Doctor of Philosophy Degree (Ph.D) in any of their field of specialization in business education. Notwithstanding the PG degree pursued, students utilize internet for their educational pursuit.

Irrespective of the benefits of using Internet for academic purpose highlighted, several factors that encourage or hinder Internet use in different setting have been identified by researchers in literature. These factors have been classified as personal/individual, institutional/organizational and technological/system factors (Buabeng-Andoh, 2022; Zabukovsek and Bobek, 2013; Ogunsola and Oluyemi, 2019). Okogwu (2019) identified the personal factors to include childhood experience, knowledge and education, personality and self-construal, sense of control, empowerment, usefulness, success, interest, caring, goals, felt responsibility, cognitive biases, place attachment, age and chosen activities. Anandarajan, Igbaria and Anakwe (2018) revealed that perceived usefulness and perceived enjoyment did not motivate students on the use of internet resources for academic purposes but organizational support and social pressure.

Institutional factors concern the position of the language in various sectors of society, such as government, education, mass media, and religion. Some of the institutional factors that influence utilization of internet resources for academic purposes by students in tertiary institutions include institutional commitment, immediate workplace environment, academic culture such as reward, training, institution's ICT use policy, academic workload, access and location of electronic resources. Institutional factors have been found to

influence the use of various ICT in different settings (Tony-Okereke, 2021). Institutional factors include steady supply of electricity, availability of institutional computer laboratory and cybercafé, adequate access points, reliable connectivity; cost of Internet access, Internet speed (bandwidth), and institutional skills acquisition programme among others have been found to influence Internet access and use among different categories of users (Appleton, 2016). Aderibigbe and Aramide (2021) also identified some institutional factors that affect the use of the internet by students in as availability of adequate rules and regulations; adequacy of infrastructural facility to support Internet use; provision of conducive ICT environment; adequate policies to support ICT use in academic work and availability of adequate computer accessories while on the other hand inadequate provision of access points for Internet use and high cost of Internet access as institutional factors that hindered Internet usage. In the same vein, Ivwighreghweta and Igere (2014) posited that inadequate internet facilities, slow internet speed, unreliable power supply were some of the problems impeding effective internet access and usage among students. These organizational factors just like system factors affects students' academic use of the internet resources.

Technological factors refer to the infrastructure planning, hardware and software use within the organization for enhancing teaching-learning process. Technological factors on the use of internet resources include education, socioeconomic status, attitude towards technology, the perceived benefits of technology, and access to technology that influence internet resources. Technology plays a fundamental role in enhancing teaching learning process. It has facilitated instructional process and made it more productive, dynamic and effective. Technology factors provides opportunities for learning control, as well as it can help students investigate and answer complex questions, develop new thinking skills, and access, evaluate, and synthesize information (Hanus and Fox, 2015). Furthermore, technological factors can help students set goals, form and test hypotheses. The technological factors include ICT adoption and Internet connectivity to explore their impact on academic purpose to adopt ICT. Others technology factors include Internet connectivity, poor internet bandwidth for browsing, and electronic library reserve. These factors are bound to have positive or negative influence in the use of internet by students.

Higher education students utilize internet for diverse academic purposes. Ayub, Hamid and Nawawi (2014) posited that students use internet to search for materials, seek information from the internet, exchange e-mails with friends and colleagues as well as access e-library websites to search for academic books. Naribole (2023) enunciated the uses of internet as access to information, communication as well as online learning. In noting the relevance and use of internet in education, Veerpal, Amandeep, Kulwinder, Satveer (2016) opined enhanced lessons, accessibility, communication, study and research as its important role on students' academic endeavors. These could be viewed as different ways and means of educational use of internet.

Some studies have indicated that certain factors influence students' use of internet for academic purposes which could be age, programme type as well as ownership of institutions (Apuke and Tunca, 2022; Binuomote and Okoli, 2015; Ezenwafor and Ukwuoma, 2018). Age in the context of this study refers to adults 18 years and above. Programme type refers to the academic programme offered in business education programme at the post-graduate level which comprises Postgraduate diploma in business education (PGDBE), Master (M.Sc.Ed) and Doctoral (Ph.D) programme, while institution ownership refers to right of possession of the institution by different levels of government, in this case, federal and state government. Against the background of the complexities of these variables and concerns of the prevailing factors on use of internet, this study set out to understand how individual, organizational and system factors foretell students' use of the internet for educational purposes.

### **Statement of the Problem**

Substantial research evidence has confirmed that the advancements in information technology and the growth of the internet have influenced positive students' approach toward research and learning in the present-day advanced educational settings among post-graduate students (Odeyemi, Bamigboye, Adeniran and Bamigboye, 2019; Rahaman, 2021; Nemalladinne, 2023). The internet is a significant tool for modifying and enhancing students' academic performance which developed into a platform for improved student interactions, access to information and increased learning possibilities. Intrinsically, the internet resources to a large extent have shown to influence students' research and educational development (Apuke and Ezeah, 2017, Ogaji, Okoyeukwu, Wanjiku, Osiro and Ogutu, 2017; Apuke and Tunca, 2020).

Preliminary observations of the researcher revealed that despite the benefits and affordances of internet resources in academic pursuit of post-graduate students in Nigerian universities. Majority of them make little or no use of internet resources and services provided owing to individual, organizational and system factors. These prevailing factors pose its challenge as it affects students flexible and personalized learning opportunities, retards global communication, collaboration and access to information which ultimately hinders research output and publications dissemination. There is therefore the need to understand the predictive influence of these factors on post-graduate students' educational use of the internet resources.

### **Purpose of the Study**

The purpose of this study is to ascertain the factors predicting business education post-graduate students' utilization of internet resources for academic purposes in South-East, Nigerian Universities. Specifically, the study sought to determine:

1. personal factors predicting the utilization of internet resources for academic purposes by business education post-graduate students in South-East, Nigerian Universities.
2. Institutional factors predicting the utilization of internet resources for academic purposes by business education post-graduate students in South-East, Nigerian Universities.
3. technological factors predicting the utilization of internet resources for academic purposes by business education post-graduate students in South-East, Nigerian Universities

### **Research Questions**

The following research questions will guide the study:

1. What personal factors predict business education post-graduate students' utilization of internet resources for academic purposes in South-East Nigerian universities?
2. What institutional factors predict business education post-graduate students' utilization of internet resources for academic purposes in South-East Nigerian universities?
3. What technological factors predict business education post-graduate students' utilization of internet resources for academic purposes in South-East Nigerian universities?

### **Hypotheses**

The following null hypotheses will be tested at 0.05 level of significance:

1. There is no significant predictive effect of personal factors on post-graduate business education students on utilization of internet resources for academic purposes in South-East Nigerian universities.
2. There is no significant predictive effect of personal factors on post-graduate business education students on utilization of internet resources for academic purposes in South-East Nigerian universities.
3. There is no significant predictive role of technological factors on post-graduate business education students on utilization of internet resources for academic purposes in South-East Nigerian universities.

### **Literature Review**

Historically, it has been shown that the internet was established in the early 1960s and eventually turned into a tool used by the majority (Schneider, Evans and Pinard, 2016). At the initial stage, it was called the ARPANET, a network of computer project funded by the United States of America. By the year 1971 and 1972 these technologies grew, and by 1973 it expanded beyond the United State into other European countries (Barfi and Afful-Arthur, 2018). The internet has been defined as a worldwide system of networks that publicly connects millions of individuals (Ameyaw and Asante, 2016). It lets people and business to relate and disseminate data, resources and services (Almarabeh, Majdalawi and Mohammad, 2016). According to Carter (2016), the Internet connects millions of smaller, local, international, educational and governmental networks that permit interactivity between people without any terrestrial hindrance. It allows people to access data along numerous points (Adeniran, 2018), and most of these data comprise interconnected hypertext files and resources on the web.

In addition, evidence has shown that there is a large proportion of learning materials found on the Internet which permits students to get quick access (Alshammari, 2014). This is not surprising as Fasae and

Adegbilero-Iwari (2015) revealed that the Internet resources aid students in carrying out their assignments, undertake research and even releases their stress. The authors added that the internet improves students' communication skills, promotes their relationship and boost their CGPA. There has been research argument regarding the students use of the internet, some authors claim that the use of internet by students is mainly for entertainment reasons, since the internet was not only designed for seeking information, but also for bringing individuals together (Ahmed and Bukar, 2016). The Internet, though, does not provide leisure and social interactivity, yet, many academic and scientific resources are also found on the Internet. It is, therefore, necessary to encourage student (post-graduate business education students) to make use of the Internet resources to retrieve pertinent research materials because the advent of the Internet will be baseless if not properly integrated into the educational sector. Thus, evidence has shown that the Internet resource is now widely used in the tertiary institutions around the world (Park and Biddix, 2018).

Additionally, a research has supported that the use of the Internet resources has the potential of improving the quality of research and learning as it permits students to be critical and creative, thereby solving pertinent problems in the academics and beyond (Akpuke and Tuncan, 2020). This view is in harmony with Limaye and Fotwengel (2015) findings, which indicates that the Internet resources permit students to share ideas, knowledge, and accomplishments with their peers abroad, and this enhances their understanding, capabilities in studies as well as professional life at large. This is not surprising as studies have indicated that students now use the internet to do their homework, class work, and other related research activities, and this has attracted attention in the educational sector as it regards the integration of technology into the tertiary institution's curriculum across the globe (Asselin and Moayeri, 2018). Todd (2018) reported that students prefer to make use of the Internet to do school work because they perceive its benefits as it relates to achieving a good research project and assignments. Indeed, the academic setting has been completely transformed by the recent development of the internet and its resources. Hence, to benefit from the large resources available on the Internet, a student needs to demonstrate a moderate level of technological literacy. Technological literacy has been specified as possessing a fuller understanding of when and why certain information is needed, where to obtain it, ways to evaluate and practice it to accomplish certain objectives (Gullbekk, Skagen, Toning and Calvo, 2019). This indicates that technological literacy goes beyond exploring and evaluating materials online, to using such material, thereby creating knowledge and sharing ideas (Todd, 2018).

## **METHODOLOGY**

The research was conducted at South-East public Universities that were offering business education programme at post-graduate level. The population of the study included 120 post-graduate business education students in South-East public Universities. The entire population was used because the number is not too large. The data was collected using a self-structured questionnaire titled "Factors and Utilization Questionnaire (FAIUQ)". The questionnaire consisted of two sections A and B. A elicited information on demographic data of the respondents. Section B1 contains the items utilized or not utilized for different purposes by the students which contains 16 items, while B2-B4 was structured on a five point rating scale of Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1) on factors affecting utilization of internet resources. The instrument was trial tested by administering it to 41 post-graduate business education students from South-East Universities in Nigeria and reliability co-efficient of 0.79, 0.80, 0.81 and 0.77 respectively were obtained respectively for each cluster. The instrument was validated by three experts, two from Technology and Vocational Education department and one expert from Measurement and Evaluation department, all from faculty of education in Nnamdi Azikiwe University Awka.

One hundred and twenty copies of questionnaire were distributed by the researcher with the help of three research assistants, the 120 copies were duly completed and returned. The data in respect of research questions were analyzed using Pearson Product Moment Correlation (PPMC) while the null hypotheses were tested with simple linear regression of  $r$  at 0.05 level of significance.

**RESULTS**

Data collected were analyzed and presented as follows:

**Research Question 1:** *What is the predictive role of personal factors on business education post-graduate students' utilization of internet resources for academic purposes in South-East Nigerian universities?*

**Table 1.** *Bivariate correlation between personal factors and utilization of internet*

SN	Variables		1	2	Remark
1	Utilization of Internet	R	1	.02	Negligible Positive Relationship
		Sig.		.839	
2	Personal Factor	R	.02	1	Negligible Positive Relationship
		Sig.	.839		

The data in Table 1 shows the correlation between personal factors and utilization of internet resources for academic purposes among post-graduate students. A Pearson's correlation revealed a negligible correlation between personal factors and utilization of internet,  $r(118) = 0.02$ ,  $N = 120$ . Thus, it can be stated that the predictive role of personal factors on business education post-graduate students' utilization of internet resources for academic purposes is negligible.

**Research Question 2:** *What is the predictive role of institutional factors on business education post-graduate students' utilization of internet resources for academic purposes in South-East Nigerian universities?*

**Table 2:** *Bivariate correlation between institutional factors and utilization of internet*

SN	Variables		1	2	Remark
1	Utilization of Internet	R	1	.03	Negligible Positive Relationship
		Sig.		.713	
2	Institutional Factor	R	.03	1	Negligible Positive Relationship
		Sig.	.713		

The data in Table 2 shows the correlation between institutional factors and utilization of internet resources for academic purposes among post-graduate students. A Pearson's correlation revealed a negligible correlation between institutional factors and utilization of internet,  $r(118) = 0.03$ ,  $N = 120$ . Therefore, it can be stated that institutional factors scarcely predict business education post-graduate students' utilization of internet resources for academic purposes is non-significant.

**Research Question 3:** *What is the predictive role of technological factors on business education post-graduate students' utilization of internet resources for academic purposes in South-East Nigerian universities?*

**Table 3.** *Bivariate correlation between technological factors and utilization of internet*

SN	Variables		1	2	Remark
1	Utilization of Internet	R	1	-.36**	Moderate Negative Relationship
		Sig.		.000	
2	Technological Factor	R	-.36**	1	Moderate Negative Relationship
		Sig.	.000		

The data in Table 3 shows the correlation between technological factors and utilization of internet resources for academic purposes among post-graduate students. A Pearson's correlation revealed moderate correlation between technological factors and utilization of internet,  $r(118) = -0.36$ ,  $N = 120$ . Therefore, it can be stated that technological factors predict business education post-graduate students' utilization of internet resources.

**Test of significance**

**Hypothesis 1.**

There is no significant predictive role of personal factors on post-graduate business education students on utilization of internet resources for academic purposes in South-East Nigerian universities.

**Table 4.** *Simple linear regression for the predictive role of personal factors on utilization of internet*

Model	SS	df	MS	F	$\beta$	SE	T	Sig.
Regression	.021	1	.021	.041	.019	.390	.203	.839
Residual	59.650	118	.506					
Total	59.671	119						

The data on Table 7 reveals the summary of linear regression on the predictive role of personal factors on post-graduate business education students' utilization of internet resources for academic purposes. Specifically, the data shows that the personal factors do not significantly predict post-graduate business education students' utilization of internet resources:  $F(1, 118) = 0.041$ ,  $\beta = 0.019$ ,  $t = 0.203$ ,  $P(.839) > 0.05$ . Hence the null hypothesis is accepted. This means that personal factors have no significant predictive role on post-graduate business education students' utilization of internet resources for academic purposes.

**Table 5.** *Simple linear regression for the predictive role of institutional factors on utilization of internet*

Model	SS	df	MS	F	$\beta$	SE	T	Sig.
Regression	.044	1	.044	.136	.115	.313	.369	.713
Residual	38.310	118	.325					
Total	38.354	119						

The data on Table 3 reveals the summary of linear regression on the predictive role of institutional factors on post-graduate business education students' utilization of internet resources for academic purposes. Specifically, the data shows that the institutional factors do not significantly predict post-graduate business education students' utilization of internet resources:  $F(1, 118) = 0.136$ ,  $\beta = 0.115$ ,  $t = 0.369$ ,  $P(.713) > 0.05$ . Hence the null hypothesis is accepted. This means that institutional factors have no significant predictive role on post-graduate business education students' utilization of internet resources for academic purposes.

**Hypothesis 3** There is no significant predictive role of technological factors on post-graduate business education students on utilization of internet resources for academic purposes in South-East Nigerian universities.

**Table 6.** *Simple linear regression on the predictive role of technological factors on utilization of internet*

Model	SS	df	MS	F	B	SE	T	Sig.
Regression	10.706	1	10.706	17.526	.429	-.360	-4.186	.000
Residual	72.081	118	.611					
Total	82.787	119						

The data on Table 4 reveals the summary of linear regression on the predictive role of technological factors on post-graduate business education students' utilization of internet resources for academic purposes. Specifically, the data shows that the technological factors significantly predict post-graduate business education students' utilization of internet resources:  $F(1, 118) = 17.526$ ,  $\beta = 0.429$ ,  $t = -4.186$ ,  $P(.001) < 0.05$ . Hence the null hypothesis is rejected. This means that technological factors significantly predict post-graduate business education students' utilization of internet resources for academic purposes.

**DISCUSSION OF FINDINGS**

Predictive role of personal factors on business education post-graduate students' utilization of internet resources in South- East universities

**Research Question 1 and Hypothesis 1**

Regarding the first research question 1 which sought to ascertain the predictive role of institutional factors on business education post-graduate students' utilization of internet resources, the result of the analysis revealed that there is a negligible correlation between personal factors and utilization of internet accessibility

suggesting that personal factors are not always significant predictors of academic internet usage. It also supports the findings of Afari et al (2023) who found that personal efficacy in using technology was less important in predicting students use of academic internet resources. The findings of Ali and Aslam (2024) who emphasized that at post-graduate level students are often self-directed and personal factors may play less role than at the undergraduate level.

Hypothesis 1 indicated that  $P(.839) > 0.05$  level of significance. The null hypothesis is therefore accepted. This suggests that personal factors have no predictive role on post-graduate business education students' utilization of internet resources for academic purposes.

#### **Research Question 2 and hypothesis 2**

The predictive role of institutional factors on business education post-graduate students' utilization of internet resources in South-East Universities. The result of research question 2 revealed that there is a negligible correlation between institutional factors and utilization of internet resources by business education post-graduate students. The result agrees with the work of Afzal et al (2023) who argues that institutions in developing countries often face a digital divide, where the lack of investment in digital technologies impairs the ability of students to benefit from institutional efforts to integrate internet resources into learning. In a similar vein, Tamhankar et al. (2019) also states that without strong technological support systems, even well-intentioned institutional policies may fail to encourage students' use of online resources. In the context of Nigerian higher education, limited funding and inconsistent ICT infrastructure may alter the effects of institutional initiatives aimed at promoting internet usage for academic purposes.

Hypothesis 2 indicated that  $P(.71) > 0.05$ . Hence the null hypothesis is accepted. Hence there is no predictive role of institutional factors on business education post-graduate students' utilization of internet resources for academic purposes.

#### **Research Question 3 and Hypothesis 3**

Predictive role of technological factors on business education post-graduate students' utilization of internet resources in South-East Universities. The result of research question 3 revealed that there is a moderate correlation between technological factors and utilization of internet resources by business education postgraduate students.

The findings of this work is in line with the finding of Aristovonik et al (2022) which showed that access to high-speed internet and user-friendly digital platforms are crucial factors influencing students' academic performance and engagement with online resources.

Hypothesis 3 indicated that  $P(.001) < 0.05$  level of significance. The null hypothesis is therefore rejected. Hence, there is predictive role of technological factors on business education post-graduate students' utilization of internet resources.

### **CONCLUSION**

Based on the results of the study, the following conclusions were drawn.

Technological factors play a crucial role in students' use of internet resources for academic purposes, while personal and institutional factors have minimal impact on students' use of internet resources for academic purposes.

### **RECOMMENDATION**

Based on the findings of this study the researcher recommends:

1. University administrations should allocate more funding to improve ICT infrastructure and ensure consistent internet availability across campuses and also partner with technology companies and international donors to provide affordable digital devices and internet connectivity to students.
2. Institutions should offer more training programs for both students and faculty educators on how to effectively use online academic resources by organizing workshops and seminars. Also, academic departments should integrate more e-learning resources and internet-based assignments into the curriculum to encourage regular use of internet resources by students.
3. Universities should create inclusive policies that address the digital divide, ensuring that students with limited access to digital devices or internet resources are provided with the necessary support,



such as loan programs for devices or subsidized internet access. They should also establish feedback systems where students can voice their challenges with digital learning, allowing institutions to adapt policies in real-time.

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