



## Use of Internet Medium for Postgraduate Students in African Universities: Case Study Nigeria Universities

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**ABSTRACT** An investigation was conducted on the postgraduate students' use of internet in learning in South-west Universities Nigeria. The design of the study was a descriptive survey research type. The population for the sample was purposively drawn from 6 universities, a total number of 600 postgraduate students were samples, 100 postgraduate students from each University. The instrument for data collection was research designed questionnaires named 'Postgraduate students usefulness of internet to learning in South-West Universities in Nigeria'. 2 questions were raised and 2 hypothesis posed for the study. The data collected were analyzed with ANOVA and t-test statistics at 0.05 level of significance. The results of the analyses related to the 2 hypotheses indicated significant no difference on the 'Postgraduate students' usefulness of internet for learning in South-West Universities in Nigeria'. Based on the findings, it was recommended that postgraduate students should be encouraged to utilise internet for learning and the university to inculcate curriculum that will promote students using internet in the university.

### INTRODUCTION

The use of Information Technology in education is so remarkable globally that in this digital age, educational institutions are greatly inculcating Information Technology tools to support and disseminate meaningful learning (Bamigboye and Olusesan 2017). More so, Information and Communication technology in schooling encompass the utilization of universal tools of information and communication technology in the teaching-learning process.

Pinto (2018) opined that Internet devices such as mobile phones, handheld game consoles, data cards as well as cellular routers enable the accessibility of internet opportunity through communication technology. Kennedy et al. (2003) explained that the digital divide is an issue of accessibility and usefulness in relating to Internet usage. Teo (2008) stressed that students' perceived ease of use and perceived usefulness of the system, therefore, factor affecting learners embracing of information communication and technology is featured by the individual learner, in line with the attitude,

competence, self-efficacy, gender, experience, accessibility among others.

Spencer et al. (2013) described ICT utilization as the way of adopting ICT tools, for example, Internet, modernized learning technologies, CD ROMs, etc. to assist and commensurate teaching and learning. Information and communication technology (ICT) plays a vital and active role in learner's achievement at all educational levels and significance in education. ICT is being used effectively in education and learning environments due to its spread of internet usage in different dimensions around the world. Tondeur and Johan (2007) suggested that usefulness, embracing and incorporation can literally mean the same thing in their usage. Ogunsola and Aboyade (2005) opined that ICT is a mass of connected technologies distinct by their purposeful usage in information accessibility and communication of which one epitome is the internet that provides a medium for those with low self-efficacy in ICT to access the internet (Muneo 2009).

The frequent use of the internet among the students for interaction as well as for education

is increasingly prevalent in university education. Several studies have been conducted on the internet and education globally. Ison (2015) researched on the internet and self-efficacy, to predict students' performance on search tasks in web-based instruction. His findings concluded that task-specific and internet self-efficacy has proved a significant effect on the online search performance of students. This revealed that task-specific, computer self-efficacy is an individual's perception of efficacy in performing specific computer-related tasks within the domain of general computing. In another development, Bowers-Campbell (2008) researched the effect of the internet on students learning. The studies revealed that the internet has the ability to assist students who are struggling with low self-efficacy and poor self-regulation behaviors. However, all the above mentioned studies are relevant to the present investigation because they give an insight into internet utilization in education globally.

Scott (2011) submitted that the internet has been the catalyst for the global integration of learning in schools and colleges. However, the study has also stressed the value of the internet. For instant Delacruz (2009) explained that the Internet is widely recognized as the tools and vehicles through which instructional activities and effective transformation happen worldwide. Bergmann and Lin (2016) also stressed that Internet technology influences learning in a classroom positively, and creates more time for teachers interacting with students instead of lecturing. Nyenwe and Ishiakaku (2013) explained that the internet significantly prepares learners with the required skills and continuous technological innovations for the global workplace.

Kabasakal (2015) explained that the majority of the Internet users constitute male students. They are efficacious, proficient and comfortable in handling computer technology and the Internet when compared with their female mate.

Previous researches have unveiled the gender acquisition of knowledge via the internet. Whitmore et al. (2015) conducted research on web resources utilization as well as online acquisition of knowledge by both male and female genders. The study concluded that there is a substantial disparity between genders. Shashaani (1993) and Fischer and Arnold (1994) stressed that male and female students' accessibility to

the Internet at home and school has widened their horizons academically and gender differences in Internet utilization favored males than females.

Anand et al. (2018) further explained that the world is a global village of 3 Dimensional virtual form. The network technologies and computing powers are developed towards 3 Dimensional Internet, where gender reacts to electronic media in the 3 Dimensional environments through active manipulations for instructional purposes.

Munusamy (2009) submitted that frequent use of internet usage recorded for the male during the weekend for educational purposes. Also, Crocco et al. (2008) submitted that girls and boys have equal participation in computers and as well as the use of the internet for instructional and entertainment. Winker (2005) explained that male students are in the category of using the internet frequently for education while the female is of the moderate user for fun and entertainment. Internet usage and web information differences cut across the gender, in that male and female behaviors are not of the same (Hupfer and Detlor 2006). In another development, Kim et al. (2007) reported that the utilization of internet inversely is quite noticeable among men and women for different missions. Also, the issue of gender differences on the Internet is still a relatively new trend in the information.

In essence, Cullen (2001) submitted that internet utilization has been tag as 'the digital age' and has become suitable and mean of communication for describing technologies in this century. Bimber (2000) argued that gender differences came into existence as a result of socioeconomic status and that males and females differ in technological advancement which in return influences computers and Internet access and usage. Andreassen et al. (2017) submitted that male and female learners are different in handling computer for instructions, this may be as a result of different factors.

The recent development of educational technologies exposes different hypothetical models that developed to research and elucidate elements that influence users' recognition, refusal or continuing use of new technology (Venkatesh and Davis 2000; Venkatesh et al. 2003). These theoretical models have sources from previous researcher such as Fishbein's Model and Theory of Reasoned Action (TRA). Davis (1989) pio-

neered and established the Technology Acceptance Model (TAM) and gave a theoretic framework that narrates the association of attitude-intention-behaviour. In line with the Technology Acceptance Model, it observed efficacy, intention to use and professed ease of use are assumed to be essential factors of user recognition and rejection of new technology. The extent to which the usefulness of Internet to students for learning in Nigeria universities remained unknown. The study, therefore, intends to fill the gaps created by previous studies, especially in finding out the use of the Internet for learning in Nigeria Universities.

### Purpose of the Study

The main purpose of the study is to investigate the usefulness of the internet to students for learning, in South-West, Nigeria. Specifically, the study intends to:

1. Investigate the usefulness of the Internet for learning in Nigeria Universities.
2. Examined the influence of gender on the usefulness of the Internet for learning in Nigerian Universities.

### Research Questions

The following research questions were posulated to guide the study:

1. What are the differences in the usefulness of the Internet for learning in Nigerian universities?
2. What are the different in the male and female usefulness of the internet for learning in Nigerian Universities?

### Research Hypotheses

The following two hypotheses have been formulated to guide the research study in line with research questions:

- HO<sub>1</sub>** There is no significant difference in usefulness of the Internet for learning in Nigeria universities.
- HO<sub>2</sub>** There is no significant difference in the male and female usefulness of the Internet for learning in Nigeria universities.

## METHODOLOGY

The design of the study was a descriptive survey. The targeted population for the study consisted of all the postgraduate students of the six-states in the South-West Nigeria geopolitical zone. These consist of Oyo, Ogun, Ondo, Ekiti, Osun, and Lagos State, in both the Federal and the State Universities of the mentioned states. Therefore, the researcher purposively sampled a University in each state, the institutions that were sampled are Ekiti State University, Ado - Ekiti, Ekiti State. Obafemi Awolowo University, Ile - Ife, Osun State, University of Ibadan, Ibadan, Oyo State, University of Lagos, Akoka. Lagos, Olabisi Onabanjo University, Ago- Iwoye. Ogun State and Adekunle Ajasin University, Akungba - Akoko Ondo.

The sample was achieved using a purposive sampling technique to select 100 students in each University. This was to ensure adequate representation of the subjects thereby reducing sampling error. 50 samples were male, while the other 50 were female making a total of 100 samples for the study. (1:1) The instrument for the study was a researcher-developed questionnaire titled: 'Postgraduates students usefulness of Internet for learning in in South-West Universities in Nigeria', structured on a 5 - point rating which were Strongly Agree (SA) - 5 points, Agree (A) - 4 points, Disagree (D) - 3 points Strongly Disagree (SD) - 2 points and Undecided (UD) -1 point.

The tool was certified to be tested and originated to satisfy face, content and construction validity by a lecturer in the Department of Educational Technology as well as another lecturer in the department of Test, Measurement and Evaluation, University of Ilorin Nigeria. The tool was further exposed to pilot testing and reliability before using the research instrument. The reliability of the instrument was ordered on 20 postgraduate students at the University of Ilorin, Nigeria, with Cronbach's Alpha. The consistency of the tool was conventional by adopting the Cronbach Alpha analysis. The consistency and coefficient value generated 0.89 which is suitable for the study.

The researchers administered the tools to the respondents with the aid of two trained researcher assistants from each University. A total number of 600 copies of the questionnaires were adminis-

tered and collected on the research field from the respondents. In the course of the collection, 10 questionnaires were imperfectly filled, 6 were marred, while 2 got lost in transit. Therefore, only 582 questionnaires were properly filled and collected from the respondents. The researchers had to work with the 582 questionnaires. The data were analyzed using ANOVA and t-test data to test the null hypotheses at 0.05 level of importance.

**RESULTS**

**Hypothesis One**

*There is no significant difference in the student's usefulness of the Internet for learning in Nigeria universities.*

This hypothesis was tested using ANOVA statistics to compare the postgraduate students in all the South-west Universities. This hypothesis was tested and is shown in Table 1.

Table 1 confirmed the calculated F value of .027 is significant in that the significant value of 1.000 is greater than 0.05 alpha levels. This establishes no significant difference in the postgraduate students' perception of the integration of the internet to learning in South-west Universities in Nigeria. Thus, the hypothesis is not rejected. This result suggested that postgraduates' students do differ in the integration of the internet for learning.

**Hypothesis Two**

*There is no significant difference in the female and male students' usefulness of the Internet for learning in Nigerian universities.*

This hypothesis compared the female and male students' usefulness of the Internet for learning in Nigeria universities, South-west, Nigeria. The hypothesis was tested and is shown in Table 2.

**Table 2: t-test of male and female students' usefulness of the internet for learning**

Variables	No.	Mean	Sd	df	t	Sig.
Female	282	31.33	5.50	580	024	879
Male	300	31.40	5.55			

Table 2 reveals t value of 0.24 is significant because the significant value of 879 is more than 0.05 alpha levels. This shows no significant difference in the mean scores of both female and male postgraduate students on the integration of the internet to learning in South-west Universities in Nigeria. Thus, this hypothesis is accepted. In other words, the result suggested that male and female postgraduate students integrate the internet for learning. In order to ascertain where the significant difference lies, the means of the male and female postgraduate students was compared from Table 2. The means of the male postgraduate students, 5.55 was slightly greater than the means of female postgraduate students, 5.50.

**DISCUSSION**

The present results of the analyses related to hypothesis 1 indicated no significant difference in the postgraduate students' perceptions of the integration of the internet to learning in South-west Universities in Nigeria. The findings of this study are in line with Anand et al. (2018) whose studies supported that internet connectivity enhances and increases learner motivation as it combines with the richness and interactivity of other ICTs tools with the opportunity of connectivity for useful information. It also collaborates with the findings of LaRose and Eastin (2004) who explained that Internet self-efficacy usage has

**Table 1: One Way ANOVA Result of the perception on the integration of internet to learning, in South-west, Nigeria**

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected Model	4.204 <sup>a</sup>	5	.841	.027	1.000
Intercept	569156.349	1	569156.349	18594.350	.000
Factor	4.204	5	.841	.027	1.000
Error	17630.842	576	30.609		
Total	590221.000	582			
Corrected Total	17635.046	581			

a. R. Squared = .000 (Adjusted R Squared = -.008)

new explanatory powerful variables useful for learning. The finding conformed with the findings of Papadakis (2018) whose study affirmed that the internet has the ability to distribute digital media files or series of files for playback devices that promote learning. The finding also agrees with the findings of Lu et al. (2014) who commented that learners use a computer for general study and surfing the internet. The findings were further supported by findings of Odora and Matoti (2015) who concluded that, both lecturers and students in higher institutions access to digital technologies such as computers and mobile phones to surfing the internet for teaching and learning purposes.

The results of the analysis related to hypothesis 2 indicated no significant difference in male and female postgraduate students' perception of the integration of the internet to learning in South-west Universities in Nigeria. The finding conformed to the findings of Debatin et al. (2009) who concluded that Facebook uses self-efficacy as determinants of attitudes about the general Internet among males and females. And also, the findings collaborated with the finding of Andreasen et al. (2017), who thoroughly investigated college male and female students' attitudes and self-efficacy towards the Internet and concluded the finding to be positive. The findings also agreed with Ogedengbe et al. (2012) and Nwangwa et al. (2014), based on their review of male and female students' attitude towards internet for learning and research, while the findings contradict Akman and Turhan's (2014) findings who submitted that only female students spent most of their time on internet to surf social media for fun. The findings also negate the findings of Olabemiwo (2013) who stated that male and female students are found to be more interested in the use of ICT resources for learning and research in sciences than humanities.

### CONCLUSION

The outcome of the findings established that the postgraduate student's perceptions of the integration of the internet in learning in South-west Universities in Nigeria are positive. Students' utilize the internet to acquire vital educative materials for learning and research purposes.

### RECOMMENDATIONS

Based on the study, the following recommendations are hereby given: Universities authorities should encourage the postgraduate students in more use of the internet for learning by inculcating the internet as a prerequisite curriculum for the students' to enable them closer to the internet. Also, they should improve on the internet services provided in the Universities.

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