
EXTENT OF KNOWLEDGE OF INTERNET OPPORTUNITIES, CHALLENGES AND HUMAN CAPACITY BUILDING AMONG NIGERIA UNDERGRADUATES: A CASE STUDY OF ADEYEMI COLLEGE OF EDUCATION, ONDO

Brownson Mopelola

Department of Home Economics Adeyemi College of Education

Ondo, Ondo State, Nigeria

E-Mail: mopelolaoluwatoyin@yahoo.com

Abstract: *The study investigates the extent of knowledge of internet opportunity and cyber crimes among Nigerian undergraduates. It was a case study. Five specific purposes and one null hypothesis guided the study. Six hundred and sixty one students were randomly sampled in Adeyemi College of Education, Ondo. Forty-item questionnaire was developed and used for the data collection. The reliability index of the instrument was 0.79. Mean, standard deviation and t-test were used for data analysis. The results show, among others, that the students have high extent knowledge of internet opportunity.*

Keywords: Internet, Internet Opportunity, Internet Usage, Cyber Crime Knowledge, Human Capacity Building.

Introduction

Internet refers to the global information system that: is logically linked together by a globally unique address space based on the internet protocol (IP) or its subsequent extensions/follow-ons; is able to support communications using the transmission control protocol / internet protocol (TCP/IP) suite or its subsequent extensions/follow-ons and or other IP-Compatible protocol; and provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described here in (Federal Networking Council (FNC), 1995). It is a powerful tool for improving the efficiency and quality of a wide range of public services that are important in issues relating to education and health (World Bank, 2002), Internet gives the students an opportunity to access quantum of information. It also keeps the students away from common crimes because they are readily occupied with so many fascinating internet opportunities (Kitosdad, 2010), The internet opportunities such as; the use of online dictionary and encyclopedia, surfing of net for project topics, searching for ideas and information online; reading free online materials, (e.g. E-books) via internet; contacting of staff via e-mail for project and other relevant information e.t.c. have taken educational system world wide to a new level. In Nigeria, the youths represents the future who will sustain information and technology (IT) in the country to bridge the digital divide between Nigeria and the developed nations (Turner, 2003; Owolabi, 2000). This statement can only be possible through the sensitization of the youth on these internet opportunities and making the internet access points available for them. By so doing they will tap on the plethora of benefits in it. One of such benefits is that people

are linked together in a "Networks" irrespective of location to communicate and exchange information and share resources (Turnner, 2003). Also, the usage of internet opportunity enhances learning. Usman and Eze (2010) reported that computer is a tool that enhances students' achievement and retention in all forms of learning. In Adeyemi College of Education Ondo, the internet access point as provided by ACE/ Wifi Chair 3 and ACE/MTN has made the use of internet relatively available, affordable, and accessible to all. The availability of these internet service providers (ISPs) and internet access points, according to Chemeka (2008), had several positive impacts on the socio-economic and educational developments in the country. The extent to which the students have the knowledge of its opportunities and use them when necessary is important, hence, the need for the work. In addition, some individuals appear to be using internet in an unwholesome way which give rise to cyber crimes.

Cybercrime or computer crime refers to any crime that involves a computer and a network (Moore, 2005). Computer may have been used in commissioning of a crime, or it may be the target (Warren and Heiser, 2002). Net crime refers to criminal exploitation of the internet (Mann and Sutton, 1998). Also in the word of Sylvester (2001), crime generally is the direct opposite of development that leaves a negative social and economic consequence to any nation. The students' knowledge, awareness and precautions preventive attitudes towards the cyber crimes or cyber threats cannot be over emphasized. If the students are aware of these cybercrimes without the corresponding precaution then, something is wrong. In fact, this statement was supported by Margaret Ross, Geoff Staples and Mark Udall (2009) that said, "it is necessary to raise awareness of cyber crime and to minimize its effect by ensuring that all computing students have a wide and current knowledge. It is then hoped that this will ensure that not only the students but also their friends, relatives and future employers would also gain from this knowledge. It is hoped that this should help them to protect their computer systems from future cyber attacks. Beside usage, is gender, should internet opportunity usage of the students be a function of gender? This work will take care of the question.

Purpose of the study

The major purpose of the study was to investigate the extent of students' knowledge of internet opportunity and cyber crimes among Nigerian undergraduates. Specifically the study determined;

- The extent of students' knowledge of internet opportunity available to them;
- The extent of students' usage of internet opportunity;
- The extent of students' knowledge of cyber crime;
- The extent of students preventive/precautions attitude towards cyber crimes;
- The effect of gender on students' usage of internet opportunity.

Research Hypothesis

H₀: There is no significant difference between the mean of male and female students' usage of internet opportunity at 5% probability level.

Methodology

Area and design of the study: The study was carried out in Adeyemi College of Education, (ACE) Ondo. The choice of ACE was borne out of the fact that the needed attributes for the research exists in it, that is the internet access points exists in the College (MIS, LIB, Mystic, Ace COOP, No 1. etc). Also the College has a heterogeneous students' population, such that data gotten from it may be generalizable to other Nigerian tertiary institutions. The study was a case study design.

Population of the study: The population of the study comprised of all 13214 undergraduate students of the institution (ACE, Ondo). From this figure, 593% are male students, while 7278 are female students. In ACE Ondo, there are five schools and the total number of the students in each of the schools makes up the total figure above. (Source: Academic Affairs Unit, ACE, 2014).

Sample of the study: Five percent of the number of students in each of the schools was randomly selected as shown in the table below. A total of 661 students comprised the sample for the study.

Table 1: Percentage Sample of ACE, Ondo Students

School	Number of Students	Percentage	Sample
Arts and Social Sciences	3243	5%	162
Education	1846	5%	92
Languages	2112	5%	106
Science	3875	5%	194
Vocational and Technical Education	2138	5%	107

Instrument for Data Collection: Forty-item questionnaire was developed for the study. The questionnaire has four sections, each section addressing each of the research purpose. The questionnaire was face validated by two expert lecturers in the school of Education. Thirty copies of questionnaire were produced initially and were trial-tested using students in Wesley University of Science and Technology, Ondo (WUSTO). The reliability index was 0.79. The students were not among the ones selected as sample.

Method of Data Collection and Analysis: Five research assistants were used in the administration and collection of the questionnaire. 661 copies of the questionnaire were initially produced and distributed and all were returned. Mean and t-test were used for data analysis.

Findings of the study

The following findings were made:

1. At Adeyemi College of Education, Ondo, the students have high extent knowledge of internet opportunity (see table 2).
2. High extent usage of internet opportunity (see table 3).
3. Their cyber crimes awareness is high (see table 4)
4. The students preventive/precautious attitudes towards cyber crimes are at high extent too (see table 5).
5. Gender has no effect on the students’ usage of internet opportunity (see table 6).

Results

Research purpose 1: Extent of students’ knowledge of internet opportunity.

Table 2: Mean Responses of students to the extent knowledge of Internet Opportunity available to them

S/N	Indicators of student’s knowledge of Internet opportunity	Mean	SD	Remarks
1.	Searching the library website for Reference	2.670	1.148	High extent
2.	Contacting staff via email for Information	2.081	1.070	Low extent
3.	Contacting external experts Via email for information	2.189	1.098	Low extent
4.	Contacting other students via Email concerning school work	2.749	1.123	High extent
5.	Doing my assignment using Internet	3.461	0.810	High extent
6.	Using the web for searching relevant Materials	3.610	1.031	High extent
7.	Reading news via the internet	3.120	1.006	High extent
8.	Sending messages via email to Course mates	3.101	1.141	High extent

9.	Downloading materials such as Pictures, games, music, video, Animation, texts, software	3.061	0.940	High extent
10.	Reading free online materials/text Books via internet	3.332	0.584	High extent
	OVERALL	2.937	0.563	High extent

Table 2 shows high extent mean response of the students' knowledge of internet opportunity. This means that the students have high extent knowledge of internet opportunity as indicated by their overall mean responses. However, their staff and external experts are lowly contacted for information.

Research purpose 2: Extent of students' usage of internet opportunity

Table 3: Mean Responses of Student's Extent of Usage of Internet Opportunity

S/N	Indicators of Student's Knowledge of Internet Opportunity	Mean	SD	Remarks
11.	Send messages via email to my School mate	2.859	1.128	High extent
12.	Exchange ideas via face book, Twitter, 2go	3.442	0.933	High extent
13.	Make new acquaintances via Social networking	3.210	1.066	High extent
14.	Use email attachment to send Files to school mate or staff	2.811	1.012	High extent
15.	Upload information in net	2.950	1.131	High extent
16.	Take pictures via web cam	2.873	1.101	High extent
17.	Use mozilla firefox, Google Chrome, internet explorer for Information surfing	3.600	0.824	High extent
18.	Use online dictionary, Encyclopedia e.t.c	3.512	0.904	High extent
19.	Surf for project topics online	3.301	0.978	High extent

20.	Search for ideas and information			
	Online	3.583	0.712	High extent
	OVERALL	3.214	0.976	High extent

Table 3 shows high extent of mean responses of students' usage of internet opportunity. This implies that the students usage of internet opportunity available in the Adeyemi College of Education is high. This is commendable because if the internet opportunities existing in the school are not known by the students, then the whole thing will be incomplete.

Research Purpose 3: Extent of students' knowledge of cyber crimes.

Table 4: Mean responses on students extent knowledge of cyber crimes

S/N	Indicators of student's knowledge of Internet opportunity	Mean	SD	Remarks
21.	Introduction of computer viruses	3.498	0.716	High extent
22.	Computer fraud e.g. bank, credit/ Debit card fraud.	3.232	1.029	High extent
23.	Identify theft	2.561	1.113	High extent
24.	Child and adult pornography	3.073	0.972	High extent
25.	Cyber stalking e.g. sexual harassment, Kidnapping e.t.c.	2.517	1.103	High extent
26.	Online 419 e.g. come and claim Big amount you won	3.229	2.410	High extent
27.	Trafficking e.g. child and drug Online trafficking	2.671	2.223	High extent
28.	Online piracy	2.844	1.116	High extent
29.	Online lacking e.g. illegal access to your personal data.	2.975	1.109	High extent
30.	Email spans e.g. .receives messages from unknown person s even in my phone.	2.951	1.098	High extent
	OVERALL	3.055	0.821	High extent

Table 4, shows overall high extent means responses on students knowledge of cyber crimes In Nigeria today the criminals use all sorts of means in achieving their target, internet not excluded.

Research purpose 4; Extent of students' precautions attitude towards cyber crimes.

Table 5: Means responses on students extent of precautions attitude towards cyber crimes.

S/N	Indicators of student's extent of Precautions attitude towards cyber crimes	Mean	SD	Remarks
31.	Functional antimalware e.g anti virus is in my computer.	3.241	1.043	High extent
32.	USB security	2.942	1.091	High extent
33.	Download an unknown file from net	2.383	1.093	Low extent
34.	Don't download an unknown file from net	2.522	1.121	High extent
35.	Insert flashes into my computer without scanning them.	2.510	1.234	High extent
36.	Sign out after accessing my email.	3.478	0.971	High extent
37.	Don't sign out after accessing my email	1.884	1.016	Low extent
38.	Give my ATM card to my friend to withdraw money for me	2.269	1.188	Low extent
39.	Scan all flashes inserted in my computer before opening them.	2.879	1.067	High extent
40.	Use password to open my computer or laptop.	3.582	0.713	High extent
	OVERALL	2.769	0.713	High Extent

Table 5 shows students high extent mean responses on precautions /preventive attitude. Regrettably, the students do download unknown files from the Net, don't sign out after accessing the mails, give ATM card to their friends to withdraw money for them.

Test of the null hypothesis {H₀}. There is no significant difference between mean male and female students usage of internet opportunity at 5% probability level.

Table 6: T-test analysis of influence of gender on student’s usage of internet opportunity at 5% probability level

Group	N	Mean	Std. Deviation	Std. Error of mean	t-cal	df	Sig. 2 tailed
Overall	3.210	0.664	0.094	0.596	0.561		0.05
Female	3.186	0.639	0.092				
Male							

Table 6 shows mean value of 3.210 for female and 3.186 for male student’s usage of internet opportunity. Since the value of significant level (0.561) for two-tailed test is greater than the probability level (0.05), hence, the researcher failed to reject the null hypothesis. This means that any noticeable difference may be by chance factor.

Discussion

The study revealed that the undergraduate students of Adeyemi College of Education Ondo had high extent internet opportunity knowledge. This result was encouraging since it goes to show that the availability of internet opportunities in the school are known by the students. This finding was in agreement with the work of kian-sam Hong, Abang Ahmad Ridzuan and ming -koon kuck (2003) that showed that the students of university of Malaysia had adequate basic knowledge of the internet opportunity in their school. However, the students recorded low extent on the issues of contacting staff and external experts via mail for information. The second result of the study showed that the students had high extent usage of the internet opportunities. This also shows that the students did not just have the knowledge of the internet opportunities in their school but are equally using them. The result also indicates that the students had high extent knowledge of cyber crimes and take high extent precautious/preventive attitudes towards the cyber crimes. This also was good because just knowledge of the internet threats or cyber crimes without the concomitant preventive efforts is dangerous and destructive to students, the school and the society at large. This funding agrees with the finding of Yucedal (2010) that reported that individuals who have better knowledge about cyber threats, internet and computer related terms, are less likely to be victims of spy ware and adware and have less computer problems. Also, the finding positively anchored with the finding of Chio (2008) who found that people who use digital guardianship such as antivirus and anti-spyware programs and firewalls are less likely to be victims of cyber crime. The work of Hallam-Baker (2008) and Pfleeger (2003) proffered some working suggestions to this effect. They suggested that there are certain ways to avoid victimization in cyberspace. For instance, to prevent a virus infection, people might use anti-virus programs or to prevent the unauthorized access to their computers, people can use firewalls. Another way is keeping the computer operating system and the known

vulnerabilities which can be exploited by cyber criminal. But, the students had low extent knowledge of cyber stalking (sexual harassment and kidnapping) downloading an unknown file from net, do not sign out after accessing their mails and give out their ATM cards to friends for money withdrawal. This ATM result issue positively confirmed one of the researcher witnesses, where she saw some students giving out their ATM cards to their friends for money withdrawals inside the campus. Finally, the study revealed that the usage of the internet opportunities was not gender skewed. This finding equally agreed with the work of Hong, *et al* (2003) which showed that students positive attitudes towards using the internet as a learning tool, was not gender specific. Also, the work of Yucedal (2010) equally confirmed that gender, has an insignificant effect on basic online activities.

Conclusion

Having internet opportunity in a school alone is not enough, but the students having the knowledge of the internet opportunity using the internet opportunity and the concomitant knowledge and prevention of cyber crime or threat complete the cycle. This study examined the extent of knowledge of internet opportunity and cyber crimes among Nigerian undergraduates; a case study of Adeyemi college of education Ondo. The study revealed among others that the students had high knowledge and usage of the internet opportunity.

Recommendation

- Positive efforts should be put in place by the respective school administrators in Nigeria through sensitization and awareness creation on internet opportunity available in their schools to help reduce knowledge gap of the students on internet opportunity especially in the area of them contracting staff and external experts for information.
- Laptops or palmtops should be made available for the students either at give away price or at subsidized rate. This will in no little measure increase students usage of internet opportunity in their school.
- A formal forum should be created in the school through which students should be informed on the dangers of internets that is, Cyber crimes and cyber threats inherent in internet opportunity by drawing special emphasis on the area of unknown file down loading, signing out after using one's email and ATM card usage.

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