



Cyber crime and its implications for educational development in Nigeria

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Abstract

Internet is useful in all facets of the Society of today and is highly relevant and heavily reliant but there is no gainsaying that it has produced some serious social demerits as well. One of these demerits is the exposure to cyber related crimes. These include; botnets, child pornography and cyber stalking, hacking, cyberbullying, software piracy, spoofing, social engineering and phishing, spamming etc. In recent times the spike in teenage involvement in these cybercrimes has become alarming and as such posing dire consequences for the educational sector and the society at large. This Study therefore investigated the implications of technological advancement with regards to the internet on educational development, the effect of cybercrime on education as well as the reasons behind the rise in internet crimes by employing a structured questionnaire guided by three research questions and the reliability of the instrument measured by the test retest method. The literature reviewed posited that educational development is critical for developmental sustainability of a nation. On analysis of data collected when employing chi-square test method, it was established that technological advancement has immensely impacted on education, cybercrime has a significant influence on the development of education, whereas poverty, greed, peer pressure, unemployment, weak regulations are causes of the rise in cyber related crimes. The study therefore recommended that sensitization campaigns should be carried out in schools on the dangers of engaging in cyber related crimes. Better techniques should be employed to personal information protection on the internet. Organizations and governments should adopt better security protocols and stricter regulations to deter youths from cybercrime.

Keywords: cybercrime, education, development

1. Introduction

The reliance on the internet in present day society could not have been imagined a few decades ago. However, since the introduction of the internet, the reliance on the internet being a facet of globalization has seen the internet become a major means of communication for millions of individuals across the world and economies that desire to experience growth. Unfortunately, this growth in the use and reliance on the internet has surpassed regulatory capacities of authorities and thereby created opportunities for abuse. According to a recent survey, South Korea and United States has the highest levels of abuse of the internet globally with 35.4 percent and 12.8 percent respectively (Lakshmi & Ishwarya, 2015) ^[23]. This abuse of the internet gave rise to what is known today as “cybercrime”. The first reported case of cybercrime occurred in the 1960s and was more a less an “insider cybercrime” due to the sole existence of mainframe systems at that time. Today the practice of cybercrime has become far reaching and the impact become widespread and has seen several websites and organizations fall victim to these crimes. It was reported that in 2008 and 2011, cyber-attacks on the pentagon led to about 24,000 files been stolen from the networks of the Defense industry (Conti, Caroland, Cook & Taylor, 2011) ^[8]. On the 11th of November 2012, two Nigerians were arrested for diverting 13, 978 dollars by hacking into the systems of the Ghana Armed Forces (GAF) (Ghana Business News, 2012) ^[13]. Noteworthy is the conclusion by scholars that youths are involved in the propagation of these criminal acts and the

dangers it poses in the society at large and for future generations. It is therefore imperative that the impact of cybercrime on educational development be assessed.

1.1 Concept of Cybercrime

The concept of cybercrime has generated debates from scholars. According to Duah the term “cyber” is gotten from the word “Cybernetic” derived from the Greek word “Kybernetes”. Coined in 1948 by Nobert Wiener as a “formalization of concepts of feedback with various effects for engineering systems control, computer science, philosophy, biology as well as the organization of society” (Duah, 2013) ^[11]

Scholars have defined cybercrime as any type of crime that is carried out by a person employing the use of network or computer (Sackson, 1996; Olusola *et al.*, 2013; Maitanmi *et al* (2013) ^[30, 28, 24] It is an illegal behavior that is influenced by means of electronically engineered operations that are aimed at the security of computer systems and data that is being processed by them (Dashora, 2011; Olusola *et al.*, 2013) ^[9, 28]. Das & Nayak (2013) ^[10] opine that it is any criminal activity that is done to expose another to mental, emotional and physical harm using the internet. Maitanmi *et al* (2013) ^[24] proposes that as the concept of cybercrime. According to him, it is a form of crime that is carried out by hoodlums who employ the computer as a means and the internet as a connection with a view to achieving several illegal targets. According to Jaishankar (2010) ^[21] cybercrimes are offences

carried out against an individual or group of persons with a criminal intention to cause emotional and physical harm as well as their reputation using modern telecommunication networks.

1.2 Classification

Cybercrime may be generally grouped into the following three groups which include;

Cybercrime targeted at Individuals

- a. Their person
- b. Properties owned by them.

Cybercrime targeted at organizations

- a. Company or collection of people
- b. Government
- c. Cyber terrorism
- d. Distribution of pirated software

Cybercrime targeted at the society at large

- a. Cyber-stalking
- b. Indecent exposure
- c. Email spoofing
- d. Cheating and fraud
- e. Unauthorized access and control over computer system.
- f. Financial crimes
- g. Forgery

Types of cybercrime

- a. Phishing
- b. Computer Originated Virus
- c. Malware (Malicious Software)
- d. Hacking
- e. Spam
- f. Botnets
- g. Cyber bullying
- h. Child pornography
- i. Software piracy
- j. Ransomware

1.3 Causes of Cyber Crime

Over the years, several reasons have encouraged the practice and growth of cybercrime. Proponents have highlighted:

- a. Poverty
- b. Urbanization
- c. Weak cybercrime laws and enforcement agencies
- d. Peer pressure
- e. Poor cyber safety protocols by corporate bodies and organization (Hassan *et al.*, 2012; Omodunbi *et al.*, 2016; Igba *et al.*, 2018) ^[14, 29, 20] as key causes of cybercrime in Nigeria.

1.4 Concept of education development

Education is described as any act or experience that can impact on the mind, character and physical capabilities of an individual (Chukwuemekas, 2011; Ige & Fasakin, 2014) ^[6, 19] Offorma (2009) ^[26] further posits that education is the process of giving information to an individual with a view to aiding them develop mentally, socially, physically, economically and politically. Scholars have long established that education is a panacea to national and individual advancement (Ekpo *et al.*,

2009; Umo, 2015) ^[33] and as such no meaningful development

can occur without education. It can therefore be deduced that it is the common connection that links all aspects of development in the society (Uriah & Wosu, 2012) ^[34].

1.5 Concept of Development

Development can therefore be described as the routine process through which a country provides for its population by ensuring that basic amenities such as security, housing and electricity are provided. It is also the change that comes in the form of political and societal advancement as well as increase in the gross domestic product. It seeks to improve the livelihood of citizens of a country by making sure that the wealth available is evenly distributed through advancements in technology, education, security etc (Ibietan, 2014) ^[17].

Educational development therefore is the developmental process that sees advancements in the ways of acquisition education, method of teaching, materials of education, and infrastructures for education. (Amundsen & Wilson, 2012; Sorcinelli, Austin, Eddy & Beach, 2006) ^[3, 32]. Technology has played a major role in the advancement of education through sources such as the internet being used to offer distance learning possibilities, access to information, revenue opportunities for schools and educational bodies. As such technology has brought about the globalization of the educational sector and the society at large.

2. Statement of the Problem

Nigeria's educational development has been stalled by many factors which include; inadequate infrastructures, incessant union strikes, poor funding and inadequate remuneration for employees (Odo & Odo, 2015) ^[25]. The nonchalant attitude of administrations to develop the educational sector has seen the country's development slow down. Nevertheless, educational development in the country is still heavily influenced by the internet (Chien, 2012) ^[7]. However, this technologically influenced growth on education has also exposed the youths to the vices. One of these vices includes cyber-crime and has seen scholars raising concerns regarding the increasing number of youths engaging in this practice (Hassan *et al* 2012) ^[14]. This consequently has implications on the society and economy at large. Lakshmi & Ishwarya (2015) ^[23] opines that according to records the United States and South-Korea recorded the highest cyber-attacks of 35.4 percent and 12.8 percent respectively in 2003. In the case of Nigeria, a report by Nigerian communication commission establishes that Nigeria lost 127 billion naira in 2015 alone from cybercrimes. This therefore places the educational sector at a big risk if this trend is not checked.

3. Purpose of the study

The main purpose of this study is to determine the impact of cybercrime on educational development among tertiary institutions in Imo state.

1. Investigate the perception of students, lecturers regarding technological advancement on educational development.
2. Investigate the perception of students, lecturers on the impact of cyber-crime on education
3. Investigate the reasons influencing the perpetuation of cybercrime.

3.1 Research Questions

The following research questions were formulated to guide the research:

1. To what extent does technological advancement impact educational development?
2. To what extent does cybercrime impact education?
3. What are the causes of cybercrime in Nigeria?

4. Methodology

The study adopted an approach that was structured to obtain the opinion of the different categories of respondents. This approach allows for a systematic collation of information from the respondent with the view to better understand and predict the interest.

i) Study location

The study was carried out in Imo state, one of the 36 states of Nigeria. This state lies in the south east part of Nigeria and is bordered by Anambra on the north, Rivers state on the side, Abia state to the east and Delta state to the west. It is located within latitudes 4° 45'N AND 7°15'N, and longitude 6°05'E and 7°25'E' with landmass of about 5,100 square kilometers. Notably it has a number of rivers which include; Orashi, Ezize, Nworie, Njaba, Otamiri. The state is abounded with natural resources such as natural gas, lead, crude oil, zinc and calcium carbonate. The choice of location was chosen because of the large number of students and tertiary institutions.

ii) Population and sample size

The population of the study is drawn from students in selected tertiary institutions within Imo state namely: Federal University of Technology, Imo State University, Alvan Ikoku College of Education, Federal Polytechnic, Nekede composing of students within the selected tertiary institutions, educationalist and lecturers selected employing the stratified random sampling method.

iii) Instrumentation

The instrument adopted for this research is a questionnaire tagged "Questionnaire on the impact of cybercrime on educational development" with a total of 454 questionnaires administered.

iv) Validity and Reliability

With the view to ensuring validity, the content and face value were reviewed by experts in the field of educational development and cybercrime. The reliability of the instrument was measured by the test-rest method and the scores obtained correlated employing the Pearson correlation formula.

v) Data analysis

The data collected and recorded for the research was analyzed employing the Chi-square test.

5. Result and Analysis

Research Question 1: To what extent does technological advancement impact educational development?

The participants were asked questions to determine the impact of technological advancement in the area of the internet on educational development and the corresponding table

generated.

Table 1: Opinion of respondents on the impact of technological advancement on educational development

Item	Response	Freq	%	Df	Table value	Cal Value	Decision
Distance learning greatly improves educational development	SA	84	75	3	7.82	159.5	P<0.05
	A	23	20.53				
	D	4	3.57				
	SD	1	0.89				
Multimedia capabilities affects the development of education	SA	91	81.25	3	7.82	190.1	P<0.05
	A	11	9.82				
	D	7	6.25				
	SD	3	2.65				
The introduction of online textbooks and materials improves educational development	SA	28	25	3	7.82	134	P<0.05
	A	78	69.64				
	D	4	3.57				
	SD	2	1.78				

The table above indicates the calculated chi-square (X^2) value for item 1, 2 and 3 are 159.5, 190.1 and 1.34 respectively. These calculated values are greater than the critical table value of 7.82 at 0.05 level of significance with the degree of freedom pegged at 3. Hence it can be deduced that technological advancement significantly impacts educational development.

This conclusion is in agreement with the position of that highlights that technological discoveries has seen the dispersion of educational information faster through the means

of the internet (Wikramanayake, 2005; Higgins *et al.*, 2012) [35, 15]. According to Al-Muhtadi (2013) student enrolment in education in Russia saw an estimated increase by 230% in 2013 since the advent online classrooms.

Research Question 2: To what extent does cybercrime impact education?

Participants were asked questions with a view to determining the extent of impact of cybercrime on education and the table below highlights their responses.

Table 2: opinions of respondents on the impact of cybercrime on education

Item	Response	Freq	%	Df	Table value	Cal Value	Decision
Activities in cybercrime greatly influences Educational performance	SA	11	9.82	3	7.82	183.9	P<0.05
	A	90	80.35				
	D	4	3.57				
	SD	7	6.25				
Cybercrime activities influences attendance in classroom attendance	SA	12	10.71	3	7.82	144.3	P<0.05
	A	83	74.1				
	D	8	7.14				
	SD	9	8.03				
Cybercrime affects societal education and leads to moral decay	SA	97	86.6	3	7.82	227.8	P<0.05
	A	9	8.03				
	D	1	0.89				
	SD	5	4.46				

Table 2 shows the calculated chi-square (X^2) value for items 1, 2 and 3 are 183.9, 144.3 and 227.8 respectively. It can therefore be deduced that the calculated values are greater than the critical value of 7.82 at 0.05 level of significance having a degree of freedom of 3. As such, from the response and the table generated above, it can be established that cybercrime significantly impacts educational development. This conclusion is in line with the proposition by scholars who argue that due to the lack of job opportunities upon graduation and poverty, Nigerian undergraduates have developed the fear of the future and are now increasingly engaging in crimes that they presume will be a fast break through finances thereby leading to increased number of school dropouts, hooliganism

and armed robberies to mention a few (King, 2009; Igba *et al.*, 2018) ^[22, 20]. Furthermore, research indicates that these cybercriminals are usually within the age of 18 and 30 years as such placing the educational development at a risk (Okeshola & Adeta, 2013) ^[27].

Research question 3: What are the causes of cybercrime in Nigeria?

With the intention of determining and establishing the factors encouraging the rise of cybercrime in Nigeria, participants were asked a series of questions and the table below shows their response and findings upon data analysis.

Table 3: Opinions of respondents on the cause of cybercrime in Nigeria

Item	Response	Freq	%	Df	Table value	Cal Value	Decision
Cybercrime is caused by poverty, urbanization	SA	10	8.92	3	7.82	241.7	P<0.05
	A	99	88.39				
	D	2	1.78				
	SD	1	0.89				
Weak implementation of cybercrime laws by government encourages cyber crime	SA	13	11.6	3	7.82	210.2	P<0.05
	A	94	83.92				
	D	4	3.57				
	SD	1	0.89				
Cybercrime is encouraged by peer pressure, Negative role models	SA	3	2.67	3	7.82	220.2	P<0.05
	A	96	85.71				
	D	5	4.46				
	SD	8	7.14				

Table 3 indicates that the calculated chi-square (X^2) value for items 1, 2, 3 are 241.7, 210.2 and 220.2 respectively. Since the calculated values are greater than the critical value of 7.82 at 0.05 level of significance having a degree of freedom of 3. Thus, it can be established that sociological factors such as unemployment, poverty, peer pressure, corruption, weak implementation of regulations influence the spread of cybercrime in Nigeria. This view is supported by Okeshola & Adeta (2013) ^[27] who posit that cybercrime which has become a norm in today’s society as a result of the ever changing nature of ICTs has being encouraged by corrupt practices by bankers, graft agencies and the perpetrators, lack of jobs across the country, peer pressure placed on youths as a result of the societal expectation placed on them, poor moral decadence and little of no implementation of regulations that prohibit and deter cyber related crimes.

6. Discussion

This research critically investigated the motivation behind cybercrime in Nigeria and its implications for educational development in Nigeria. Emphasis was placed on the youths because of the economic and strategic importance they have in the society. As such, the following research questions: To what extent does technological advancement impact on educational development in Nigeria? To what extent does cybercrime impact on education in Nigeria? What are the causes of cybercrime in Nigeria? In consistence with the objectives of the study and data gathered and analyzed upon which it was established that:

1. The advent of the internet has greatly improved the educational sector.
2. Educational development is being threatened by the increase of adolescents engaging in cybercrime.

3. Societal expectations and pressure has immensely influenced the growth of cybercrime in Nigeria and across the world.
4. The regulations surrounding the control and eradication of cyber related crimes are too weak.
5. Security agencies tasked with the duty of curbing cybercrime are not adequately carrying out their duties.

7. Conclusion

Education has been established as the panacea to national development. It is central to the advancement of a country as such there is need for the educational sector to continue to evolve in order to meet the demands of the 21st century. However, this study highlights that educational sector is been threatened by the rise in cyber related criminal activities.

8. Recommendations

The following recommendations were made, namely:
Government should make policies that make online transactions more transparent and secure for individuals.

- Regular workshops and seminars should be organized by stakeholders such as government, financial organizations, graft agencies, religious and NGOs to raise awareness on the dangers and effect of engaging in criminal related cyber activities.
- Counseling offices should be opened in universities aimed at counseling those who have quit these acts.
- Policy makers should introduce stronger regulations and stricter punishment for cyber criminals.
- Graft agencies should be better equipped by the government and relevant bodies to aid them in the fight against cybercrime.
- Organizations should introduce better protocols to protect the information of the client and employees online.
- The society must eliminate the pressure it places on the youth to get rich quick.
- Students should be educated on the proper usage of the internet.

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