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Cybercrime in Assessment



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Abstract

This study investigated cybercrime in Assessment among students in Rivers State University, Port Harcourt. Two research questions and two corresponding null hypotheses guided the study. Descriptive survey research design was adopted for the study. A sample of 400 year III students were drawn from the population through stratified proportionate sampling technique and used for the study. An instrument titled “Cybercrime Assessment Scale” (CAS) was used for the data analysis. The Face and Content validities of the instrument were determined by experts in measurement and evaluation. Test-retest method was used to determine the validity of the instrument and the coefficient obtained for the CAS was 0.77. Mean, standard deviation and independent t-test was used for the data analysis. The findings shows that; gender, Age significantly influence cybercrime in assessment among students in Rivers State university independently taken. Based on the findings conclusion and recommendations were made.

Keywords: Assessment; Components of assessment; Cybercrime; and cybercrime in assessment.

1. Introduction

All over the world especially, in various institutions of learning, assessment is the major tool used in determining the level of acquisition of instruction and performance of both instructors and learners. Assessment provides the basis for evaluation of a given instruction to learners or receivers and serves as a feed-back mechanism for improvement. Lee (2010), pointed out that the high point of teaching and learning is the assessment of the learner and, this takes different forms at any given times. However, many institutions adopt different assessment strategies in order to achieve a desirable goal.

Opine (2009), noted that assessment could be carried out in form of paper-pencil method, computer-based assessment and oral based assessment. Osuji (2007), stressed that whatever method that is used in assessing the performance of an individual, be it in school or workplace there are always associated limitations which in most cases, gives rise to different crimes. He further explained that there are crime or malpractice associated with paper-pencil assessment in examination across the globe. For instance, since the establishment of Joint Admission and Matriculation Board (JAMB) in 1978 as an assessment body for candidates seeking admission into Nigeria tertiary institutions, there have been series of crimes in the paper-pencil examination which led to the introduction of computer based test which has also witnessed several cybercrime-based malpractice resulting to digitalization of the JAMB examination process in recent times (Uche, 2019). However, as the best, measures of combating cybercrime increases, it does appear that the rate of cybercrime also increases especially, in assessment. This also implies that cybercrime in assessment is becoming a common practice among various individuals especially, learners, computer minders and teachers. This ugly trend led to the investigation of cybercrime in Assessment.

1.1. Concept of Assessment

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning. Assessment is the systematic basis for making inferences about the learning and developing of students. It is the process of defining, selecting, designing, collecting, analyzing, interpreting, and using information to increase students' learning and development. Erwin in Uche (2019). Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving students learning and development.

1.2. Nature of Assessment

Assessment is tightly lined with the learning process. Similarly, it unites with the course of study and teaching. It helps in the collection of regular response to students' learning. Also, how they respond to specific teaching approaches. Classroom review helps teachers to continuously detect students learning. It gives students a calculation of their improvement as a pupil. Provides close examination chance to students in the learning process.

1.3. Functions of Assessment

It performs the following functions:

1. **Detecting Function:** It detects all the activities during the elevation. From making plans to estimating the results all activities are closely watched. It also helps in improving performance and achieving desired results.
2. **Making Decisions:** It helps to decide what has to be done for improvement. All the decision related to assessment has to be taken by the teacher. It helps to focus on improvements.
3. **Screening:** The teacher has to assess the probable incidence of the problem. They have to do this by using a simple yes or no. assessment defines the problem while screening identifies and treats it.
4. **Student's Placement:** it helps in the determination of the academic strength and weakness and placement of a learn in his or her next academic level.
5. **Instructional Planning:** Is a process for teachers. It helps the teachers to make a plan to target the course of study. It helps to address the diverse need of students.
6. **Feedback/Response:** The process helps to validate how student's marks are derived. It also identifies and prizes specific character in student's work. In addition, it guides students to make improvement in their work.

1.4. Components of Assessment

The following are major components of assessment

1. **Formulating Statements of Intended Learning Outcomes:** Statements describing intentions about what students should know, understand, and be able to do with their knowledge when they graduate.
2. **Developing or Selecting Assessment Measures:** Designing or selecting data gathering measures to assess whether or not our intended learning outcomes have been achieved includes
 - **Direct assessments-** projects, products, paper/theses, exhibitions, performances, case studies, clinical evaluations, portfolios, interviews, and oral exams-which ask students to demonstrate what they know or can do with their knowledge.
 - **Indirect assessments:** Self-report measures such as surveys-in which respondents share their perceptions about what graduates know or can do with their knowledge.
3. **Creating Experiences leading to Outcomes:** Ensuring that students have experiences both in and outside their courses that help them achieve the intended learning outcomes.
4. **Discussing and Using Assessment Results of Improve teaching and Learning:** Using the results to improve individual student's performance.

1.5. Cybercrime

Firstly, crime is the unlawful taking of another person's thing or object through any means (Sabastine, 2011). Crime constitutes one of the biggest challenges in the world. Explained that millions of dollars are spent yearly all over the world in the fight against crime and example of crime include cybercrime especially, in assessment. Conceptualize cybercrime as those Computer – Mediated- Activities which are either illegal or considered illicit by certain parties and which can be conducted through global electronic networks. This definition reflects an important difference between crime (acts explicitly prohibited by law and hence illegal) and deviance (acts that reach informal social norms and rules, hence considered undesirable or objectionable). However, it is worthwhile that crime and deviance cannot always be strictly separated in criminology. The boundaries between the criminal and deviant are socially negotiated and have become a recurrent feature of contemporary developments around the internet. Some criminologists argue that cybercrime is not a new type of crime but is same as non-virtual crime; it just uses new tools and techniques, while some others say that cybercrime is radically different and focuses on social structural features of the environment.

Cybercrime, in simple terms, is a crime that is facilitated or committed using a computer, network or hardware device. The computer or device may be the agent of the crime, the facilitator of the crime, or the target of the crime. It can take place on the computer alone, or in other virtual or non-virtual locations. It is recognized that current legal

definition of cybercrime varies drastically between jurisdictions. A practical definition of a cybercrime is offered by [Kshetri \(2010\)](#), that Cyber Crime is the criminal activity in which computers or computer networks are the principal means of committing an offence or violating laws, rules or regulations. Examples of cybercrime include denial of service attacks, cyber-theft, cyber trespass, cyber obscenity, critical infrastructure attacks, online fraud, online money laundering, ID fraud, cyber terrorism, and cyber extortions. It is evident that organized criminal organizations use cybercrime extensively to collaborate and connect with their vast network which is spread across globe. The synergy between organized crime and the internet has thus increased the insecurity of the digital world.

1.6. Categories of Cyber Crime

It is very important to note the various categories of cybercrime and to place specific offenses into those categories. Cybercrimes can be easily placed into two categories; Violent and Non-violent cybercrimes. Most of the cybercrimes are nonviolent offenses, because of the fact that interaction is without any physical contact. Some of the nonviolent cybercrimes are cyber trespass, cyber theft and cyber fraud. The following diagram shows categories of cybercrime with various types placed in it:

1.7. Violent Cyber Crimes

They include: Cyber Terrorism, cyber Stalking, pornography and cyber bullying etc.

1.7.1. Non-Violent Cyber Crime

They include: Cyber theft, cyber embezzlement, unlawful appropriation, cybercrime Assessment, Corporate espionage, plagiarism, piracy, cyber fraud, cyber prostitution, internet gambling, internet drug sales and cyber laundering

1.7.2. Destructive Cyber Crimes

They include: Cyber vandalism and spread of new virus (Lee in [Uche \(2019\)](#))

1.7.3. Motives Behind Cybercrimes

- **Monetary Profit** – Like many offline crimes, cybercrimes are also motivated by the desire for financial gain.
- **Political Motive** – Internet is used by extremist and radical groups for propaganda, to attack the websites and network of their opposite groups.
- **Sexual Impulses** – Sexually deviant behaviour is illegal and is considered harmful. People view porn sites to fulfill their immoral desires and needs.
- **Entertainment** – Many cybercrimes are done for fun and enjoyment unlike other cybercrimes, in which internet is means to an end. For cyber criminals such as hackers, fun is both a means and an end.
- **Academic motives** – Some cyber criminals defraud academic results, papers and publications for personal gains
- **Emotional Motivators** – Cyber criminals who use anger as motivation are spurned lovers, fired employees, business associates or someone who feels cheated. Revenge is much better planned than anger and it could be more dangerous because cyber-criminal has more time to think and plan his tracks which often reduces the possibility of being caught Lee in [Uche \(2019\)](#).

1.8. Cyber Assessment

Cyber Assessment are test, examination, assignment that are carried out using computer or internet process in order to ensure quick and enhance out-come among others ([Sabastine, 2011](#)). It is an activity or evaluation that are processed using computer or online method of assessment. [Job \(2010\)](#), explained that books are being assessed on line, individuals are being assessed and places on positions using computer and online process and, learners in most times are being taught and assessed through computer and online method. All these are to ensure efficient and effective means of services delivery. Cyber assessment is a computer and internet-based procedure with the aim of capturing large participants and effective outcome.

1.9. Cyber Crime in Assessment

Explained that cybercrime in assessment is the used of computer and internet means in the alteration and misuses of original data of an individual after proper assessment. [Haul \(2009\)](#), stressed that after assessment, original data are change or totally removed during computer storage. Most learners' academic scores are altered during entry into a computer either deliberately or non-deliberately with most of its occurrence deliberately done ([Opine, 2009](#)). Computer or internet minders are in some cases paid to alter results after its original assessment. Cybercrime in assessment usually occur in schools and among teachers, students or computer handlers.

The aim of cybercrime in assessment is to influence the out-come of result, paper or other documents to the advantage of the beneficiary. It also occurs in published materials in which words in original or assessed paper are altered to the advantage of the committer. Recently a report indicated that Nigeria is losing about \$80 million (N11.2 billion) yearly to software piracy. It is even alarming to know that 80% of perpetrators in Nigeria are students in various Higher Institutions ([Aghatise, 2006](#)). [Opine \(2009\)](#), investigated correlates of cybercrime among university

students in South-South Nigeria. The study used three research questions and two null hypotheses. It was found among others that, age significantly influence cybercrime among university students.

Sabastine (2011), examined the influence of demographic factors on cybercrime among year II students in tertiary institutions in South-East Nigeria. The study used five research questions and four null hypotheses. A sample of 800 year II students in colleges of education in South-East were drawn through stratified proportionate sampling technique. Mean, standard deviation and independent t-test was used for the data analysis. It was found among others that, gender significantly influence cybercrime among colleges of education.

- 1) Negligence
- 2) Getting money
- 3) Easy to access
- 4) Loss of valuable evidence
- 5) Complexity
- 6) Unyment
- 7) Peer groups /associates
- 8) Extreme knowledge of computer

Solutions to cybercrime in assessment;

- Education ; It is difficult to prove as it lacks the traditional paper audit trail, which requires the knowledge of specialists in computer technology and internet protocols, hence we need to educate the citizens that they need to maintain and update the security on the system.
- Establishment of Programs and IT Forums for Youths;
- Lack of infrastructure.
- Porous Nature of the internet ;
- Lack of National Functional Databases;

1.10. Effects of Cybercrime in Assessment

They include:

- Reduces the creditability of original sources of information
- Increases the rate of crime in the society.
- Reduces the effectiveness of computer-based test.
- Negatively affect evaluation in and outside school settings especially, using computer or internet-based procedure (Todi, 2010).

Assessment is one of the major tools for determining the extent to which learning has taken place in a learner and also provide feed-back for improvement in instructional delivery. However, while some learners are allowing their assessment scores to be in-tight and for subsequent improvement, many others are busy altering their scores and that of others through computer and internet process for their undue advantage. This situation is on the increase on a daily basis among university students especially in University of Port Harcourt. If this ugly trend is not checked and controlled by government and other stakeholders in the education sector, it may affect the level of quality of manpower development in the area. The problem of this study therefore, is to investigate cybercrime in assessment among students of University of Port Harcourt.

2. Research Questions

The following research questions were posed to guide the study;

1. To what extent does gender influence cybercrime in assessment among students in University Port Harcourt?
2. To what extent does age influence cybercrime in assessment among students in University of Port Harcourt ?

3. Hypotheses

The following null hypotheses guided the study;

1. There is no significant influence of gender on cybercrime in assessment among students in Rivers State University Port Harcourt.
2. There is no significant influence of age on cybercrime in assessment among students in Rivers State University Port Harcourt.

3.1. Social Control Theory and Cybercrime

Social control refers to the effort of a group or society to regulate the behaviour of members in conformity with established norms. As a result, there are sanctions, or externally imposed constraints. Some of these are informal sanctions and unofficial pressures to conform. When informal sanctions are not enough, formal sanctions come into play. These are officially imposed pressures to conform, such as fines or imprisonment. Through socialization and internalization of cultural norms and values, most people learn to pursue socially accepted means even without external sanctions. However, when this learning is faulty or incomplete, it results in deviance. Very little crime is committed by young children because they are constantly under adult supervision. Hirschi (1969). However, adolescents and young people are relatively free from adult control. As a result, they experience less social control and of these who exhibit an underlying tendency to pursue short term immediate pleasure often engage in cybercrimes.

4. Methodology

The design of this study was descriptive survey research design. The population of the study comprised all the 3211 year III students in all the departments in University of Port Harcourt (source; departmental offices of the various departments 2019/2020 year III students figures). Stratified proportionate sampling technique was used to draw sample size 400 year III students based on gender and age. An instrument titled “Cybercrime Assessment Scale” (CAS) was used for data collection. The CAS has two sections A and B. Section A considered Bio data such as gender and Age. Section B consisted of 30 items structured based on four points modified Likert rating Scale designed to measure cybercrime in Assessment. Three experts in measurement and evaluation determined the face and content validities of the instrument. The reliability of the instrument CAS was determined using test-retest method with a sample 30 year III students who are not part of the sample for this study and the coefficient obtained was 0.77. The researcher personally administered the instrument to the respondents with the help of research assistant (departmental offices) who were well trained and instructed on what to do. Mean, standard deviation were used to answer the research questions while independent t-test were used to test their corresponding hypotheses at 0.05 Alpha level of Significance.

5. Results

Research Question 1: To what extent does gender influence cybercrime in assessment among students in University of Port Harcourt?

Hypothesis 1: There is no significant influence of gender on cybercrime in assessment among students in University of Port Harcourt.

Table-1. Independent t-Test Calculation on Influence of gender on cybercrime in assessment among students in University of Port Harcourt

Gender	N	Mean	Std. Deviation	t-cal	Df	t-critical
Male	200	59.35	10.10	1.68	398	1.96
Female	200	40.73	7.53			

Table 1 indicates the mean scores of respondents of male and female on cybercrime in assessment to be 59.35 and 40.73 respectively with respective standard deviation of 10.10 and 7.53. This implies that, gender influenced cybercrime in assessment. When these values were subjected to independent t- test statistics, it was revealed that the difference in the mean scores is statistically significant. That is, the t-value of 1.68 is statistically significant at 0.05 alpha level. Thus, the null hypothesis is accepted. There is significant influence of gender on cybercrime in assessment among students in University of Port Harcourt. This also means that male student are highly involve in cybercrime in assessment than their female counterpart in University of Port Harcourt.

Research Question 2: To what extent does age influence cybercrime in assessment among students in University of Port Harcourt?

Hypotheses 2: There is no significant influence of age on cybercrime in assessment among students in University of Port Harcourt.

Table-2. Independent t-test Calculation on Influence of age on cybercrime in assessment among students in University of Port Harcourt

Age	N	Mean	Std. Deviation	t-calculated	Df	t-critical
21 years and above	210	57.78	11.18	13.13	398	1.96
20 years blow	190	43.57	10.43			

Table 2 shows the mean scores of the respondents to be 57.78 and 43.57 on cybercrime in assessment based on age respectively with respective standard deviation of 11.18 and 10.43. This means that age influenced cybercrime in assessment among university students. When these values were subjected to t- test analysis, it was indicated that the difference in the mean scores based on age is significant statistically. That is, the calculated t- value of 13.13 is statistically significant at 0.05 alpha level. Thus, the null hypothesis is rejected. That is, there is significant influence of age on cybercrime in assessment among students in University of Port Harcourt. This also implies that students who are 21 years and above are more involved in cybercrime in assessment than others.

6. Discussion of Findings

The findings of this study are discussed as follows;

The finding of research question one and hypothesis one, shows that there is significant influence of gender on cybercrime in assessment among students in University of Port Harcourt. This implies that most students in indulge in cybercrime activities instead of working hard for the academic success. This finding is in agreement with that of Sabastine (2011), who found that gender significantly influence cybercrime among colleges of education students.

The finding of research question two and hypothesis two revealed that there is significant influence of age on cybercrime in assessment among students in University of Harcourt. This implies that age play a vital role on the attitude of students towards cybercrime in assessment. This finding is in agreement with that of Opine (2009), who found age significantly influence cybercrime among university students.

7. Conclusion

Based on the findings of the study, it was concluded that gender and age significantly influenced cybercrime in assessment among university students independent taken. Therefore, gender and age of students play a vital role in the attitude towards cybercrime in assessment.

Recommendations

The following recommendations were made:

1. Government should enact special law with stiffer punished against the individuals that involve in cybercrime in assessment.
2. There should be the use of known identity such as user name and password in all internet and computer related information especially, in issues of assessment.
3. Assessment records should always be given to trusted individuals in the society to handle especially, the internet and computer based.
4. Open source software should always be used as a way of preventing cybercrimes. Hoepman *et al.* (2007) wrote that; open source enables users to evaluate the security by themselves, or to hire a party of their choice to evaluate the security for them. Open source even enables several different and independent teams of people to evaluate the security of the system, removing the dependence on a single party to decide in favour of or against a certain system.
5. Make every effort to harmonies their laws on cyber crime in such a way as to facilitate internal cooperation in preventing combating these illicit activities .
6. Take steps to heighten awareness of this issue among the general public, including users in education system, legal system, and justice system regarding the needs to prevent combat cyber crime

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