

## INFORMATION AND COMMUNICATION TECHNOLOGY: A VERITABLE TOOL FOR CONTROLLING EXAMINATION MALPRACTICES

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### Abstract

*The study examined the place of Information and Communication Technology (ICT) in controlling examination malpractice in University. One research question and two hypotheses guided the study. A correlational research design was used to achieve the purpose of the study. The population comprised 603 academic staff of Olabisi Onabanjo University, Ago-Iwoye, Ogun State. Using stratified sampling technique, a total of 150 academic staff were selected as sample size. A self-developed instrument titled: ICT Tools and Examination Malpractice Control Questionnaire (ICTTEMQ) was used for data collection with a reliability coefficient value of 0.86. Descriptive statistics of mean and standard deviation were used for answering research question. Inferential statistic such as regression were used in testing the null hypothesis. The findings revealed that ICT tools such as CCTV and CBT are good enough for controlling and reducing the alarming rate of examination malpractice in public university in Ogun State, Nigeria. There was significant influence of CCTV in controlling examination malpractice in public University. There was significant influence of CBT in controlling examination malpractice in University. The authors recommended among others that CCTV should be installed to every lecture theatres where examination is being conducted.*

**Keywords:** CBT, CCTV, Examination Malpractice, Information and Communication Technology

### Introduction

The circumstances that surrounding examination malpractice in Nigeria educational sector is alarming and a source of concern to Government and others stakeholders in the sector. The problem of examination malpractice has been a continual dilemma and further cuts across the whole educational system from primary to tertiary level. Examination malpractice is one among the factors contributing to the fall in standard of education in Nigeria. Although, examination malpractice is a global phenomenon, which appears to have assumed a dangerous proportion in Nigeria. The problem of examination malpractice in Nigeria is as old as the introduction of western education into the nation. Essien (2015) observed that examination malpractice has the tendency of ruining the educational system as well as impairing the efficacy of the labour force. It involves a deliberate act of wrong doing, contrary to official examination rules, and is designed to place a candidate at an unfair advantage or disadvantage. Generally speaking, examination malpractice is a demonstration of irregular behaviour by candidates or agents charged with the conduct of examination within or outside the examination prior to the commencement, or during or after the test or examination with the intention of gaining undue advantage in such test or examination. Edeh, Ani *et al.*, (2019) reiterated that examination malpractice has become a terror to the quality of education in Africa. Cheating in examinations is no

longer considered as news by many due to the rate of its occurrence in West Africa. The widespread reports of students, teachers, and parents' involvement in examination malpractices are not only shameful but worrisome.

Examination malpractice does not only diminish the integrity of examinations but can also lead to deprivation, marginalization and denial (Edeh, *et al.*, 2019). When people are allowed to get away with cheating, it causes the assessors or examiners to award the perpetrators marks, grades, and prizes which they do not deserve. This can frustrate genuine efforts and terminate dreams of those who genuinely work hard to earn such grades and prizes. Goodluck, Onuoha and Osinulu (2015) asserted that examination malpractice is considered as a huge challenge to educational assessment and evaluation in Nigeria. Busayo (2008) viewed examination malpractice as 'an improper and dishonest act associated with examination, with a view to obtaining an unmerited advantage. Examination malpractice is any action carried out by stakeholders such as educational administrators, teachers, parents or students that is likely to render the assessment or examination ineffective or useless (Bruno & Obidigbo, 2012). Underwood (2006) viewed examination malpractice as dishonest practice which encompasses any action by an individual or group of students to gain an undue advantage in any form of assessment, be it coursework, test or examination. As earlier mentioned, examinations remain important tools for objective assessment and evaluation of what individuals have achieved after a period of training. This accounted for why the Examination Malpractice Act (2012) defined examination malpractice as any act of commission or omission by a person who in anticipation of, before, during or after any examination, fraudulently secure any unfair advantage for himself or any other person in such a manner that contravenes the rules and regulations to the extent of undermining the validity, reliability, authenticity of the examination and ultimately the integrity of the certificate issued. Examination malpractice is called by various names and descriptions – examination misconduct, cheating, examination fraud and so on (Goodluck *et al.*, 2015).

According to Ogunjobi, Adedara and Ogunleye (2021), the reasons students engage in examination malpractices in virtually all levels of educational institutions are not far-fetched. These authors identified some of the reasons to include pressure from parents and the society to get good grades, the value attached to certificates, fluid examination procedures, low intellectual ability, low moral judgment and inappropriate operation of continuous assessment, teachers/lecturers' inability to impart knowledge, laziness and indolence on the part of students, peer pressure, inadequate preparation and fear of failure as being the major reasons of students committing examination malpractices. Ogunjobi *et al.*, (2021) suggested that the introduction of Information and Communication Technology (ICT) tools into the educational systems in Nigeria has helped the sector towards curbing examination malpractice. ICT refers to the art and applied sciences that deal with data and information. It encompasses all (equipment including computational machinery - computers, hardware, software, firmware, tools, methods, practices, processes, procedures, concepts, principles and the sciences) that come into play in the conduct of the information activities: acquisition, representation, processing, presentation, security, interchange, transfer, management, organization, storage and retrieval of data and information (Federal Ministry of Education, 2019). ICT has become an indispensable part of the contemporary world. In fact, culture and society have to be adjusted to meet the challenges of the knowledge age. The pervasiveness of ICT has brought about rapid technological, social, political, and economic transformation, which has metamorphosed to a network society organized around ICT (Opunne & Eneh, 2021). The objectives of ICT in Education are as follows: facilitation of the teaching and learning processes; promotion of problem-solving, critical thinking and innovative skills; promotion of life-long learning and advance knowledge; enhancement of the various teaching/learning strategies required to meet the needs of the population; fostering research and development; supporting effective and efficient education administration; enhancement

of universal access to information; widening access to education and the range of instructional options and opportunities for any-where, any-time, any-pace and any-path learning; and development of and support of technical infrastructure that maximizes digital creativity, sharing and innovation (Opunne & Eneh, 2021).

Information and Communication Technology has the potentials to accelerate, enrich, and deepen skill; to motivate and engage students in learning to help relate school experiences to work practices; to help create economic viability for tomorrow's workers, contribute to radical changes in school; to strengthen teaching and to provide opportunities for connection between the school and the world (Ureigho, Agbogidi & Ureigho, 2005). The field of education has certainly been affected by the penetrating influence of ICT worldwide and particularly in developed countries. ICT has made a very profound and remarkable impact on the quality and expanse of teaching, learning and research in educational institutions. In addition, the introduction of computer-based testing has completely revolutionized the concept of assessment in education. Kuzmina (2010) defined computer-based testing (CBT) as a method of administering tests in which the responses are electronically recorded, assessed, or both. As the name implies, Computer-Based Test makes use of a computer or an equivalent electronic device to test students' academic ability on various subject matter. Joshua, Joshua and Ikiroma (2014) defined computer-based testing as a method of administering tests in which the responses are electronically recorded, assessed, or both. It is commonly available for several admission tests throughout the developed and less developed countries. Daramola (2018) defined computer-based testing (CBT) as tests or assessments that are administered by computer in either standalone or dedicated network, or by other technology devices linked to the internet or World Wide Web most of them using Multiple Choice Questions (MCQs). Amie-Ogan and OgoMegbulam (2021) opined that computer-based tests had positive effect on exclusion of impersonators during examinations and prevention of manipulation of candidate's examination scores after examination. Amaechi, Uchenna and Ugochukwu (2017) concurred that effective invigilation can nip these examination malpractices in the bud and that can be done using closed-circuit television (CCTV) surveillance. CCTV surveillance has the advantage of providing video surveillance of examinations, deterrent effect on potential offenders, evidence of occurrence or non-occurrence of malpractice. CCTV surveillance, therefore, has the capacity to perfect the examination invigilation process and curb the propensity of candidates to indulge in such examination malpractices.

### **Statement of the Problem**

The issue of examination malpractice among University students is becoming more and more alarming and dangerous for development, quality and standard of education. Personal observations by the authors revealed that rate of examination malpractice in University today could be among the contributing factors affecting the quality of graduates produced. This situation become worrisome when graduates are unable to possess employability skills as a result of failure to have in-dept knowledge of what they have been taught in school. However, the ugly situations have made government and stakeholders in University system to promulgate laws that work against examination with series of punishments such as expulsion, cancellation of session, extension of years to be spend in school among others. Despite that, examination malpractice continues to increase in public university. This study attempted to examine ICT as veritable tool for controlling examination malpractices in public university.

### **Purpose of the Study**

The purpose of the study was to examine ICT as veritable tool for controlling examination malpractice in University. Specifically, the study examined the:

1. contributions of ICT tool for controlling examination malpractice in public university.
2. extent to which ICT tool such as CCTV could control examination malpractices in public university.
3. extent to which ICT tool such as CBT could control examination malpractices in public university.

### **Research Question**

The following research question guided this study.

*Research Question:* What are the contributions of ICT tools towards controlling examination malpractices in public university?

### **Research Hypotheses**

The following null hypotheses were tested at a 0.05 level of significance.

*Research Hypothesis 1:* There is no significant influence of CCTV in controlling examination malpractices in public university.

*Research Hypothesis 2:* There is no significant influence of CBT in controlling examination malpractice in public university.

### **Theoretical Framework**

This study is anchored on Theory of Planned Behavior (TPB). The TPB according to Madara, Namango and Katana (2016) evolved from the theory of reasoned action (Fishbein & Ajzen) which posited intention to act as the best predictor of behaviour. The premise of the TPB is that individuals make rational decisions to engage in specific behaviours based on their beliefs about the behaviours and their expectation of a positive outcome after having engaged in the behaviours. TPB hypothesize that cheating happens because of the opportunity as well as the intention to cheat for example a student may have a favourable attitude toward cheating and may have friends who also engage in cheating, but the vigilant level of examination monitoring in a specific class may make cheating difficult or impossible (Madara *et. al.*, 2016). The TPB therefore explains both the reasons why students cheat in exams and how the strategy of strict supervision of exams can help prevent the same. The relevance of this theory to the present study is that students engage in examination malpractice, where they hope to benefit by passing examinations and graduating. This means that students' behaviour is a factor that promote their involvement in examination malpractices. Further, the theory related to this study by positing that behaviours are immediately determined by behavioural intentions, which in turn are determined by a combination of three factors: attitude toward the behaviour, subjective norms, and perceived behavioural control.

### **Methods**

#### ***Research Design***

A correlational research design was used to achieve the specific aims of the study . This design was appropriate, because it help the authors to determine extent to which ICT tools such as CCTV and CBT could control examination malpractice among the University students.

#### ***Population and Sampling Procedure***

The population of the study comprised 603 academic staff of Olabisi Onabanjo University, Ago-Iwoye, Ogun State. Using stratified sampling technique, a total of 150 academic staff were selected as sample size. The stratification was based on gender balance (male and female lecturers).

### ***Data Collection Instrument***

A self-developed instrument titled: ICT Tool and Examination Malpractice Control Questionnaire (ICTTEMQ) was used for data collection. The instrument was divided into two sections. Section A embraced demographic characteristics of the respondents such as gender, status, marital status, highest qualifications and numbers of publications. Section B examined items on the contribution of Information and Communication Technology (ICT) tools towards controlling examination malpractice, extent to which ICT tools such as CCTV and CBT controlled examination malpractice. The responses rate of the instrument was based on four scale format which include strongly agreed (SA) (4-point), agreed (A) (3-point), disagreed (D) (2-point) and strongly disagreed (SD) (1-point).

### ***Data Collection Instrument Validity and Reliability***

Before administration of the instrument, it was subjected to face and content validity. The instrument was given to 3 experts from Computer Science, Tai Solarin University of Education for correction. After all the corrections done, the authors diligently perfected the grey area. The instrument was further subjected to reliability exercise twice in Lagos State University (LASU) among 10 academic staff. The data collected were analyzed using Pearson Product Moment Correlation Coefficient (PPMCC). The reliability coefficient index yielded a value of 0.86. This is an evident of how reliable and adequate the instrument was.

### ***Data Collection Procedure***

The data collection procedure for this study was based on primary method of data collection. Validated instrument was used for the collection of data from respondents through the help of 2 research assistants. However, 139(93%) copies of the questionnaires administered were retrieved.

### ***Data Analysis***

Descriptive statistics of mean and standard deviation were used for answering research question. Hypotheses were tested using regression analysis. Decisions were made at 0.05 level of significance. Any mean score of 2.5 and above was regarded as agree while any one below 2.5 regarded as disagree. For regression analysis, when  $p_{\text{value}}$  is less than significance level ( $p < .05$ ), the null hypotheses is rejected, otherwise, not accepted.

### **Results**

*Research Question:* What are the contributions of ICT tool for controlling examination malpractices in public university?



**Table 1: Descriptive statistics on the contributions of ICT tools for controlling examination malpractices**

Items	Mean	SD	Remark
CCTV expose student involve in examination malpractices	2.98	.804	Agreed
CCTV show enough evidence to judge student caught in examination malpractices	2.67	.848	Agreed
CBT encourage students to be more serious to read their book	3.03	.711	Agreed
CBT helps to restore the educational value in University	2.88	.899	Agreed
CBT encourage students to work hard in order to perform better in their examination	2.91	.942	Agreed
CBT reduces miscellaneous cases like using of unsigned scripts by the students	3.28	.705	Agreed
CCTV build self-confidence among students in University	3.51	.693	Agreed
CBT biometric verification reduces examination malpractice	3.27	.744	Agreed
Cluster Mean	3.07		

The results from Table 1 revealed that respondents agreed with all the items raised. Cluster mean was found to be 3.07 and bench mark mean was 2.50. Since  $3.07 > 2.50$ ; the implication of these results was that ICT tools such as CCTV and CBT are good enough for controlling and reducing rate of examination malpractice in public university in Ogun State, Nigeria.

*Research Hypothesis 1:* There is no significant influence of CCTV in controlling examination malpractices in public university.

**Table 2: Influence of CCTV for controlling examination malpractice in public university**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error				Beta
1	(Constant)	5.715	4.630		11.170	.000
	CCTV	.085	.037	.126	2.287	.023

a. Dependent Variable: Examination malpractice control

The first important thing to note in Table 2 is that the sign of the coefficient of CCTV is positive. This implied that CCTV and examination malpractice control are positively related. Furthermore, the standardized coefficient was (.126) and p-value  $> 0.05$ . This implied null hypothesis was rejected and the researcher concluded that there was significant influence of CCTV in controlling examination malpractice in University.

*Research Hypothesis 2:* There is no significant influence of CBT in controlling examination malpractice in public university.

**Table 3: Influence of CBT in controlling examination malpractice in University**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.703	2.098		27.030	.000
	CBT	.228	.047	.270	4.823	.000

a. Dependent Variable: Examination malpractice control

The first important thing to note in Table 3 is that the sign of the coefficient of CBT value is positive. This implied that the CBT and examination malpractice control are positively related. The standardized coefficient was (.270) and p-value > 0.05. This implied null hypothesis was rejected and the researcher concluded that there was significant influence of CBT in controlling examination malpractice in University.

## Discussion

Based on the analysis on research question 1, the findings revealed that ICT tools such as CCTV and CBT are good enough for controlling and reducing rate of examination malpractice in public university in Ogun State, Nigeria. These findings were in support to Edeh *et. al.*, (2019) who examined the role of technology in mitigation of examination malpractices in West Africa and they found that ICT such as CBT and CCTV offers solutions for mitigation of examination malpractices in West Africa. Likewise, Ogunjob *et. al.*, (2021) findings revealed that e-invigilation will reduce examination malpractices and thereby restore the discipline among students in colleges of education.

Hypothesis 1 indicated that there was significant influence of CCTV in controlling examination malpractice in University. These findings corroborate with Amaechi *et. al.*, (2017) who investigated the closed-circuit television surveillance as an antidote to examination malpractice in high institutions in Nigeria and found that effective invigilation can nip these examination malpractices in the bud and that can be done using closed-circuit television (CCTV) surveillance. According to them, CCTV surveillance has the advantage of providing video surveillance of examinations; deterrent effect on potential offenders; evidence of occurrence or non-occurrence of malpractice. CCTV surveillance, therefore, has the capacity to perfect the examination invigilation process and curb the propensity of candidates to indulge in such examination malpractices.

Hypothesis 2 revealed that there was significant influence of CBT in controlling examination malpractice in University. These findings correlate with Amie-Ogan, and Ogomegbulam (2021) who examined undergraduate students' perception of effect of computer-based tests on malpractice in examination centres in Rivers State Universities and they concluded that computer-based tests (CBT) had positive effect on exclusion of impersonators during examinations and prevention of manipulation of candidate's examination scores after examination in Rivers State Universities.

## Conclusions

This study had successfully examined the Information and Communication Technology (ICT) as veritable tools for controlling examination malpractice in University; thus, the following conclusions were drawn based on the findings of the study that ICT tools such as CCTV and CBT are

good enough for controlling and reducing rate of examination malpractice in public university in Ogun State, Nigeria.

## Recommendations

Based on the findings of the study, the following recommendations were raised:

1. CCTV should be installed to every lecture theatres where examination is being conducted. In addition, all facilities such as electricity power supply, computers, and others should be adequately provided in order to facilitate the effective e-invigilation.
2. Government should invest more in making Computer Based Test facilities readily available and accessible to the public Universities in Ogun state.
3. Government should increase the funding of public universities and ensure more funds are allocated for the development of ICT programme among others.

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