

**EFFECTIVENESS OF COMPUTER-BASED EXAMINATION IN
AMBROSE ALLI UNIVERSITY, EKPOMA, EDO STATE**

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Abstract

The study examined the effectiveness of computer-based examination in Ambrose Alli University, Ekpoma, Edo State. The study was guided by four research questions. The study employed the descriptive research design of the expo-facto types. The population of the study was made up of all the forty-one thousand, three hundred and ninety-four (41,394) undergraduate students who have registered for 2021/2022 academic session in all the fourteen Faculties in Ambrose Alli University, Ekpoma, Edo State. The 41,394 students presented in the population covers all the students from 200-400 levels which have participated in computer-based examinations in Ambrose Alli University, Ekpoma, Edo state. The simple random technique was used in selecting 7 Faculties in Ambrose Alli University, Ekpoma, Edo State. In this regards, 70 students were randomly selected from each of the 7 sampled faculties. This gave a total sample size of four hundred and ninety (490) students sampled for the study. A questionnaire titled “Effectiveness of Computer-based Examination Questionnaire” (ECBEQ) was used in the study. The data obtained was analyzed using percentages, Mean (X) and Standard Deviation (SD). The study revealed that computer-based examination was not effective in managing impersonation among students, computer-based examination was not effective in managing examination malpractice among students and Computer-based examination was effective in managing the accuracy in students grading. Based on the findings, the study recommended among others that the management of Ambrose Alli University should deploy more technological equipments such as thumb printing identification devices to help curb the problem of impersonation during computer-based examinations.

Keywords: Effectiveness, Computer-based Examination, Impersonation, Accuracy in Students Grading, Examination Malpractice

Introduction

All over the world, education is seen as a transformational tool in every society and it is expected to be held in high esteem. It is the acquisition of knowledge and skills required to sustain individual, groups, and organizational advancement at all levels and spheres of life. Education is also described as the transmission of values and the accumulation of knowledge of the society and it is designed to guide students in learning culture, moulding their behaviour into adulthood and directing them towards eventual role in the society. The field of education has seen a sweeping transformation in the past two decades. The changing scenario of world economy and innovation in information and communication technology has resulted in the beginning of a lot of new drifts in education as modern-day education is all about innovation, accessibility and suitability. From kindergarten to university, students are encouraged to learn through interactive and practical tools. These radical trends have benefited those people who want to get practical knowledge for their personal and professional growth.

It is believed that the Nigerian school system has continued to experience series of transformations as a result of the introduction of information and communication technologies (ICTs) in the teaching and learning processes, and the constant increase in the number of pupils and students enrolled into the system. However, the duo is now making it difficult for effective teaching and learning to take place without appropriate tools and mechanisms. Among these technologies, is the introduction of the computer-based examination in schools. It is generally recognized that examinations determine the extent to which educational objectives have been achieved as well as the extent to which educational institutions have served the needs of community and society. It is believed that examinations play a significant role in determining what goes on in the classroom in terms of what, and how teachers teach and students learn and

can have impact on both teaching and learning. Computer-Based Testing (CBT) is defined as tests or assessments that are administered by computer in either stand-alone or dedicated network, or by other technology devices linked to the internet or world wide web most of them using Multiple Choice Questions (MCQs) (Ajayi, 2023).

It is perceived that the computer-based examination requires a system of interconnected computer networks that the Standard Internet Protocol Suite (SIPS) to serve the users. Computer systems which are used for CBT are made of two major components for them to carry out their functions as delivering examination questions they help to store examination questions and allow students to access them and these two parts are hardware and software. Computer hardware refers to the physical components of the computer i.e. the aspect of computer that can be seen, touch and felt. While software refers to the set of instruction that are fed into the system which enable the computer to process information or data, and these are application software. Furthermore, Bennett (2015) asserted that computer-based test represents a modern way of answering an examination questions, replacing the written pen and paper (PNP) format. CBT is a combination of networks, hardware and software as well as means of communication, collaboration and engagement that enables the processing, management and exchange of data, information and knowledge.

Computer-based is understood to be a complex of artificial techniques and knowledge for solving instructor's problem involving paper and pen examinations. It is believed that Computer-based Tests (CBT) are the form of assessment in which the computer is an integral part of question papers' delivery, response storage, marking of response or reporting of results from a test or exercise. Ajayi (2023) defined Computer-based Tests as 'the use of computers for assessing students learning'. It is required to think, re-consider, and modify or change the traditional test manners. Computer-based test in managing

impersonation among students, computer-based examination in managing examination malpractice among students, computer-based examination in managing students academic performance and computer-based examination and accuracy in students grading.

One of the aspects of the computer-based test in schools is its effectiveness in managing impersonation among students. Impersonation is described as the act of pretending to be somebody in order to trick people or to entertain them. It is perceived that impersonation is an act of pretending to be somebody in order to trick people or to entertain them. Identity and presence verification is meant to address impersonation threats. It is believed that impersonation threats during computer-based tests occurs when the correct student logs in, and then lets fraudster to continue with the exam on his/her behalf. However, computer-based tests in detecting and correcting these wrongs is of serious interest to this study.

Another aspect of computer-based test is its effectiveness in managing examination malpractice among students. Examination malpractice is an illegal behaviour by a candidate before, during or after the examination in order to achieve undue success easily. Gregory (2023) defined examination malpractice as behaviour contrary to a set of expected code of conduct or contrary to a set of ethics and norms exhibited in the cause of examination by person or group of persons. Examination malpractice has become a canker worm that has eaten deep into the academic fabrics of students in Nigerian schools. This has created doubts on academic certificates issued to graduates from Nigerian schools. However, it is believed that the effective adoption of computer-based test in schools could help address the issues of examination malpractice in schools.

It is alleged that there is going to be improvement with student academic performance with the incorporation of technology because of its capacity to arouse the mental curiosity to become achiever in addition to the alertness in

intelligence and conscientiousness. It is believed that computer-based test has a range of activities which include the delivery, marking, and analysis of all or part of the student assessment process using computer technologies (Özden, Ertürk, and Sanli, in Ajayi 2023). In the light of the foregoing, the study seeks to investigate how the use of computer-based test effectively addresses the variables of this study. Hence, this study investigates the effectiveness of computer-based examination in Ambrose Alli University, Ekpoma, Edo State.

Statement of the Problem

The researchers are of the view that the high rate of poor performance of students during or after the CBT examinations is alarming as students tend to query the motivation behind using CBT software to conduct examination in the Nigerian educational system. Thus, the researchers believe that the challenges may perhaps centre on the inadequacy of facilities, epileptic power supply and computer illiteracy among students as this might have negative effects on the computer-based examination in its effectiveness in managing impersonation, examination malpractice, students' academic performance and accuracy in students' grading. It has been observed in Ambrose Alli University that during computer-based examination, students swap school fees payment slips with their friends, edit their friend's school fees slips and go into the examination venue with their friends and watch their impersonators react to questions for them.

It is worrisome that despite the technological advancement in the conduct of such examination, the students still perpetuate these acts. There have been series of complaints from the students that their results displayed on the computer screen after does not always tally with the final scores and grades released at the end of the session. The students have lamented that in most cases, what is released does not match what was displayed on the system after examination while some other students lamented that so many of their courses are not released on time. This delay in the release of computer-based results has caused delays in the course registration of some students as well as their preparations for their

examinations. Therefore, one begin to wonder the level of effectiveness of computer-based examination in such situations as these issues have raised concerns among well-meaning stakeholders the university and also the researcher inclusive. It is therefore the interest of this study to examine the effectiveness of computer-based examination in Ambrose Alli University, Ekpoma, Edo State

Purpose of the Study

The major purpose of this study is to examine the effectiveness of computer-based examination in Ambrose Alli University, Ekpoma, Edo State. The specific objectives of the study were to:

1. Examine the effectiveness of computer-based examination in managing impersonation among students in Ambrose Alli University, Ekpoma, Edo State.
2. Examine the effectiveness of computer-based examination in managing examination malpractice among students in Ambrose Alli University, Ekpoma, Edo State.
3. Ascertain the effectiveness of computer-based examination in managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State

Research Questions

The following research questions raised to guide the study:

1. What is the level of effectiveness of computer-based examination in managing impersonation among students in Ambrose Alli University, Ekpoma, Edo State?
2. What is the level of effectiveness of computer-based examination in managing examination malpractice among students in Ambrose Alli University, Ekpoma, Edo State?
3. What is the level of effectiveness of computer-based examination in managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State?

Review of Literature

Concept of Computer-based Examination

Computer-based examination requires a system of interconnected computer networks such as the Standard Internet Protocol Suite (SIPS) to serve the users. Computer systems which are used for Computer-based Test (CBT) are made of two major components for them to carry out their functions as delivering examination questions they help to store examination questions and allow students to access them. Bennett (2015) asserted that computer-based test represents a modern way of answering an examination questions, replacing the written pen and paper (PNP) format. Computer-based tests (CBT) are the form of assessment in which the computer is an integral part of question papers' delivery, response storage, marking of response or reporting of results from a test or exercise.

Computer-based Examination in Managing Impersonation

According to the examination rules and regulations, only the registered candidates are eligible to participate in any examination being conducted by the examination authority and nobody is supposed to undertake any examination on behalf of anybody. Impersonation in examinations ranges from the registration of examination using a false name, certificate or signature of different persons for identification purposes during the examination process. According to Onyibe, Uma and Ibina (2015), there are two types of impersonation. In the first form, a candidate registers with his/her name but submits the photograph of another person, the mercenary, with whom arrangement has been made to take the examination on his/her behalf. Fayomi, Amodu, Ayo, Idowu and Iyoha (2015) opined that electronic device are useful for controlling examination malpractices, and that with the deployment of electronic devices, the level of examination malpractice will reduce. Ojirinde (2015) asserted that computer-based testing methods provide multiple electronic options for reducing the fraud and clamping down on impersonators. Gathori, Matende and Kamundi (2014) opined that

Profile-Based Authentication Framework should be used to curb impersonation in examinations and the use of multiple-step biometric verifications can also help to eliminate and totally exclude impersonators from examination halls.

Amadi and Nwokenne (2017) carried out a study on enhancing creative thinking and reducing examination malpractice in secondary school system through Open Book Examination (OBE) Method. The study employed descriptive survey design. The population of this study was all the SS2 chemistry students in Owerri-west. 126 students were randomly selected and used as sample. It was found among others that the rate of malpractice was reduced using OBE. Shaibu, Ogwu and Edegbo (2019) investigated the innovations in curbing examination insecurity in public secondary schools in the East Education Zone of Kogi State. The study revealed that the use of technological equipments was the most effect innovative strategies to curb impersonation during in Kogi East education zone of Kogi State.

Computer-based Examination in Managing Examination Malpractice

Examination malpractice comes in different forms which includes, coping, sorting, bringing foreign materials into examination halls, impersonation, exchange of scripts, use of electronic devices such as phones, calculators collusion with invigilators, and exam officers smuggling scripts written outside into exam halls. Innovative approaches in education has also given rise to innovations in examination malpractice as students can now send questions and answers to their colleagues in any part of the country through electronic means which negates the conduct of examination. However, one of such methods adopted to checkmate examination malpractice in public examinations such as the Unified Tertiary Matriculation Examination (UTME) is the Computer-based Test (CBT) mode of examination. Computer-based Testing (CBT) mode has emerged as one of the recent innovative approaches to assessments by examination bodies against the Pencil and Paper Testing (PPT) mode. Computer-based test (CBT) is the taking of a test on computer instead of using Paper and

Pencil. Ojirinde (2015) noted that the introduction of computer-based test (CBT) has led to reduction in exam malpractice in the country. It was noted that the introduction of the CBT was for the development of the Nigerian child and the betterment of all Nigerians desirous of improvement in the educational standard. Ojirinde further expressed that with CBT our schools will be forced to follow our school curriculum as it affects Information Technology and above all, the Board opted for CBT so as to ensure global best practice in the conduct of examination.

Nwoke, Osuji, Uchechukwu and Agi (2017) examined the Influence of Computer-Based Test (CBT) on Examination Malpractice in Public Examinations. The result of the study showed that CBT effectively reduced examination malpractice. Okoye and Duru (2019) examined assessment of the effectiveness of computer-based testing in the conduct of the 2019 joint admissions and matriculation board examination in Anambra State. The findings of the study indicate that the use of the CBT to a high extent has helped to reduce the tedious process of registration and examination malpractices among UTME candidates as well as facilitate the timely release of results. Achio, Ameko, Kutsanedzie, Alhassan and Ganaa (2012) examined the concerns on issues of examination malpractices a case study of Accra Polytechnic. Analysis of results was done with the aid of literature from various sources. The CBT/L system, when well managed with proper reorientation of the people's minds and attitudes, will help curtail the examination malpractice menace. Iregbenya (2018) investigated the assessment of implementation of anti-examination malpractices measures in secondary schools in Esan West Local Government Area of Edo State. The study revealed that Computer-based Test (CBT) has contributed in controlling examination malpractice in Esan West Local Government Area of Edo State.

Computer-based Examination and Accuracy in Students Grading

Aworanti (2012) asserted that examination malpractices carried out at the end of examinations are considered by the perpetrators to be the safest, surest and most reliable form of malpractice capable of achieving their desired objectives. The agents commonly used here are supervisors, custodians, examiners, computer operators, subject officers, office clerks, typists and many others. This occurs by inducing the personnel with amorous behaviour, gifts and money to lure the personnel of examining bodies as well as those connected with the marking and coordinating of candidates. Ojirinde (2015) in a report affirmed that there were incidences of candidates tracing their papers from Enugu to Kano and Kano to Ibadan. However, with the adoption of Computer-based examination, the occurrence of such incidences would be controlled, reduced to a reasonable extent or completely averted in examinations conducted by schools and other examination bodies.

Mubashrah, Tariq and Shami (2012) examined computer-based vs paper-based examinations: Perceptions of university teachers. The study adopted the descriptive research design. The study revealed that the computer-based examinations systems is beneficial and easy to manage because results are more accurate in same system of examinations. Jimoh, AbdulJaleel and Kawu (2012) examined students perception of Computer-based Test (CBT) for examining undergraduate chemistry courses. That there have been achieved success the testing has made such as immediate scoring, fastness and transparency in marking. Muhammad and Hayyo (2023) examined students perception on the role of Computer-based Test in Curbing Examination Malpractice. Findings of the study revealed that the use of computer-based test serves as a viable tool in curbing the rate of candidate impersonation, copying other peoples' work, collusion among candidates, favorable award of marks, leaking of examination question papers and illegal assistance to students.

Nwogbo, Anierobi and Alnwafor (2021) examined the availability and utilization of information and communication technology in managing examination misconduct in public universities in South-East Nigeria. The study found out that CBT is used in managing aspects of examination misconduct such as: curtailing exchange of answer sheets, eliminate snatching of question papers and taking away of answer scripts from the examination halls during examination. Muhammad and Hayyo (2021) examined students perception of computer-based examination in federal college of education Eha-Amufu. The findings revealed that computer-based examination had positive influence on grading of students in Federal College of Education, Eha-Amufu, Enugu State.

Methodology

The study employed the descriptive research design of the expo-facto types. The population of the study was made up of all the forty-one thousand, three hundred and ninety-four (41,394) undergraduate students who registered for 2021/2022 academic session in all the fourteen Faculties in Ambrose Alli University, Ekpoma, Edo state. The 41,394 students presented in the population covers all the students from 200-400 levels which have participated in computer-based examinations in Ambrose Alli University, Ekpoma, Edo state. The simple random technique was used in selecting a total sample size of four hundred and ninety (490) students sampled for the study. A questionnaire titled “Effectiveness of Computer-based Examination Questionnaire” (ECBEQ) was used in the study. The data obtained were analyzed using percentages, Mean (X) and Standard Deviation (SD).

Results

Research Questions One: What is effectiveness of computer-based examination in managing impersonation among students in Ambrose Alli University, Ekpoma, Edo State?

Table 1: Mean and Standard Deviation of the effectiveness of computer-based examination in managing impersonation among students

S/N	ITEMS	\bar{X}	SD	Remark
vi.	Since the introduction of computer-based examination, students writing examinations for their fellow students have been reduced	2.25	0.64	Disagreed
vii.	The introduction of computer-based examination has reduced the act of swapping identity in the examination hall	2.21	0.55	Disagreed
viii.	The computer-based examination has reduced the act of students swapping school fees printouts for the purpose of writing examination	2.54	0.49	Agreed
ix.	Students have been observed to verify their identity on the computer screen before the commence of examination as this reduces the act of impersonation	2.43	0.55	Disagreed
x.	With the introduction of computer-based examination, the act of machinery during examination has reduced	2.33	0.43	Disagreed
MEAN AGGREGATE		2.35	0.53	LOW

* *Mean scores is significant ($\bar{X} \geq 2.50$)*

The results in Table 1 presented the Mean and Standard Deviation of the effectiveness of computer-based examination in managing impersonation among students in Ambrose Alli University, Ekpoma, Edo State. The results showed that the mean ratings on items 3 was marked agreed at mean rating of 2.54 with standard deviation of 0.49 while the mean ratings of items 1, 2, 4 and 5 were marked disagreed with mean ratings of 2.25, 2.21, 2.43 and 2.33 with standard deviations of 0.64, 0.49, 0.55 and 0.43. However, the aggregate mean of 2.35 was marked low and this implies that computer-based examination is not effective in managing impersonation among students in Ambrose Alli University, Ekpoma, Edo State was low.

Research Questions Two: What is effectiveness of computer-based examination in managing examination malpractice among students in Ambrose Alli University, Ekpoma, Edo State?

Table 2: Mean and Standard Deviation of the level of effectiveness of computer-based examination in managing examination malpractice among students

S/NO	ITEMS	\bar{X}	SD	Remark
xi.	The introduction of CBT makes students prepare hard for examinations and this reduces students involvement in examination malpractice	2.38	0.58	Disagreed
xii.	The introduction of CBT has terminated one on one interactions with examiners and reduces examination malpractice	2.66	0.46	Agreed
xiii.	The introduction of CBT has discouraged the leakage of examination questions and reduces examination malpractice	2.51	0.45	Agreed
xiv.	The introduction of CBT has improved on students reading habits, examination malpractice is reduced	2.57	0.36	Agreed
xv.	The introduction of CBT has enhanced proper conduct of examinations and facilitated curbing of examination malpractice	2.69	0.48	Agreed
MEAN AGGREGATE		2.562	0.466	High

* *Mean scores is significant ($\bar{X} \geq 2.50$)*

The results in Table 2 presented Mean and Standard Deviation of the effectiveness of computer-based examination in managing examination malpractice among students in Ambrose Alli University, Ekpoma, Edo State. The results showed that the mean ratings on items 7, 8, 9 and 10 were marked agreed at mean ratings of 2.66, 2.51, 2.57 and 2.69 with standard deviations of 0.46, 0.45, 0.36 and 0.48. This aggregate mean of 2.56 signify that computer-based examination is effective in managing examination malpractice among students in Ambrose Alli University, Ekpoma, Edo State.

Research Questions Four: What is the effectiveness of computer-based examination in managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State?

Table 3: Mean and Standard Deviation of the effectiveness of computer-based examination in managing the accuracy in students grading

S/N	ITEMS	\bar{X}	SD	Remark
xvi.	The use of computer-based examination grades students immediately after examination	2.42	0.42	Disagreed
xvii.	The introduction of computer-based examination have helped reduced the problem of missing results	2.47	0.38	Disagreed
xviii.	The typographical errors on students scores and grades witnessed in paper and pen examination have been curbed with the introduction of computer-based examination	2.47	0.46	Disagreed
xix.	Sometimes, my scores are always reduced when the final results is released	2.56	0.53	Agreed
xx.	In computer-based examinations, the grading is not sometimes as good as paper and pen examination	2.41	0.42	Disagreed
MEAN AGGREGATE		2.50	0.44	High

The results in Table 5 presented the Mean and Standard Deviation of the effectiveness of computer-based examination in managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State. The results showed that the mean ratings of item 19 was marked agreed at mean rating of 2.56 with standard deviation of 0.53 while the mean ratings of items 16, 17, 18 and 20 were marked disagreed at mean ratings of 2.42, 2.47, 2.47 and 2.41 with standard deviation of 0.42, 0.38, 0.46 and 0.42. Meanwhile, the aggregate mean point of 2.50 was marked high and this implies that computer-based examination is effective in managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State.

Discussion of findings

The discussion of findings was done under the following subheadings:

The results of this study showed that computer-based examination is not effective in managing impersonation among students in Ambrose Alli University, Ekpoma, Edo State was low. This could have been triggered by the ineffectiveness computer-based examination committee to devise reliable strategies of curbing impersonation with the adoption of computer-based

examination and this could have results to some students identifying to loopholes and utilizing same which could have results to the persistent occurrence of students involvement in examination malpractice despite the introduction of computer-based examination in the institution. The finding of this study is in agreement with the findings of Ajayi (2023) whose study reported that computer-based machines learning technique was less effective for detecting cases of impersonation among students. However, the finding of this study contradicts the findings of Amadi and Nwokenne (2017) that the rate of malpractice was reduced using OBE. The finding of this study also contradicts the findings of Shaibu, Ogwu and Edegbo (2019) that the use of technological equipments was the most effect innovative strategies to curb impersonation during in Kogi East education zone of Kogi State. This finding is not in support of Nwoke, Osuji, Uchechukwu and Agi (2017) that implementation of computer-based examination eradicates student impersonation in examination malpractice activities during course of paper and pen examination in Federal Polytechnic Ilaro.

The results of this study revealed that computer-based examination is effective in managing examination malpractice among students in Ambrose Alli University, Ekpoma, Edo State. This finding could have been informed by the fact that the introduction of computer-based test (CBT) might have led to reduction in exam malpractice in the country as the introduction of the computer-based test might have affect the development of the students as well as the improvement in the educational standard. This finding might have been informed by the fact that the introduction of computer-based test might have forced institutions of learner to follow school so as to ensure global best practice in the conduct of examination. The finding of this study is in agreement with the findings of Nwoke, Osuji, Uchechukwu and Agi (2017) that CBT effectively reduced examination malpractice. The finding of this study is in agreement with the findings of Okoye and Duru (2019) that the use of the CBT to a high extent has helped to reduce the tedious process of registration and examination

malpractices among UTME candidates as well as facilitate the timely release of results. The finding of this study is in agreement with the findings of Achio, Ameko, Kutsanedzie, Alhassan and Ganaa (2012) that the computer-based examination helped curtail the examination malpractice menace. The finding of this study is in agreement with the findings of Iregbenya (2018) that Computer-based Test (CBT) has contributed in controlling examination malpractice in Esan West Local Government Area of Edo State.

The results of this study revealed that computer-based examination is effective in managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State. The finding of this study might have been informed by the fact that computer-based examination might have been the safest, surest and most reliable form of fighting malpractice and ensuring that student gets their actual scores and grades without inducement of any form. This finding might have been informed by the fact that the use of computer-based examination could have mitigated the substitution of a candidate's original script with a re-written one, alteration of scores in favour of candidates and the falsification of statement of results are very common at the final stage of examinations. This finding might have also been informed by the fact that with the adoption of Computer-based examination, the occurrence of such incidences would be controlled, reduced to a reasonable extent or completely averted in examinations conducted by schools and other examination bodies. The finding of this study is in agreement with the findings of Kola (2021) that the use of computer-based examinations achieved success the testing has made such as immediate scoring, fastness and transparency in marking. The finding of this study is in agreement with the findings of Danjuma (2023) that the use of computer-based test serves as a viable tool in curbing the rate of candidate impersonation, favorable award of marks and leaking of examination question papers. The finding of this study is in agreement with the findings of Anierobi and Alnwafor (2023) was effective in ensuring adequate and reliable grading of the students in public universities in

South-East Nigeria. The finding of this study supports that of Odo (2021) that the respondent have positive perception on the conduct of computer-based examination as the conduct of computer-based examination was seen to have positive influence on grading of students in Federal College of Education, Eha-Amufu, Enugu State.

Conclusion

Based on the findings, the study concluded that computer-based examination was not effective in managing impersonation among students. Computer-based examination was however effective in managing examination malpractice and managing the accuracy in students grading in Ambrose Alli University, Ekpoma, Edo State.

Recommendations

Based on the findings, the following recommendations were made:

1. The management of Ambrose Alli University should deploy more technological equipments such as thumb printing identification devices to help curb the problem of impersonation during computer-based examinations.
2. The management of Ambrose Alli University should deploy more supervisors to computer-based examination venues as this would further help sustain its effectiveness in managing examination malpractices.
3. The computer-based committee should adopt a method which would enable the computers to display the students scores and grades immediately after examination to mitigate the problem of students complaining of grade reduction after results are officially released.

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