

THE ASSOCIATION OF ENVIRONMENTAL-RELATED FACTORS WITH EXAMINATION MALPRACTICE IN NIGERIA

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Abstract

The incidence of examination malpractice which started as a minor misdemeanor several decades ago has become a permanent feature of Nigerian educational system. Efforts by educational stakeholders through sanctions to stem the tide have not yielded meaningful results; hence the need for further investigation into factors that promote students involvement in malpractices. In this study, the association between environmental-related factors and examination malpractice in secondary schools was evaluated.

The study adopted a survey research design of *ex-post facto* type. Participants for the study were 400 teachers who have served as examination invigilators in schools. Multi-stage sampling technique was used to get the sample size in three geo-political zones: South-South, North-Central and North-East of the country. The instrument used was Examination Environment Questionnaire ($r=0.85$). Five research hypotheses were tested in the study while chi square was used to analyse the data at 0-05 confident limit.

Result shows that environmental-related factors are significantly associated with student involvement in examination malpractice: lack of conducive examination halls ($\chi^2= 4.243$; P values = 0.039; P = <0.05); inadequate seating facilities ($\chi^2= 4.751$; P values = 0.029; P = <0.05); Seat arrangement ($\chi^2= 14.123$; P values = 0.001; P = <0.05); Invigilator/examinee ratio ($\chi^2=6.642$;Pvalues=0.036).

The provision of adequate resource materials will promote healthy examination environment, positively influence student's attitude during examination and minimize incidence of examination malpractice in secondary schools in Nigeria.

Background to the Study

Examination malpractice ranks highest among contemporary social vices and moral decadence that have bedeviled Nigerian educational system in recent times. It affects the quality of output and this could be responsible for the poor contribution to national development. The objective of secondary school education as stated in the National Policy on Education includes: preparation for citizenship, character development, moral leadership, and service to the society, each of which has a moral dimension. Uwadiae (2006) asserted that as long as there is still examination malpractice in secondary schools, the goals and the objectives of secondary education cannot be realized. Research report shows that examination malpractice occurs in all the geopolitical zones in the country (Oshin, 2008). Government, examination bodies and concerned citizens have made efforts to forestall the incidence of examination malpractice and the problem associated with the conduct of examination. Onuka and Amoo (2009) confirmed that the stringent measures imposed to check examination malpractice in Nigeria in 1984 has turned out to be very ineffective. In the same vein, Noah and Eckstein (2003) remarked that a penalty of twenty-one years imprisonment for culprit as stipulated in the examination malpractice decree No. 33 of 1984 and 1999 was too severe and absurd to be implemented in Nigeria; hence an increasing number of examination fraud cases every year.

Reported shades of malpractice recorded by examining bodies include: examination questions leakage, collusion in examination hall, exchanging of answer booklets, bringing foreign materials into the examination halls, irregular activities inside and outside examination halls such as misappropriating the scripts of other candidates, substituting worked scripts during or after examination, employing mercenaries to pose as candidates to write certain or all examinations on behalf of candidates (impersonation), mass cheating, insult or assault of invigilators, multiple entries (where a candidate registered for same examination in different centres) and so on. Research reports show that collusion among candidates and smuggling of unauthorized materials into examination halls constituted 75% of candidates caught in the final senior secondary school examinations in Nigeria (Oluyeba, 1995; Uwadiae, 1997; Oshin, 2008).

Previous studies investigated isolated factors like school-related, parent-related and student-related. There is however a dearth of literature on the joint influence of environmental-related factors on examination malpractice. The examination environment has not been properly captured as a keen contributor to incidence of examination malpractice. The environment in this context includes the physical resources (conducive examination hall, its location, the size and the hall arrangement), the material resources (desks and chairs, seat arrangement, wall clock, and the test materials), and human resources (scope of examination officials, and the examinee population). Conduct of examination under harsh and unfriendly conditions such as overcrowded classrooms, with poor seat arrangement and visibility, sets a stage for examination malpractice. Examination demands that acceptable space is provided, adequate seating facilities provided and venues properly lit for clear visibility (Badmus, 2006; Jimoh, 2009).

The present study is interested in this aspect since there is paucity of research findings as to the contributions of environmental-related factors (availability of conducive examination hall, location of examination hall, sitting facilities, seat arrangement, invigilator/examinee ratio) as determinants of examination malpractice in Nigeria.

Statement of the Problem

This study investigated the association between environmental-related factors (availability of conducive examination hall, location of examination hall, sitting facilities, seat arrangement, invigilator/examinee ratio) and examination malpractice in Nigeria.

Hypotheses

- Ho1: There is no significant association between availability of conducive examination hall and incidence of examination malpractice.
- Ho2: There is no significant association between location of examination hall and incidence of examination malpractice.
- Ho3: There is no significant association between adequate sitting facilities and incidence of examination malpractice.
- Ho4: There is no significant association between seat arrangement and incidence of examination malpractice.

Ho5: There is no significant association between invigilator-examinee ratio and incidence of examination malpractice.

Scope of the Study

The geographical scope covered all public secondary schools in North Central, North East and South-South geopolitical zones of Nigeria. The study investigated the association between environmental-related factors (availability of examination hall, location of examination hall, sitting facilities, seat arrangement, invigilator/examinee ratio) and incidence of examination malpractice in Nigeria.

Significance of the Study

Examination period is a trying period for students especially when such examination is terminal and tied to the candidates' progress in life. Several factors have contributed to the rapid spread of examination malpractice in our educational system and these include environmental-related factors. In order to ensure appreciable improvement in the quality of student input into examination, the results of the findings of examination environment factors would provide a solid base for school management to efficiently and effectively plan for the administration of examination.

To the government, the findings of the study would facilitate the need to release funds for the purchase of school facilities and to periodically embark on campaigns against malpractice in examinations.

To educational stakeholders, supervisors and invigilators, the findings of this research would provide the need to design preventive measures rather than curative measures as antidotes to examination malpractice in the conduct of the senior secondary school examination.

Literature Review

Oshin (2008) studied pattern of examination malpractice across the geopolitical zones in Nigeria, and found out that North Central and South-South had the highest percentage of student involvement in co-operative cheating behaviour. Alimba (2007) submitted that malpractice behaviour is widespread, unbridled and extensive in the society because examination is the only widely accepted mode of assessment and screening for further studies and job placement. This phenomenon has assumed different styles and approaches. It has become

systemized, involving a networking approach. It has taken multidimensional facets, from ordinary copying method to a more advanced and sophisticated style, employing varied tactics/strategies. According to Eckstein (2003), the problems associated with control of malpractices in public examination in Nigeria resemble the broader problem of controlling any form of transgression in the society, and establishing rules of behaviour and security measures related to the kind of offences. Over the years, educational administrators and government have resorted to the use of punishments such as outright ban of examination centres, cancellation of results, and de recognition of examination centres to curb the growing incidence. The fact remains that the more the examination regulations are being tightened, the more sophisticated methods of malpractice being devised, coupled with defective security measures during examination processing.

The present study considered factors associated with the structural and infrastructural facilities in the examination environment. WAEC (1980) discovered that the manner in which examination halls were arranged in the past contributed to examination malpractice. Other studies attributed structural factors to location of examination halls and size of the examination halls. The conduct of examination under harsh and unfriendly conditions such as overcrowded classrooms with poor seat arrangement and visibility sets a stage for examination malpractice. Abayeh (1997) proposed more effective ways by which examination environment can be made more conducive for both invigilators and examinees. He stressed the need for supervisors and invigilators to be acquainted with methods that will sharpen their skills in conducting public school examinations. Time factor must remain in strict focus for all managers of the examination. It includes: time to start procurement results of materials, publish timetable, distribute materials, commence and end each examination. Suitable examination accommodation facilities must be provided. Other researchers attributed examination malpractice to lack of quality control as a result of large student enrolment or population explosion in schools (Uwadiae, 1997; Oshin, 2008; Badmus, 2006; Jimoh, 2009). It was observed that in most state schools, classrooms are grossly inadequate, desks and benches for the students are either in poor state or not adequate in number. This is an affirmation that a school environment

that is not conducive for learning invariably would not be conducive for conduct of examination.

Research Design

The study adopted a survey research design of *ex-post facto* type. This was due to the fact that the researcher had no control over the independent variables as they have manifested already.

Study Population

The study covered all public secondary schools in Nigeria.

Sample Size

400 teachers that invigilate and supervise May/June SSCE were used for the study.

Sampling Procedure

A multi-stage random sampling technique was used for this study. The entire country is stratified into six geopolitical zones. At the first stage, three zones were picked at random, namely; South-South, North Central and North East zones. Furthermore, a state was randomly selected from each of the zones. From South-South, Delta State which has 25 Local Government Areas was selected; Taraba State with 16 Local Government Areas was selected from North East, and Kogi State with 20 Local Government Areas was selected from North Central. The reason for selecting South-South and North Central zones is because the data collected from all the zones show that these two zones have the highest percentages of incidence of examination malpractice.

The second stage, based on probability proportionate to size, has eight local governments selected from Delta, six local governments from Kogi State and five local governments from Taraba State. In all, nineteen local governments were used for the study.

The third stage in the sampling procedure covered a random selection of 57 schools from the selected local governments across the nine senatorial districts in the three states. All the teachers that supervise and invigilate external examinations were used for the study. The entire sample for the study was four hundred teachers who served as invigilators and supervisors of public examinations.

Research Instrument:

The instrument used in this study was Examination Environment Questionnaire (EEQ). The EEQ was developed by the researcher and was trial tested on 50 teacher-invigilators in five secondary schools in Ibadan metropolis. Reliability was determined and the coefficient alpha value obtained was 0.85.

Scoring of EEQ

All the items were manually scored; the background information which includes items 1 to 8 was for the purpose of identification.

Scoring of Examination Hall Management Inventory (EHMI)

The items are (1) availability of examination hall with “yes or no response”, (ii) if “no”, how many classroom were used, (iii) location of the hall with options 1 to 3, (iv) invigilator –student ratio to measure the capacity of the examination hall with options 1 to 3, (v) time management to evaluate invigilator use of time, and (vi) seating arrangement with options 1 to 3.

Scoring of Examination Hall Facilities Inventory (EHFI)

The EHFI contains three items that measure the availability of examination facilities like: (i) wall clock and adequacy of, (ii) desk and chairs (iii) question papers and answer sheets. Each item with two options 1 to 2. Positive response scored 1 and negative response scored 0.

Procedure for Data Collection

The research instruments were administered through the vice principals and senior teachers in the schools during May/June 2009 senior secondary school examination (SSCE). The respondents were teachers that invigilate or supervise SSCE. Vice Principals of the schools, five research assistants and the researcher were involved in carrying out the administration and collection of the questionnaires.

Data Analysis

The five research hypotheses were analyzed using chi square to determine the association of the environmental-related factors with examination malpractices.

Hypothesis I

There is no significant association with availability of conducive examination hall and incidence of examination malpractice.

Table 1: Availability of Conducive Hall and Examination Malpractice

	No incidence		Incidence		Total		χ^2	Df	P values
	Freq	%	Freq	%	Freq	%			
Yes	108	38.9	42	14.8	150	52.8	4.243	2	0.039*
No	81	28.5	53	18.7	134	47.2			
Total	189	66.5	95	33.5	284	100			

* = Significant at 0.05 alpha level

Table 1 shows that χ^2 observed indicating the association of availability of conducive examination halls with examination malpractice is $\chi^2 = 4.243$; $P = 0.039$. Therefore, non availability is associated with examination malpractice significantly since $P < 0.05$, the null hypothesis is therefore rejected.

Hypothesis III

There is no significant association with adequacy of sitting facilities and incidence of examination malpractice.

Table 3: Adequacy of Sitting facilities and Examination Malpractice

	No incidence		Incidence		Total		χ^2	Df	P values
	Freq	%	Freq	%	Freq	%			
Adequate	77	27.0	26	9.1	103	36.1	4.751	2	0.029*
Inadequate	113	39.6	69	24.2	182	63.9			
Total	190	66.7	95	33.3	285	100			

* = Significant at 0.05 alpha level

Table 3 shows that χ^2 observed indicating the association of adequacy of sitting facilities with examination malpractice is $\chi^2 = 4.751$; $P = 0.029$.

Inadequacy of facilities is significantly associated with examination malpractices since $P < 0.05$, the null hypothesis is therefore rejected.

Hypothesis IV

There is no significant association with seating arrangement and incidence of examination malpractice.

Table 4: Seating Arrangement and Examination Malpractice

	No incidence		Incidence		Total		χ^2	Df	P values
	Freq	%	Freq	%	Freq	%			
Well Spaced	90	31.8	40	14.1	130	45.9	143.12	2	0.001*
Poorly Spaced	70	24.7	22	7.8	92	32.5			
Clustered	29	10.2	32	11.3	61	21.6			
Total	189	66.8	94	33.2	283	100			

*= Significant at 0.05 alpha level

Table 4 shows that χ^2 observed the association of seating arrangement with examination malpractice is $\chi^2 = 14.123$; since $P < 0.05$, the null hypothesis is therefore rejected. Therefore, seating arrangement is significantly associated with examination malpractice.

Hypothesis V

There is no significant association between invigilator/examinee ratio and incidence of examination malpractice.

Table 5: Invigilator/ Examinee Ratio and Examination Malpractice

	No incidence		Incidence		Total		χ^2	Df	P values
	Freq	%	Freq	%	Freq	%			
1-50	94	34.1	62	22.5	156	56.5	6.642	2	0.036*
1-100	46	16.7	21	7.6	67	24.3			
1-150	42	15.2	11	4.0	53	19.2			
Total	182	65.9	94	34.1	276	100			

*= Significant at 0.05 alpha level

Table 5 shows that χ^2 observed indicating the association of invigilator-student ratio with examination malpractices is $\chi^2 = 6.642$; $P = 0.03$. Therefore, invigilator/examinee ratio is significantly associated with examination malpractice since $P < 0.05$, the null hypothesis is rejected.

Discussion of Findings

In this study, non availability of conducive examination hall is significantly associated with examination malpractice since χ^2 observed indicating the association of availability of conducive examination halls with incidence of examination malpractice is $\chi^2 = 4.243$; P values = 0.039; $P = < 0.05$. This is in agreement with the findings of Uwadiae (2002) that 57% of SSSCE centres did not have examination halls for both examinations. Examination malpractice cannot be curtailed in a situation where examination hall is replaced with classrooms. In addition, about 77% of the classrooms used were inadequate for the number of candidate registered. For effective test administrations, physical facilities in terms of examination halls must be adequately provided in secondary schools. Availability and adequacy of conducive examination halls should be enforced as a precondition for approval of schools as examination centres.

Location of examination hall is not significantly associated with incidence of examination malpractices. Table 2 shows that χ^2 observed indicating the association of location of examination hall with the incidence of examination malpractice is $\chi^2 = 1.202$; P values = 0.0548; $P = > 0.05$. Therefore, location of examination hall is not significantly associated with incidence of examination malpractices since P value is greater than 0.05, the null hypothesis is therefore not rejected. The result contradicted the findings of Uwadiae (2002) that attributed examination malpractice to location of centres.

Adequacy of sitting facilities is not significantly associated with incidence of examination malpractices. Table 3 shows that χ^2 observed indicating the association of adequacy of sitting facilities with examination malpractice is $\chi^2 = 4.751$; P values = 0.029; $P = < 0.05$. Therefore, inadequacy of sitting facilities is significantly associated with incidence of examination malpractice since P value is lesser than 0.05, the null hypothesis is therefore rejected. WAEC (1980) noted that cheating will tend to increase when students are sitting in groups on a table than when provided with separate seats and writing desks and

separated from one another by a distance of about 1.5 metres to 2.0 metres. The last decade saw more private participation as school enrolment increased substantially without corresponding adequate infrastructure and equipments (Oshin, 2008). It could therefore be deduced that collusion existed to such a high magnitude because examination halls were overcrowded. Candidates had the mind to cheat; hence, they built understanding relationship among themselves.

Seating arrangement is not significantly associated with incidence of examination malpractices. Table 4 shows that χ^2 observed indicating the association of seating arrangement with incidence of examination malpractice is $\chi^2 = 14.123$; P values = 0.001; P = <0.05. We therefore conclude that seat arrangement is significantly associated with incidence of examination malpractice since P value is less than 0.05, the null hypothesis is therefore rejected. This was an indication that perpetrators of examination malpractice in the school set up were of closer relationship. This is usually facilitated by inadequate spacing between desks and poor test supervision. This corroborates the findings of previous researchers that cheating will increase when student are seated in groups than when separated from one another by a distance 2.0 metres (Oshin, 2009; Oluyeba, 1997; Salami, 1995; WAEC, 2004).

Invigilator/student ratio is not significantly associated with incidence of examination malpractice. Table 5 shows that χ^2 observed indicating the association of invigilator/student ratio with incidence of examination malpractice is $\chi^2 = 6.642$; P values = 0.036; P = <0.05. Therefore, we conclude that invigilators/student ratio is significantly associated with incidence of examination malpractice since P value is less than 0.05; the null hypothesis is therefore rejected (Table 5). This corroborates Salami (1995) who identified large number of students in a class in Nigerian schools as one major factor that made it difficult for any teacher however competent to satisfy judgmental teaching and supervision.

Teachers play a crucial role in the detection and punishment of examination malpractice. Classroom management, teacher vigilance, and enforcement are all crucial factors. Gary (1995) emphasized that adolescents are inspired by the integrity of their teachers and they intuitively know when a teacher has integrity. Teachers should be given

all needed support because they are collaborators in establishing a quality of life in the school.

Summary of Findings

- Environmental-related factors are significantly associated with student involvement in examination malpractice, and can be associated with the incidence of the occurrence. The examination environment facilities provided in majority of the schools investigated are either not available or where available, inadequate.
- Hence, majority of the schools lack conducive examination halls ($\chi^2 = 4.243$; P values = 0.039; P = <0.05). Examination malpractice cannot be curtailed in a situation where examination hall is replaced with congested classrooms.
- Most of the schools surveyed lack adequate sitting facilities, therefore making effective examination hall management difficult to attain ($\chi^2 = 4.751$; P values = 0.029; P = <0.05).
- Seating arrangement is significantly associated with examination malpractice ($\chi^2 = 14.123$; P values = 0.001; P = <0.05). This was an indication that perpetrators of examination malpractice in the school set up were of closer relationship; hence they easily colluded.
- Invigilators/student ratio is significantly associated with examination malpractice. χ^2 observed indicating the association of invigilator-student ratio on examination malpractice is $\chi^2 = 6.642$; P values = 0.036.

Implication of the Findings

Based on the findings above, certain implication arises for the following aspects of examination management: The examination environment, the examination officials, the examination bodies and the policy makers.

The Examination Environment

The focus here is totality of what testing environment should be for effective and efficient test administration. The examination environment includes the physical resource, the material resource and human resources available and the use into which they are made of.

The physical facilities include the examination hall, the location, the hall size and the hall arrangement. The material resources include desks and chairs, seating arrangement, wall clock, and the examination materials. The human resources include the school management, examination officials, and the examinee.

The school management must see to the availability of examination hall before the commencement of examination. Most of the schools observed lack examination halls, thereby converting classrooms to examination halls. Considering the population explosion in schools, congestion of halls hinders quality control. The implication of this is improper seating arrangements cum unconducive examination environment for both examinees and examiners. Examination facilities and practical equipment are inadequate; the number of registered students has not been matched with a corresponding increase in educational facilities and infrastructures. The net result is high examiner/examinee ratio, and the students become examination casualties.

The Examination Managers

The focus here is the invigilators, supervisors, monitoring team and the examiners which are usually drawn from the teachers in the various schools. The use of unqualified or untrained staff should be discouraged. The implication of this is non-implementation of ethics of examination supervision, which invariably hinder regulatory bodies to apply sanctions where necessary. Workshops and seminars on examination ethics should continually be organized for all stakeholders before examination, so as to acquaint them with preventive measures rather than curative measures. In addition to professional development and empowerment, the job environment should be enriched to boost teachers' image and commitment to service.

The Examination Bodies

The focus here is the various examination bodies (WAEC, NECO, WASSCE) that need to be more responsive in the discharge of their testing duties rather than witch hunting culprits. The implication of this is re-designing a special welfare package for examination officials to discourage them from financial or material inducement from parents, students, or school heads. In addition to this, grassroot campaigns and

seminars should continuously be organized in all sectors of the educational system to internalize the true values of life and shed the vices of examination malpractice. The implication of this is that cherished moral values of honesty, hard work and self reliance will be restored within the examination bodies and schools.

The Policy Makers

There is need to formulate enduring antidotes to examination malpractice in the conduct of the senior secondary school examination. In the past and even recently, decrees, laws, edicts (Decree No.27 of 1973, Special Tribunal Miscellaneous Offences Act cap 410, Examination Malpractice Act No.33 of 1999) have been promulgated and enacted with sanctions and penalties spelt out for offenders and participants in examination malpractice. These penalties have not been effectively enforced by the authorities and bodies initiating them. In addition, these laws lack institutional framework for the implementation. The implication of this is that Examination Malpractice Commission should be created with a body independent and empowered to have its team of investigators and prosecutors. This should be devoid of government interference, and the provision for its funding backed by law.

The Government

The education sector in Nigeria is grossly underfunded; the implication of this is the short supply of space facilities and overcrowded examination halls in schools. An improvement in funding efforts will provide conducive teaching, learning and testing environment devoid of sharp practices associated with the examination process in the schools system.

Conclusion

The result of this study has shown that environmental-related factors are reliable predictors of examination malpractices in public secondary schools in Nigeria. The findings have specifically shown that deficient examination resources (human and material) are variables that can predict incidence of examination malpractice.

Recommendations

In line with the relevant provision of the Nigerian National Policy on Education, adequate attention should be given to relevant skills and attitude required in examination situations. Workshops and seminars on examination ethics should be organized for all stakeholders before examination, so as to acquaint them with preventive measures rather than curative measures for curbing examination malpractices.

Examination demands that acceptable space is provided, adequate seating arrangement made and venues properly lit for clear visibility. At least two or more invigilators should be provided to the smallest examination hall. Where large halls are used, the ratio of invigilator should be 1:20.

Invigilators should carefully inspect examination halls before allowing candidates in. During the inspection, all writings on tables, desks and walls should be rubbed off and floors properly swept. Candidates must be officially identified before admittance into examination hall to ward off impersonators by provision of attendance register for candidates to sign in and out of the examination hall.

Invigilation of examination calls for a high sense of discipline as well as mental and physical alertness by invigilators and involve the following; Staff deployed in the examination hall should be people with good organization ability who can work under stressed conditions over a length of time and are determined to complete each task within given time schedule.

Invigilator/examinee ratio should be such that will not bring about over-stretching or underutilization of invigilators. Too many invigilators may have adverse psychological effects on the candidate while too few will create room for inadequate invigilation and by extension, examination malpractices. Distribution and collection of answer scripts at the beginning and end of examination respectively must be systematic and call for vigilance.

Timing is a critical factor in examination. It involves effective management of examination and achievement of desired results. Time factor should remain in strict focus for all managers of the examination. It involves time to start procurement of materials, time to publish timetable, time to distribute materials, time to commence and end each examination. Supervisors should ensure that the time duration on

a question paper is strictly adhered to even if it is different from the time on the timetable for that particular paper.

Government should made provision for adequate funding to schools for purchase of adequate facilities. Government should also re-design a special welfare package for examination officials to discourage them from financial or material inducement from parents, students, or school heads. An improvement in funding may enhance testing environment devoid of sharp practices associated with the public examination process.

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