

Influence Of Examination Storage And Distribution Practices On Academic Integrity In Public Tertiary Institutions In Mandera County, Kenya

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Abstract

Statement of the Problem: Examination storage and distribution practices play a key role in ensuring academic integrity among students. However, there have been high levels of malpractice among students in public tertiary institutions in Mandera County and this creates doubts as to the levels of management of every step of the examination process.

Purpose of the Study: Thus, the purpose of this was to study to establish the influence of examination storage and distribution practices on academic integrity in public tertiary institutions in Mandera County, Kenya.

Methodology: This research employed mixed methodology and the concurrent triangulation research design. The target population consisted of 1394 respondents, including three principals and 150 College Tutors, seven Examination Officers and 1234 students from which 462 respondents were sampled using Yamane's Formula. From this sample, three principals and seven examination officers were chosen using purposive sampling. Conversely, from each college, 150 tutors were selected using purposive sampling and about 303 students were selected randomly. Through the application of this sampling procedure, the researcher successfully obtained a sample comprising three principals, seven examination officers, 150 teachers and 303 students. Qualitative data were analyzed thematically in line with the study objectives and presented in both verbatim and narrative formats. For the quantitative data, a descriptive analysis was conducted, utilizing frequencies and percentages. Inferential statistics were also done using Pearson's Product Moment Correlation Analysis using Statistical Package for Social Sciences (SPSS Version 23) and presented in tables.

Findings: The study established that many public tertiary institutions rarely adhere to examination storage and distribution practices as a strategy for improving academic integrity.

Recommendations: The study recommends that there should be enough security during distribution of examinations to eliminate examination malpractice. The examination distributors should also be trained on ethics and adherence to distribution practices with minimum supervision.

Keywords: Academic integrity, examination storage and distribution practices, public tertiary institutions

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I. Introduction

Academic integrity is the commitment to and demonstration of honest and moral behavior in an academic setting. According to Forsyth (2016), it is the expectation that teachers, students, researchers and all members of the academic community act with honesty, trust, fairness, respect and responsibility. In primary school context, academic integrity entails the expectation that learners and teachers uphold the rules and regulations governing the administration of examinations. However, attaining academic integrity has been a challenge in many primary schools worldwide. Forsyth (2016) further indicates that academic dishonesty may be more widespread than one can imagine. In the Netherlands, for example, a report by Beguin and Ehren (2011) shows that cases of examination cheating and other forms of dishonesty or malpractice stand at 23.8%. In Pakistani, examination integrity rates are also low at 65.9% (Bhatti, 2013). To mitigate these challenges, heads of schools have introduced a raft of examination storage and distribution practices.

Proper distribution of examination requires appointment of people of integrity to participate in packing of scripts, dispatching examination to examination centers or classes and in storage of the examination. In a study conducted in Omani, Al-Issa (2007) indicated that evaluation in the education process provides the means of finding out whether educational objectives are being attained. Al-Issa (2007) further indicated that evaluation in education has also come to be viewed by different scholars as: providing information for decision makers; the systematic investigation of the worth or merit of some object and an act of collecting systematic information regarding the nature and quality of educational objects. Evaluation should therefore be carefully designed and undertaken in a manner that it ensures fairness and objectivity on the outcome of the process. However, to

achieve such effective evaluation, the procedure of distribution of examination scripts should be brought into perspective.

In United Kingdom and other Commonwealth Nations, Wheeler (2007) posits that distribution of national examinations is the responsibility of Ministry of Education though management of examinations exclusively rests with the individual school. The scenario is similar in most Sub Saharan countries where such responsibilities rest with colleges though under the directive of the Ministry of Education. In Kenya, the distribution of tasks across the sample is such as to ensure statistically satisfactory coverage of an appropriate range of knowledge and skills without overloading or stressing individual students (MoE, 2020). The same applies to most tertiary institutions in Mandera County in which students receive the same set of questions. The tests are constructed so that in the same subject area they do not vary in difficulty. In Mandera County, this has not minimized cases of examination malpractice. For instance, a Ministry of Education report from (2020) indicates public tertiary institutions in Mandera have registered exam malpractice in the national examinations compared to the national grades as shown in Table 1.

Table 1: Statistics on Examination Malpractices in Mandera County

Year	Total Number of Candidates	Number Involved in Examination Malpractices	Percentage (%)
2015	181	31	17.1
2016	126	72	57.1
2017	174	77	44.3
2018	104	75	72

Source: Mandera County Education Office (2023)

Table 1 paints a picture of declining trend in the academic integrity of students in national examinations in public tertiary institutions due exam malpractice and this queries the academic integrity in managing these examinations. However, MoE (2020), as did other empirical studies, has not exhaustively indicated how examination storage and distribution practices are effective in determining students' academic integrity in examinations, hence the study.

Statement Of The Problem

Storage and distribution of examination scripts play a key role in ensuring academic integrity. However, as stated in the background, MoE (2020) and Table 1, shows high level of malpractice this creates doubts as to the levels of management of every step of the examination process. Academic integrity is still wanting since there is evidence of malpractice in the county. As noted in Table 1, in the year 2015, Mandera County had an exam malpractice at 17.1 %, 57.1 % in 2016, 44.3 % in 2017 and 72.1 % in 2018 (MoE, 2020). This points to a declining trend in the academic integrity in national examinations in public tertiary institutions. Despite this state of affairs, few empirical studies have interrogated the extent to which examination storage and distribution practices influence academic integrity in public tertiary institutions hence the study.

Objectives Of The Study

The study sought to examine the influence of examination storage and distribution practices on academic integrity in public tertiary institutions in Mandera County.

Theoretical Framework

The study was guided by the systems theory which was postulated by Luhmann Nklas (2004). This theory holds that an organization is a managed system that transforms inputs such as raw materials, people and other resources into outputs which is the goods and services that comprises its products. The rationale of using systems theory in this study is that it underscores the fact that examination management requires marshalling and organizing all the material and human resources needed for smooth examination conduct. In other words, effective examination management practices are key to academic integrity of students in tertiary institutions. The study was also guided by the Lemon Market Theory which was proposed by George Akerlof (1970). This theory holds that, in lemon markets, it is impossible to assess the quality of products and services, a situation where the seller of products or service has more information than the buyer which implies that the market will gradually decline and defunct.

The main issue here is that quality is not assessable beforehand, thus giving sellers' incentives to presents the products or service as being of higher quality than it actually is. In the application of this theory, it is impossible to assess the quality of products and services. The one selling has more information than the buyer meaning that the market will slowly decline and become obsolete. The quality of education cannot be assessed before it goes to the consumer. Dishonesty comes whereby the consumers are cheated. Students who graduate from tertiary colleges may become lemon products since their quality cannot be evaluated in the job markets.

Without proper examination management practices, there will be no academic integrity hence poor quality of education in tertiary colleges.

II. Research Methodology

This research employed mixed methodology and the concurrent triangulation research design. The target population consisted of 1394 respondents, including three principals and 150 College Tutors, seven Examination Officers and 1234 students from which 462 respondents were sampled using Yamane’s Formula. From this sample, three principals and seven examination officers were chosen using purposive sampling. Conversely, from each college, 150 tutors were selected using purposive sampling and about 303 students were selected randomly. Through the application of this sampling procedure, the researcher successfully obtained a sample comprising three principals, seven examination officers, 150 teachers and 303 students. Qualitative data were analyzed thematically in line with the study objectives and presented in both verbatim and narrative formats. For the quantitative data, a descriptive analysis was conducted, utilizing frequencies and percentages. Inferential statistics were also done using Pearson’s Product Moment Correlation Analysis using Statistical Package for Social Sciences (SPSS Version 23) and presented in tables.

III. Results And Discussions

This section presents the findings of the study based on the objective. It also outlines the methods of presentation of the study findings and discussions.

Response Rates

In this study, 150 questionnaires were distributed among college tutors, while 303 were given to students. The completed and returned questionnaires included 148 from teachers and 299 from students. Additionally, the researcher conducted interviews with three principals and seven examination officers, providing valuable insights. Table 6 displays the response rates for each participant group;

Table 2: Response Rates

Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)
Principals	3	3	100.0
College Tutors	150	148	98.7
Examination Officers	7	7	100.0
Students	303	299	98.7
Total	463	457	98.7

Source: Field Data (2024)

Table 1 shows that the response rates for each group of participants: 100.0% for principals, 98.7% for college tutors, 100.0% for Examination Officers, and 98.7% for students. The overall average response rate of 98.7% aligns with the suggested adequacy criterion of Creswell (2014), who considers a response rate above 75.0% as acceptable. The high response rates enabled the researcher to make meaningful generalizations of the study outcomes to the target population, providing confidence in the findings.

Examination Storage and Distribution Practices in Relation Academic Integrity in Public Tertiary Institutions

The research set out to determine how examination storage and distribution practices on academic integrity in public tertiary institutions. Results are shown in Table 3:

Table 3: Examination Distribution Practices

Examination Distribution Practices	College Tutors		Students	
	f	%	f	%
Packaging of scripts	30	52.6	45	19.5
Dispatching of examinations to different centers	17	29.9	56	24.2
Opening sealed envelopes	25	43.9	102	44.2

Table 3 reveals that just over half (52.6%) who are of the institution of higher education instructors said that packaging of scripts is the most common examination practice. However, a paltry (19.5%) of the students cited packaging of scripts as the common examination distribution practice. A small proportion (29.9%) of the college tutors mentioned dispatching of examinations to different centers as a common practice with only 24.2% of the students responding in favour. Though, a fair proportion (43.9%) of the tutors cited opening of sealed envelopes as a common examination distribution practice as did 44.2% of the students. Similar views

were expressed by the principals and examination officers. They stated that there are clear-cut procedures to be following while distributing examination. These include packaging of scripts, dispatching of examinations to different centers as well as opening of sealed envelopes. These findings affirm the fact that most tertiary institutions rarely distribute examinations to different centers which may in the long run impact on academic integrity among students.

Table 4: Views of College Tutors and Students on the Influence of Examination Distribution Practices on Academic Integrity in Public Tertiary Institutions

Test Items	REP	Ratings				
		SA	A	U	D	SD
		%	%	%	%	%
In public tertiary institutions, packaging of examination scripts is done to enhance academic integrity	TR	77.2	10.4	2.5	6.1	3.8
	ST	74.0	9.4	4.2	7.3	5.1
Public tertiary institutions ensure examinations are dispatched to different destinations to as a way of improving academic integrity	TR	868.4	15.1	3.2	9.1	4.2
	ST	61.9	13.7	5.2	8.9	10.3
Principals and tutors ensure opening of sealed examination envelopes to improve academic integrity	TR	84.2	5.6	1.4	5.1	3.7
	ST	87.9	3.9	2.8	3.9	1.5
In public tertiary institutions, arrangement for distribution of examinations is always undertaken as a practice for improving academic integrity	TR	57.9	13.4	3.7	17.3	7.7
	ST	51.1	13.9	6.7	18.3	10.0

Key: REP-Respondents; CT-College Tutors; ST-Students;

Table 4 shows that majority of the college tutors (77.2%) and students (74.0%) strongly supported the opinion that, in publicly funded tertiary institutions, packaging of examination scripts is done to enhance academic integrity while 10.4% of the college tutors and 9.4% of the students were in agreement. However, a paltry 2.5% of college tutors as well as 4.2% of students were unresolved, 6.1% of the college educators and 7.3% of the students differed whereas 3.8% of the college tutors and 5.1% of the students strongly differed. These results bolster the assertions of Al-Issa (2007) that to achieve such effective evaluation, the procedure of distribution of examination scripts should be brought into perspective. Majority 68.4% of the tutors and 61.9% of the students strongly agreed with the fact that public tertiary institutions ensure examinations are dispatched to different destinations to as a way of improving academic integrity, 15.1% of the tutors and 13.7% of the students contracted. However, 3.2% of tutors and 5.2% of students were undecided, 9.1% of the tutors and 8.9% of the students disagreed whereas 4.2% of tutors and 10.3% of students strongly disagreed.

These results support Norcini's (2003) assertion that an impartial assessment must be free from all errors in order to ensure equity which can be attained through proper distribution of examination require appointment of people of integrity to participate in packing of scripts, dispatching examination to examination centers or classes and in storage of the examination. Most of the college tutors (84.2%) and students (87.9%) strongly supported the view that institution administrators and tutors safeguard opening of sealed examination envelopes to improve academic integrity, 5.6% of the tutors and 3.9% of the students agreed. However, 1.4% of the tutors and 2.8% of students were undecided, 5.1% of tutors and 3.9% of the students disagreed whereas 3.7% of tutors and 1.5% of the students strongly opposed.

Majority (57.9% college tutors and 51.1% students) strongly concurred with the view that, in public tertiary institutions, arrangement for distribution of examinations is always undertaken as a practice for improving academic integrity, 13.4% of the tutors and 13.9% of students agreed. However, 3.7% of the college tutors as well as 6.7% of students were undecided, 17.3% of the college tutors and 18.3% of the students disagreed whereas 7.7% of the college tutors and 10.0% of the students strongly disagreed. These findings were consistent with the findings of KNEC (2012) which reported that, to ensure equity and fairness, there is need to enforce stricter rules during distribution of examinations.

Inferential Analysis

To verify the possibility of the influence of examination distribution practices on academic integrity, information was gathered regarding the overall number of examination chains. distribution which are often practised by tertiary institutions and KNEC Results. The outcomes are displayed in Table 5:

Table 5: Number of Chains of Examination Distribution Practices and KNEC Results

Number of Chains of Examination Distribution	KNEC Results (%)
2	25
3	29
4	45
5	59
6	76

Table 5 shows that, in cases where there are few chains of distribution of examination scripts, students register paltry academic grades whereas in instances where there are several chains or centers of examination distribution, there are fewer cases of examination malpractice and students register impressive examination test scores. The analysis of these outcomes using Pearson's Product Moment Correlation Test yielded the findings in Table 6:

Table 6: Relationship between Chains of Examination Distribution Practices and Academic Integrity in Public Tertiary Institutions

		Chains of Examination Distribution Practices	KNEC Results
Chains of Examination Distribution Practices	Pearson Correlation	1	.985**
	Sig. (2-tailed)		.002
	N	5	5
KNEC Results	Pearson Correlation	.985**	1
	Sig. (2-tailed)	.002	
	N	5	5

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6 shows a Pearson's Product-Moment method, which produced a coefficient of correlation of $r = 0.985$ and significant levels (p-values) of 0.002, which were less than the predetermined level of significance, 5% (0.05), that is, $p\text{-value} = 0.0020.05$. These results are of statistical significance, proving that there is a strong correlation between the quantity of exam chains of distribution and academic integrity. These findings were in line with those of research by Norcini (2003) that had a p-value of 0.027 which is less than 0.05.

Thematic Analysis

During the interviews, the principals and examination officers also answered in favour of the opinion that, in public tertiary institutions, packaging of examination scripts and eventual dispatching are done to enhance academic integrity. Principal, P1, noted;

In my college, after setting of examination, the scripts are packaged and sealed permanently. This has ensured that nobody gains access to the examination questions and has thus, improved the integrity of examinations which students usually undertake.

Examination officers also stated that packaging of examination scripts is the best practice which institutions have been advised to undertake to avoid examination leakages and other forms of malpractice. These opinions provide more support for Al-Issa's (2007) claims that to achieve such effective evaluation, the procedure of distribution of examination scripts should be brought into perspective. As noted earlier, this further implies that, fair evaluation must not contain any errors in order to ensure equity. which can be attained through proper distribution of examination require appointment of people of integrity to participate in packing of scripts, dispatching examination to examination centers or classes and in storage of the examination.

IV. Summary Of Findings And Conclusions

The study found that there are different practices adopted during distribution of examinations enhance students' academic integrity. It begins from packaging of scripts, dispatching of examinations to different centers and final opening sealed envelopes with packaging of scripts being most common amongst principals and college tutors; though has limited recognition amongst students. This means that most tertiary institutions rarely distribute examinations to different centers which may in the long run impact on academic integrity among students. However, from the study, many public tertiary institutions rarely adhere to examination storage and distribution practices as a strategy for improving academic integrity.

V. Recommendations

The study recommends that there should be enough security during distribution of examinations to eliminate examination malpractice. The examination distributors should also be trained on ethics and adherence to distribution practices with minimum supervision.

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