

**INFLUENCE OF EXAMINATION MANAGEMENT PRACTICES ON
ACADEMIC INTEGRITY IN PUBLIC TERTIARY
INSTITUTIONS IN MANDERA
COUNTY, KENYA**

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DECLARATION AND APPROVAL

Declaration by the Student

This research thesis is my original work and has not been presented for a degree in any other University or for any other award.

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Approval by the Supervisors

We confirm that the work reported in this research thesis has been prepared by the candidate under our supervision.

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DEDICATION

I dedicate this thesis to my wife, Zeitun Mohamed, sons, Muhammadshukri Ali, Muhammadamin Ali, Abdibasit Ali, Abdirahaman Ali and daughter, Hania Ali, for support.



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ABSTRACT

Enhancing academic integrity and certification credibility relies on effective examination management. However, Mandera County's public tertiary institutions face malpractices that undermine credibility. This study investigates examination management practices' influence on academic integrity in these institutions. Objectives include examining the impact of examination setting, storage, distribution, invigilation, marking, and grading on academic integrity. Insights from Systems theory, Academic Performance theory, and Examination Malpractice Lemon theory inform the research. To conduct the study, a mixed methodology was employed, utilizing 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. Quantitative data was collected from college tutors and students via questionnaires, while qualitative data came from principals and Examination Officers through interviews. To ensure validity, reliability, credibility, and dependability, a pilot study involved 10% of the total sample size (463 participants) from a neighboring county. Experts established face and content validity. Reliability was assessed using the test-retest method, with a resulting coefficient of $r = 0.725$, indicating commendable internal reliability. Credibility relied on data triangulation by multiple analysts, and dependability through detailed reporting of the data collection process. Data analysis identified recurring themes in respondents' experiences. Qualitative data underwent thematic analysis, aligning with the study objectives, and were subsequently presented in both verbatim and narrative formats. For the quantitative data, a descriptive analysis was conducted, utilizing frequencies and percentages. Additionally, inferential statistics were performed through Pearson's Product Moment Correlation Analysis using Statistical Package for Social Sciences (SPSS Version 23), and the findings were presented in tabular form. The study's outcomes revealed the existence of diverse examination practices that contribute to the enhancement of academic integrity. The study reveals that most tertiary institutions have not fully adopted crucial examination practices, including setting, distribution, invigilation, and marking. To address this, it proposes prioritizing training sessions for teachers to enhance their examination setting skills. Additionally, implementing ample security measures during examination distribution is crucial to curb malpractices. Adhering to invigilation specifications, considering the number of students per class, is also recommended. Standardizing marking and grading will allow students to compare their performance across institutions, promoting improvement. Effective implementation of examination management practices by the Ministry of Education is essential.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
APEL	Assessment of Prior Experiential Learning
ECZ	Examination Council of Zambia
EQM	Education Quality Management
ID	Identification Card
IEBC	Independent Electoral and Boundaries Commission
JAMB	Joint Admission and Matriculation Board
KNBS	Kenya National Bureau of Statistics
KNEC	Kenya National Examination Council
NACOSTI	National Commission for Science, Technology and Innovation
PBAF	Profile based Authentication and Framework
SPSS	Statistical Package for Social Sciences
USA	United States of America
VET	Vocational Education and Training
WAEC	West Africans Examination Council

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This part is dedicated to exploring essential elements of the research, encompassing the surveys' context, problem statement, purpose, goals, research questions, justification, importance, scope, confines, restrictions, and preconceptions. Moreover, it furnishes a compilation of operational definitions for key terms, ensuring precise comprehension throughout the research endeavor.

1.1 Background to the Study

The antiquity of academic dishonesty traces back to the earliest examinations. Scholars have observed that cheating was widespread even in the ancient Chinese civil service exams, where both examinees and examiners faced the risk of death as a punishment. Additionally, prior to the establishment of the American Psychological Association (APA) together with the Modern Language Association (MLA) around the close of the nineteenth century, there were no standardized guidelines for correctly citing quotations from other authors' works, potentially leading to numerous cases of plagiarism due to lack of awareness.

Cheating was prevalent on higher education institutions in the United States throughout the latter part of the nineteenth and starting of the 20th century, and students did not consider it shameful. It's surprising to learn that around halfway through the first half of the 20th century, more than two-thirds of learners admitted to stealing at least once. Fraternities even operated what were known as "essay mills," repositories of term papers that could be reused repeatedly by different students, often with only the paper's

written name being changed. However, as higher learning in the USA shifted in the direction of a meritocratic system, there was a growing emphasis on anti-cheating measures and the growing diversity of student populations held a more negative perception of academic dishonesty (Ruto, Kipkoech, & Rambaei, 2011). Examinations are a set of tests employed as measuring instruments or tools by tutors to assess and quantify the level of learning among their students, especially when there is a necessity to gauge a specific attribute or variable.

To manage exams and hence academic integrity, there is need to select the most appropriate measurement tools that measures accurately that particular attribute or variable of interest. Hence, a good examination enables the tutor measure and manage accurately the attribute that in most cases is learning. According to Bush (2010), examinations have been a crucial component of educational systems globally since ancient times, serving multiple functions in the learning process and impacting the curriculum and all stakeholders involved in the education system. However, for such examinations to achieve their intended objectives, their management in terms of setting, storage and distribution, invigilation, marking and grading, is key to such success.

In other words, the influence of examination management practices on academic integrity will be assessed as the curriculum implementation is affected by the colleges in terms of management and administration of examinations (both internal and external), that is setting, handling, marking and how such processes determine integrity of the examination. In the United States, Glaser and Silver (2014) draw attention to the actuality that multiple nations worldwide employ varying systems for measuring students' achievement, integrity, attitudes, and application of acquired knowledge within the school system, which significantly impacts the management of examinations.

For instance, in the Netherlands, college education traditionally concludes with examinations that assess integrity and competence in multiple subjects. These examinations consist of a combination of national and college-based assessments (Beguin & Ehren, 2011). A critical consideration concerning these examinations lies in ensuring that the intra and inter-year school results maintain comparability and uphold proper academic integrity. In the Netherlands, Beguin and Ehren (2011) reveal the implementation of various standard examination setting methods to guarantee academic integrity. Similarly, in Pakistan, Bhatti (2013) advocates for the adoption of more flexible examination arrangements, offering additional date options to accommodate both colleges and students while upholding academic integrity.

The final examination process in Denmark is divided into two separate parts: a school examination and a national examination. The examination syllabus, approved by the Ministry of Education, Culture, and Science, precisely outlines the elements to be assessed in each examination (MoECS, 2011). This meticulous approach is aimed at upholding academic integrity. In addition to specifying the content to be tested, the syllabus in Denmark also outlines the number and duration of the tests comprising the countrywide examination. Furthermore, colleges bear the responsibility of setting the school examination while ensuring the highest level of integrity. Annually, colleges are mandated to acquiesce their own school examination syllabus to the inspectorate, detailing the elements of the syllabus to be tested, the timing of assessments, the methodology for calculating marks, including test weights and re-sit opportunities.

The ultimate goal is to ensure the preservation of integrity throughout the entire examination process. This practice ensures that there is maximum academic integrity in the whole process.

Ehren, Leeuw, and Scheerens (2012) reviewed the Dutch Examination Systems, revealing that college examinations include multiple tests per subject, including oral, written, or hands-on tests. The examinations are created by colleges or test institutes and marked by students' own tutors. Additionally, there are tasks that are practical that receive no credit, but rather an acknowledgment of proper completion by the examinee. According to Ehren et al. (2005), the completion of these examinations and the subsequent submission of results to the inspectorate must occur before the national examinations commence.

In contrast, the national examination comprises tests containing open or multiple-choice questions, along with occasional practical components (Moss, 2011). There is simply an institution test for some subjects. Over the academic year, in Denmark, the national examination takes place in at least three sessions, namely, May, June, and August. All examinees participate in the May examination, while the June and August sessions are reserved for students retaking exams or those who missed the May examination. The responsibility for the national examinations lies with the Dutch Ministry of Education, and Cito is responsible for producing the examinations (Ehren et al., 2013). The grading process involves students' own tutors assessing the exams, followed by cross-checking by a tutor from a different school, all aimed at upholding academic integrity.

Throughout the history of modern education in Sub-Saharan Africa, public or external examinations have significantly shaped the academic landscape (Kellaghan & Greaney, 2014). In most countries, three major examinations are conducted, overseen by external agencies outside the educational institutions. Anglophone countries typically have a national examinations authority, whereas Francophone countries rely on their Ministry of Education to ensure the maintenance of academic integrity in all examinations.

In Nigeria, for example, a significant indicator of an education system is the superiority of learners it produces in terms of the aptitudes required for the nation's social, governmental, and fiscal expansion (Obanya, 2015). To assess the competences achieved by students in tertiary institutions through the education system, most colleges and universities conduct examinations. The Nigeria National Examination (NNE) is widely considered a high-stakes examination by the public.

In Kenya, the examinations' management practices such as setting, handling, marking of examination results are centralized and were adopted from the Cambridge Examination Board (Ingolo, 2009). Examination management practices can be made better and consequently improve the academic integrity, for example, examination markers, who teach students quit their colleges to take part in this lucrative activity, boosting their inadequate pay. Each script they mark earns them money, receiving compensation for each assessment they complete. This ensures academic integrity in the institutions. The examinations are placed in sub counties and guarded under tight security. The picking and returning of scripts should always be under armed guards. During the taking of examinations, supervision and invigilation is done by carefully selected staff. All these practices are meant to ensure academic integrity on the certificates issued.

Therefore, the remuneration one receives at the end of the marking exercise is directly linked to their marking speed. In other words, the faster they complete the marking process, the higher their earnings will be and this can better the academic integrity in the long run. Although decisions made based on termly and end-year results hold significant importance, the administration of examinations has consistently faced various challenges over time.

Obonyo (2010), in an assessment of flaws in examination practices in Kenya: a case of Kisumu East District, reported that the tendency of regional markers and examiners to disregard the possibility of rushing through the allocated scripts and requesting more would be unwise. Obonyo (2010) points out that, despite the fact that the files may be considered moderated, it is worth noting that only a sample undergoes moderation. This exercise may compromise the integrity of examinations' results.

Poor management of exams has seen instances of certain students receiving results for examinations they did not actually take. This could be as a result of mixture during marking and grading in the final analysis. Such occurrences have led to doubts among stakeholders, including parents, regarding the authenticity of students' results, prompting some candidates to request re-marking of their scripts. This undertaking also involves expenses, as it is not provided for free. Others have opted for assessment through overseas testing organizations, like the Cambridge Examination Board, which has a reputable history of evaluating and processing extensive examinations. Following the marking process, comprehensive Examiners Reports are prepared for each subject to support tutors (MoE, 2018). These reports analyze candidates' strengths and weaknesses, offer insights into the caliber of responses provided, and assess the examination's overall quality.

To ensure integrity in the whole process, there should be confidential setting of exams. The storage and distribution should be managed properly as well the invigilation during exams. Marking and grading have to be done with a lot of integrity among the examiners. In Mandera County, the management of examinations encompasses various dimensions, including setting and grading. The Ministry of Education (2020) mandates institutions to undertake tasks such as setting examination scripts, moderating, storing,

distributing, invigilating, marking, and ultimately grading the examinations. Nonetheless, the Ministry of Education (2020) contends that the supervision and management of each stage of the examination process in Mandera County remain inadequate, leading to concerns about the academic integrity of the examinations. 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 indicated 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 (2020)

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. To mitigate these changes, tertiary institutions adopt a multiplicity of practices during administration of examinations. But there was still considerable work to be done to investigate the effects of examination management procedures on academic integrity in tertiary institutions in Mandera County, hence this current survey.

1.2 Statement of the Problem

One of the primary ways to gauge students' abilities, knowledge, and attitudes regarding both fundamental and specialized fields of study is through examination.

This is possible through effective management of examinations with much integrity which begins with setting of examination, moderation, storage, distribution, invigilation, marking and grading. However, as stated in the background, MoE (2020) and Table 1, shows high level of malpractice this creates doubts as to the degrees of management for each stage of the exam procedure. There is still a lack of academic integrity because 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. Efforts to mitigate these challenges such as employment of more tutors have not registered much remarkable progress causing exam management difficulty and hence examination malpractices. A study done by Afolabi (2010) dealt majorly on the issue of setting exams ignoring the marking and grading of the same hence causing a research gap. Despite this situation, there lack many empirical research that explore how much the evaluation and scoring procedures used in examination management actually contribute to student performance, storage and distribution and invigilation influence academic integrity in public tertiary institutions hence justifying the birth of this current study.

1.3 Purpose of the Study

The primary aim of this survey was to evaluate the impact of examinations management practices on academic integrity within publicly funded tertiary institutions in Mandera County, Kenya.

1.4 Objectives of the Study

- i. To establish the influence of examination setting practices on academic integrity in public tertiary institutions in Mandera County, Kenya
- ii. To assess the influence of examination storage and distribution practices on academic integrity in public tertiary institutions in Mandera County, Kenya
- iii. To examine the influence of examination invigilation practices on academic integrity in public tertiary institutions in Mandera County, Kenya
- iv. To determine the influence of examination marking and grading practices on academic integrity in public tertiary institutions in Mandera County, Kenya

1.5 Research Questions

These topics of study served as the foundation for the investigation:

- i. What is the influence of examination setting practices on academic integrity in public tertiary institutions in Mandera County, Kenya?
- ii. To what extent do examination storage and distribution practices influence academic integrity in public tertiary institutions in Mandera County, Kenya?
- iii. How do examination invigilation practices influence academic integrity in public tertiary institutions in Mandera County, Kenya?
- iv. What is the influence of examination marking and grading practices on academic integrity in public tertiary institutions in Mandera County, Kenya?

1.6 Rationale of the Study

Research done in the area of academic integrity is quite essential since it would shed light to examination managers on setting, storage, distribution, invigilation, marking and grading exams in the effort to attain good academic integrity in the tertiary institutions in this country. This research may add academic value in that the scholars

and investigators in this field may be assisted to find basis to conduct other related researches. This research sought to establish how the academic integrity is being handled in the country and provide policy and framework to cater for the academic integrity issues in the years to come. This analysis may add value to setting, storage, distribution, invigilation, marking and grading of exams as far as academic integrity is concerned. The study may immensely contribute to the examinations' management practices. This survey used a combination of methodologies as its method of inquiry, involving the collection of both numerical and non-numerical data. The research design employed was concurrent triangulation design, enabling the simultaneous use and comparison of different data types

The methodology and the design enabled treasured results for the management of exams in this country hence the academic integrity in the results and certification. The policymakers such as the Ministry of Education may get valued information to enable them work out better policies on academic integrity. In tertiary institutions in Mandera County, quality of academic integrity is questionable. This is evidenced by low academic integrity in national examinations outcomes. As noted earlier, the administration of every stage in the examination process remains deficient, which is evident from the discontent expressed by numerous students register low academic integrity in national examinations.

However, limited empirical research have scrutinized the degree to which examination management practices influence academic integrity in public tertiary institutions. Thus, this research might add to the corpus of knowledge. by focusing more on the specific activities undertaken by tertiary institutions under every examination management practice as a strategy for improving students' academic integrity.

1.7 Significance of the Study

Students may profit from the survey results in that they may be subjected to a fair integrity conducted examination which may enhance their belief in the outcomes of examination results. Tutors in tertiary institutions may benefit from this study as its findings may help them to identify best examination management practices to enhance academic integrity among students. Parents may benefit in the sense that their children acquire quality education. The results of this inquiry may assist the Education Ministry and decision-makers in bettering the way exams are administered in institutions all across the nation. Ministry of Education, researchers and members of society may benefit from this study highlighting the importance of improved examination monitoring and integrity which may help in improving the academic performance.

The study is significant in that it may map a way forward for improving education and to ensure students have the right perception of the education system. Educational planners may benefit from the study in adopting collaborative strategies to bring communities and other education stakeholders on board in order to accommodate their interests, tastes and preferences. The Government of Kenya may benefit from this study in reforming education systems in Kenya. As such, the findings can be used as stepping stones towards reforming tertiary education in Kenya. Specifically, the study may give recommendations regarding examination procedures as well as actions that ought to be implemented to enhance them wherever possible.

In general, the study may contribute in the improvement of academic integrity college education in Kenya by giving recommendations to the government and other relevant stakeholders. The study may be useful to education planners and policymakers to understand the essence of examination management practices as critical dynamics in

realization of improved academic performance in public tertiary institutions. The practitioners and researchers may profit from the investigation in that it could provide a solid foundation for more inquiries in a related sector.

1.8 Scope of the Study

The research scope covered time, content, geographical, methodology, design instruments and theoretical scope. Whatever transpired throughout the years would help predict and enhance the way academic integrity was handled. The focal point of this investigation was done to look at the effects of examinations management practices on academic integrity within public tertiary institutions situated in Mandera County, Kenya. The selection of this particular location was motivated by the doubts surrounding the level of academic integrity practiced in the county. For the purpose of gathering data, the examiner used surveys as well as interview guides. There was a synchronous triangulation approach to the study. Finally, the study used three theories; one being for the independent variable and two being for the depended variable.

The study utilized the Systems theory to demonstrate the impact of examinations management practices, while the Academic Performance and Lemon theories were employed to assess academic integrity. Conducted in public tertiary institutions within Mandera County, the research aimed to evaluate the effect of examinations management practices on educational integrity within these institutions. The concurrent triangulation model was used in the study's mixed methodology, allowing for the simultaneous and equal application of qualitative and quantitative techniques. College tutors and students were given questionnaires to get quantitative information; administrators and test administrators were questioned to gather qualitative information. The investigation was conducted from January to May of 2021.

1.9 Limitations of the Study

The survey encountered the limitations as below: -

- i. The study findings might not be applicable to private tertiary institutions as there might be additional forces which influence academic integrity of students other than variables under investigation. In this case, the study recommended that further inquiries be conducted on academic integrity in public tertiary institutions, but with emphasis on different dynamics other than examination management practices.
- ii. Accessing critical documents on academic performance of students in national examinations in public tertiary institutions posed a big challenge for dread of unfair treatment. In this case, the researcher explained to them that the data were purely for academic purposes and that the aim of the study was to complement their efforts in improving students' academic integrity.
- iii. Minority of the participants were reluctant to volunteer the correct information for distress of victimization. In this scenario, the researcher clarified to them that the study intended at complementing their determinations of improving academic integrity in public tertiary institutions.

Delimitations of the Study

- i. The survey was demarcated to public tertiary institutions in Mandera County
- ii. In this scholarly work, data were collected from principals, college tutors and students and examination officers.
- iii. The research focused on the influence of examination setting, storage and distribution, invigilation and marking and grading practices on academic integrity in public tertiary institutions

1.11 Assumptions of the Study

The study relied on several underlying assumptions: -

- i. That relevant records on students' academic integrity were available and accessible at the tertiary institutions
- ii. That public tertiary institutions adopt a multiplicity of examination management practices to improve academic integrity
- iii. That examination setting, storage, distribution, invigilation, marking and grading practices influence academic integrity in public tertiary institutions.
- iv. That all the participants would be honest to volunteered correct information.
- v. That all interviewees would be supportive enough to answer back to research questions.

1.12 Operational Definitions of Key Terms

Academic Integrity: this means the scholarly honesty that should be in all exams is the level of achievement which are attained by students in examinations with high degree of honesty

Academic Results without Malpractice: exam outcomes which have no misconducts during the process of taking the tests

Appointment of Setters: this is to decide who formulates the exam questions so that they can be moderated and passed to the candidates

Credible Exam: tests that have no question marks as they have passed through trustworthy meaningful process and exam results free from malpractices

Credible Process: exam procedure that is unquestionable and that is trustworthy to produce exam results free from malpractices

Design Sitting Plans: this is the way candidates are arranged during the examination so that there is the recommended distancing and spacing

Exam Setting Practices: this means giving the possible exam questions by the setters

Examination Invigilation: is the process of monitoring the students as they do their examination to reduce incidences of malpractice. It involves recruitment of supervisors and invigilators, planning for invigilation and designing of examination seating plan.

Examination Management Practices: is the act of setting up a schedule and conducting an examination. It involves setting or test preparations, distribution, invigilation and marking of students.

Examination Marking Practices: the process of assigning scores to students answer sheets and ranking them based on the scores. It involves establishing the

marking panel, setting grading systems, moderating the results and eventual release of the results.

Examination Setting Practices: is the process of designing test items for students in tertiary institutions. It involves appointment of examination setters, selection of questions, format designs, and moderation of questions and preparation of marking schemes.

Examination Storage and Distribution Practices: the process taking care of examinations after setting and supplying the scripts to different colleges which act as examination centers. It involves packaging the examination scripts, opening of sealed envelopes

Influence: this is the effect caused the examination management practices

Storage and distribution Practices: this mean keeping exam papers safe and secure and making sure they are safe when they are being sent to the candidates

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section begins empirical review of the literature by examining the examinations management practices literature as well as academic integrity as the independent and dependent variables respectively. The empirical literature has examined covering all the four study objectives. Theoretical and conceptual frameworks were examined here too. There was identification of research gaps.

2.1 Empirical Literature Review

The empirical evaluation of literature captures events at the international, regional, nationwide and local levels of the study problem. Both variables that are independent and dependent are covered and all the four research objectives and the same number of the questions that the study endeavours to answer. Empirical review of literature based on the concept of examinations management practices and the concept of academic integrity as the independent and dependent variables respectively.

2.1.1 The Concept of Examinations Management Practices

The process of examination involves evaluating the level of a learner's accomplishment in specific learning tasks through spoken or written assessments. It provides a discriminative standard for individuals and serves to assess the realization of educational goals. To ensure impartiality and equality, proper management and evaluation must be free from any unethical practices. According to Argharwal (2007), exams are used for recruitment, accreditation, and progress updates to

legislators and parents. Transparent test results are a way to hold universities responsible and track the effectiveness of the system of higher learning. Exams are viewed as a measure for assessing the caliber of the school system in a country's economy, as stated by Crooks (2008). Exams are therefore a crucial part of the learning-teaching cycle and may be given internally or externally. Tests designed by instructors are frequently used by colleges to set and administer exams, particularly school-based exams. These college-level tests are given on a weekly, termly, sometimes end-of-year basis. In contrast, public examination bodies design and oversee the administration of external exams, often known as open-ended tests.

The act of expertly or creatively handling, regulating, directing, and arranging the use of resources such as materials, time, technological advances, and staff to accomplish organizational goals is the essence of management, as highlighted by the aforementioned assertions. A manager, either a single person or an entire group, is in charge of monitoring an organization, arranging work for productivity and efficacy, coordinating how assignments will be completed, and coordinating and regulating all crucial actions inside the company. The management team's responsibility is to organize and inspire people to carry out the duties necessary to meet the organization's goals; they do not manage themselves alone. To operate harmoniously, management incorporates a variety of aspects, including men and women, monetary assets, equipment, materials, processes, and markets.

This entails determining the degree to which a student has met the goals of particular learning assignments. Examinations, whether spoken or written, serve as tests of knowledge. Internal examinations employ discriminative criteria to assess individuals and determine the attainment of educational goals.

To ensure fairness and equity, proper management and evaluation must be free from any unethical practices. As Argharwal (2007) notes, internal examinations are utilized for purposes of selection, certification, and reporting progress to both parents and policymakers. Additionally, to track the effectiveness of the educational landscape and keep institutions of higher learning responsible, widely known internal assessment results are used. In light of these assertions, Crooks (2008) describes internal exams as a technique for gauging and evaluating the caliber of education in any nation.

Internal exams play a crucial role in the method of instruction and learning. They might be done internally or outside. The majority of the time, schools use exams created by teachers for internal assessments that are given weekly, biweekly, or at the conclusion of the school year. On the other hand, public internal examination organizations design and oversee the administration of external internal tests (public internal examinations). Amidst conducting internal examinations in many Sub-Saharan African countries, several challenges arise. Agbo (2011) noted some of these issues, including internal examination malpractice, large class sizes, subpar teaching quality, faulty assessment practices, and a dearth of qualified teachers within classrooms.

Similarly, in Nigeria, Wokocha (2004) brought to light problems such as score inflation and manipulation in relation to internal examinations. The process of conducting internal examinations presents a plethora of hurdles. These encompass managing a significant number of candidates, facing financial constraints, grappling with staff shortages, dealing with inadequate infrastructure, and experiencing a shortage of dedicated internal examination officials. Additionally, the unreliability of continuous assessment scores and the prevalence of internal examination malpractices further compound the challenges faced during this process (Agbo, 2011).

The existence of these challenges significantly impacts the effective administration of internal examinations, compromising the robustness of the internal evaluation as well as the dependability of the outcomes. In Kenya, the manner in which internal examination results are reported through the media plays a pivotal role in shaping the prevalence of malpractices (Afolabi, 2010). Teachers have historically been under pressure from the stakeholders in education, such as parents, quality assurance officials, schooling officers, and influential individuals, to ensure that their schools are depicted favorably in the print media.

Instructors and candidates are inclined to use unconventional strategies, such as cheating, under such stress in an effort to improve their mean performance ratings and gain media attention. These materials are used in educational contexts to accomplish the goals of colleges and universities of higher learning. These goals include generating graduates who are employable, growing awareness through research and publishing, and eventually promoting economic growth within society as a whole or country.

Successful leadership in the context of exams entails the skillful and inventive use of a variety of resources, including individuals (lecturers, learners, and supporting staffers), instructional materials and time, proper methodologies, and technologies, all while upholding the utmost ethical standards, as expounded by Crooks (2008). When these facets are adeptly implemented, educational institutions are poised to attain superior results and realize their established objectives. Nevertheless, should any stage of the examination management process employ inadequate techniques, it may pave the way for the emergence of various examination malpractices, such as content leakage or dishonesty. In such instances, examination question papers come into the possession of examinees before the scheduled exam, and their origin can often be traced back to the

printing press or individuals connected to the custody of these question papers. Moreover, it may involve the illicit movement of examination answer scripts, with candidates receiving external aid, either in transporting or executing answer scripts during the examination, which are surreptitiously prepared by accomplices colluding with invigilators, supervisors, and other examination personnel. Also possible is the unlawful entry of educational materials, question papers from the past that have been filled with notes, or copies of previously composed answers into the test room. While instructors or testing organizations may create well-designed test or questions for exams, the efficacy of the test hinges on proper management throughout its conception, execution, and evaluation phases. Negligence in overseeing these stages would defeat the purpose of the examination, as it would jeopardize the assurance of examination quality.

Ogunji (2011) asserts that the ramifications of inefficient examination management at any stage extend far beyond mere inconveniences; they constitute a significant societal menace capable of leading to a state's failure. There are significant political, socioeconomic, and political consequences to this issue. The individuals who emerge from education examination systems and subsequently assume various employment roles are essential pillars of society, necessitating individuals of trustworthiness and high qualifications, traits predominantly cultivated through effective and robust examination systems.

These observations further underscore the crucial significance of examination management, as examinee misconduct, or cheating, has become a common global occurrence. Academic fraud, primarily test cheating, has increased and reached alarming levels in many developed and wealthy nations across the world.

This phenomenon has become a deeply concerning issue in numerous countries worldwide, leaving many appalled and pondering the root causes of this problem. In essence, the purpose of examinations is to assess the extent to which students comprehend the subject matter they have been taught, ultimately allowing for the ranking of students based on their merit or competence. Consequently, no student should receive preferential treatment or gain an unfair advantage over others.

In Sub-Saharan African nations, the conduct of examinations presents a myriad of challenges. Within classroom-based examinations, Agbo (2011) identifies several prevalent issues, including examination malpractice, large class sizes, inadequate teaching quality, faulty assessment practices, and a scarcity of skilled tutors. Similarly, in Nigeria, Wokocha (2004) sheds light on concerns such as score inflation and manipulation during examinations. These hurdles encompass managing a substantial number of candidates, grappling with limited funding, staff shortages, inadequate infrastructure, and a dearth of dedicated examination functionaries. Furthermore, the unreliability of continuous assessment scores and the frequency of exam fraud exacerbate the complexities faced in this process (Agbo, 2011).

Consequently, these obstacles significantly impede the effective administration of examinations, undermine result reliability, and challenge the validity of the overall examination outcomes. Within educational institutions, the task of managing examinations falls under the purview of the academic registry. Commencing with classroom instruction, the examination management process entails a series of essential steps, ranging from formulating examination questions to conducting exams, evaluating student performance, and finally bestowing certificates of accomplishment (Irira, 2014).

Thus, colleges encounter the critical task of ensuring the authenticity of certificates through the seamless administration of examinations. Irira (2014) further accentuates the significance of effective examination management, which involves skillfully consolidating and overseeing every resource, whether supplies and intellectual necessary to facilitate smooth examination processes, thereby safeguarding against any malpractices that might taint the integrity of the examinations.

Zhang, Liu, and Zang (2014) assert that a critical aspect of examination management revolves around fortifying the entire process, encompass the creation of testing materials, printing, management of confidentiality and security, administration of tests, scoring of test-taking papers, reading of scores, analysis of exam papers, binding, and archiving. The examination management system, in accordance with Zhang et al. (2014), should rigorously verify that each suggested evaluation paper is built using reliable scientific concepts that are adapted to the various instructional material. Additionally, the administration of exams should be carried out in accordance with any exam reform that is unique to the kind of institution and its accreditation policies.

The efficacy of examination management relies on the establishment of well-defined protocols and the harmonious collaboration among diverse stakeholders. School authorities must proactively engage with lecturers, administrators, examinations unit staff, evaluation officers from various academic departments work with invigilators, security personnel, learners, and occasionally parents. These people's coordinated efforts are crucial for ensuring the effective and efficient administration of exams. Therefore, a good examination administration depends on the cooperation of all parties concerned.

This indicates that examination management practices entail a set of activities which principals engage in to improve classroom instruction. Watering, Gijbels, Dochy and Rijt (2014) emphasize that assessments undertake a pivotal role in the instruction and learning process, enabling instructors to make informed decisions within the classroom setting (Goodrum, Hackling & Rennie, 2013). These assessments serve not only as a means to assign grades and gauge students' attainment of objectives but have evolved into valuable learning tools.

Assessment practices include, but not limited to defining assessment purpose, designing assessment tasks, setting performance criteria, providing feedback and above all, monitoring learning outcomes. At the core of these assertions lies the paramount significance of assessment, acting as the epicenter of all educational activities. Every facet within the domain of education relies on assessment to establish its validity and measure its effectiveness. Stated differently, the quality of assessment directly impacts the standard for instructional supplies, procedures, and results, consequently influencing the overall quality of education experienced by society.

A study conducted in Kuala Lumpur by Hoge and Coladarci (2014) confirmed that assessment plays a pivotal role in evaluating students' actions and performance within the classroom environment. According to Hoge and Coladarci (2014), assessment is a crucial part of the instruction process in art and aids principals, pupils, and parents in evaluating learner progress. In other words, it illustrates aspects of learner progress that are not typically evaluated in external assessment. In keeping with these assertions, Jaime and Insuasty (2015) also indicated that assessment serves as a basis for professional development and principals who analyze the work of their pupils will see trends in learner performance that may be related to instruction.

In research conducted in Malaysia, Talib, Kamsah, Naim, and Latif (2014) found that there exists an anticipatory inclination for principals to formulate assessment procedures that are in line with guidance and expertise of educational assessment specialists. According to Talib et al (2014), such assessment practices are aimed improving academic integrity among pupils. However, the extent to which management of such programmes influence academic integrity of pupils in public colleges is yet to be established.

In an Indonesian study, Saefurrohman (2015) brought to light a proposed inclination. In borderline circumstances, more focus should be put on adding extra intellectual achievement information that clearly relates to the substance of the students' work in connection to the desired learning goals rather than relying on lack thereof data to decide final marks. The research further argued against giving students with critical evaluation that just labels their work as good or terrible without offering an explanation. Instead, a continuous and informative assessment feedback approach is encouraged, where students' strengths and weaknesses are clearly delineated, alongside constructive suggestions to enhance their academic integrity.

Saefurrohman (2015) states that principals are strongly advised to implement a comprehensive strategy by utilizing a variety of assessment techniques to acquire exact proof of learners' progress, ensure alignment with learning objectives, and give students useful feedback. These claims emphasize how important it is for principals to be able to pick and create acceptable assessment systems, which in turn guide instructional decisions. They should also demonstrate competence in administering, scoring, and interpreting both evaluations created by outside sources and those created by the principal.

Principals are essentially expected to use assessment data as a pillar for making wise educational decisions. They must create effective assessment-based grading policies, know how to effectively inform learners and other parties of the outcomes of the evaluation, and be alert in identifying and dealing with unethical, illegal, and improper behavior. Similar views were expressed by Gittman and Koster (2012) that pupils' academic integrity is dependent on assessment practices adopted by principals. In a study carried out in India, for example, Sarkar (2012) revealed that 45.9% of pupils' academic success in internal and national examinations is pegged on principals' task purpose, assessment, setting of performance criteria, provision of feedback and above all, monitoring of learning outcomes.

In Colombia, Jaime and Insuasty (2015) assert that achieving exceptional academic grades in internal and national examinations demands that principals demonstrate a profound understanding of the subject matter they teach. They must skillfully establish and put into practice learning intents that are in line with the guidelines and the course of study's objectives' depth and substance. Effective communication of these learning expectations to students is also crucial. Additionally, principals should possess comprehensive knowledge of the diverse purposes and applications of various assessment types and be adept at utilizing them.

Proficient analysis of assessment methods is imperative, as is providing students with constructive and meaningful feedback on their work. Furthermore, principals must exhibit the ability to develop scoring schemes that quantitatively assess students' performance, enabling them to make well-informed educational decisions. Jaime and Insuasty (2015) emphasize that principals must exhibit a high level of expertise in governing external valuations and adeptly construing their results to inform crucial

decision-making processes. Moreover, they need to effectively implement educational decisions that are grounded in assessment outcomes, while also skillfully communicating assessment information to students in a manner that motivates their learning. Additionally, a comprehensive understanding of the legal and ethical aspects associated with assessment practices is imperative. These demanding responsibilities place considerable pressure on examination officers, who essential to the systems for managing examinations. As a result, the effectiveness of test administration represents the key variable in determining the degree of success attained in a given exam (Irira, 2014).

Rukundo and Magambo (2011) contend that a meticulously conducted examination should yield consistent performances among students taking the same examination. Moreover, when groups of comparable candidates are examined on different occasions, similar results should be obtained, despite the fact that the exam is graded by a separate examiner. This emphasizes the significance of test truthfulness and dependability, which depend on the caliber of management and administrative processes (Walklin, 1990).

In accordance with Gronlund and Linn (1990), any motivated instructor or test administrator may efficiently give exams as long as they strictly follow the guidelines set forth for testing. These processes include encouraging students to perform to the best of their abilities, giving clear instructions for the administration of exams, precisely proactively keeping an eye on time, noting any important occurrences that could have an impact on test results, and quickly gathering test supplies. By adhering to these guidelines, the examination process can ensure its validity and reliability. Examinations involve more than just the day of testing; they require careful preparations and activities leading up to the examination day.

As Ibara (2008) points out, deans of educational institutions or schools submit the courses that need to be reviewed to the appropriate authorities to start the examination procedure. Questions for testing are then created. According to Nweze (2009), the construction of these questions should be tailored to the candidates' level of understanding and must align with the content taught by the examiner, adhering closely to the syllabus without venturing into unrelated areas.

Oyebade (1994) also underlined that departments must deliver question papers to the authorized examination office at least two weeks before any other exam and at least one month before the start of a semester exam. To guarantee correctness, uniformity, and coverage of the course content, these submitted question papers are next put through vetting. The resulting examination papers, together with their related marking systems, subsequently go through both internal and external moderation (Ibara, 2008). The exam schedules are created, communicated to the departments and testing locations for student awareness, and posted on noticeboards prior to the moderation process.

According to Oyebade (1994), every student is given a unique schedule for their exams at universities including the University of Birmingham, University of Liverpool, and Aston University. Likewise, when students have finished registering for their exams, all the supplies required to hold successful exams are asked (Ibara, 2008). When it comes to the acquisition of test materials, Gronlund and Linn (1990) underlined that testing authorities must safely preserve all examination materials, whether they are computer-based or paper-and-pencil-based, in secured rooms or cabinets that are constantly watched over. Access to such facilities should be restricted for staff involved in the examination process until the designated date, to

ensure the integrity of the examinations and prevent any compromise in the quality of the results. Rukundo and Magambo (2011) also suggested that testing authorities should inspect the contents of the packages containing the test materials upon receipt to ensure that the requested quantities are accurate before resealing them. Before the day of the examination, Rukundo and Magambo (2011) emphasized the importance of notifying students and parents about the time and date of the examination and reminding students to bring the necessary materials for the test. They also stressed the need to cater to students with special needs, ensuring that provisions are made for individuals requiring glasses or hearing aids.

Adequate plans for invigilation should be set up, and examination overseers must familiarize themselves with the supervision dealings, including timing, examination regulations, and any necessary test alterations. Ibara (2008) highlights that the test procedure entails a number of key processes, including the thorough printing and assembly of question-and-answer sheets, among other necessary procedures. These meticulous tasks ensure that the examination materials are ready for the forthcoming exams, following a thorough review of students' eligibility. Notably, eligibility criteria for the Nationwide Open University of Nigeria demand that applicants have finished matriculation and course registration, received reading materials for the relevant courses for at least 8 weeks, and they have effectively presented three Tutor-Marked Assignments (TMA).

Rukundo and Magambo (2011) further advocate for appropriate examination conditions, emphasizing the need for well-ventilated and well-lit rooms or centers where the exams will take place. The arrangement of seats should be designed to prevent students from easily peeking at each other's work.

To maintain the integrity of the examination, these rooms or centers should be securely locked, and prominent signs reading "Do not enter; examination in progress" should be displayed on entrance doors. The crucial role of test administrators in ensuring favorable conditions during examinations cannot be overstated, as even meticulous preparations can be undermined by mishandled circumstances. Therefore, learners head to the test halls or rooms to participate in the evaluation procedure when all the necessary preparations for an excellent examination have been painstakingly created and all admission requirements have been satisfied (Ibara, 2008). Then, normally at least 30 minutes before the start of the exams, a list of applicants' names and their matching seat numbers is shown in the examination rooms (Babatola, 2018).

Students are led to their designated desks in the examination halls or centers where their index numbers or an examination numerical data are written or put (Babatola, 2018). Invigilators distribute the list for the students to sign before the tests begin once they are situated in their allocated locations. The requirement that each student sign the examination register throughout the test process is emphasized by Mehrens and Lehmann (1999). Additionally, it is completely forbidden for applicants to enter the testing rooms during the first 30 minutes of the test or to leave during the last 15 minutes of the test.

An applicant who has to leave the test room while it's still being administered needs to be accompanied by an invigilator or other designated staff member. Candidates are permitted to seek assistance only from an invigilator and not from their fellow candidates for any questions or clarifications on the language of the test paper. In order to provide necessary support and guidance during examinations, proficient

sources of guidance are made readily obtainable at the various examination halls by the school or department responsible for conducting the specific examination papers (Babatola, 2018). This approach enables invigilators, who have the crucial role of ensuring strict adherence to all examination rules and reporting any violations promptly, to effectively address any queries or concerns raised by students in relation to the examination paper. To maintain the integrity of the examination process, it is essential to prohibit candidates from bringing any external materials, such as written works, printed content, and unprescribed calculators, or personal belongings, into the examination halls (Babatola, 2018). However, exemptions may be granted if specific materials are explicitly permitted in the rubric or instructions of the question paper.

In specific cases where complex calculations are required, such as in mathematics or scientific disciplines, it may be specifically allowed to use an academic calculator or a table of numbers. as part of the examination requirements. However, such allowances are clearly stated beforehand to ensure fairness and consistency (Babatola, 2018). It is crucial to maintain impartiality and uphold the integrity of the examination process, thus no invigilator should provide individual advice or support to any candidate concerning specific aspects of the examination (Rukundo & Magambo, 2011). Any necessary corrections or clarifications should be addressed to the entire group of candidates to ensure equal treatment and prevent any form of favoritism or unfair advantage.

Invigilators must refrain from providing any form of assistance to individual candidates as it undermines the validity of the examination results and creates an unfair advantage (Rukundo & Magambo, 2011).

Such actions can also demoralize other candidates who may perceive that certain individuals receive preferential treatment. It is essential for examination supervisors to keep candidates informed about the progress of the examination to ensure a smooth and well-managed process (Mehrens & Lehmann, 1999). Regular updates on the time remaining can be provided to candidates at specific intervals, for instance, at 15-minute intervals, to help them manage their time effectively and complete the examination within the designated timeframe.

Concentration is crucial for examination candidates to perform successfully, and avoiding interruptions is vital in maintaining this focus. Internal interruptions, such as a test administrator explaining an unclear question to the group as a whole, can disrupt candidates' concentration and should be minimized (Rukundo & Magambo, 2011). However, some distractions may be beyond the control of examination administrators or invigilators. Nevertheless, efforts should be made to eliminate all other distractions both indoors as well as outside the exam rooms to create an optimal environment for the candidates to perform at their best.

To foster a non-threatening environment in the examination hall, it is imperative that invigilators refrain from intimidating students while they write their examinations, as emphasized by Nweze (2009). Intimidation can create undue pressure on students, leading to potential memory lapses and hinder their ability to recall what they have learned. Moreover, Nweze (2009) recommended providing sufficient time for the examination and ensuring that question papers and answer scripts are ample. Adequate time allocation allows candidates to answer questions thoughtfully and thoroughly, without feeling rushed. Likewise, having enough answer scripts enables students to attempt more questions, thereby enhancing their overall performance in

the examination. After completing the examination, it is essential for candidates to remain seated until they have submitted their answered scripts to the invigilator in charge. Invigilators then collect all the examination materials, such as pencils and mathematical tables, from the candidates before allowing them to leave the examination halls. These post-examination procedures have been implemented by school managements to ensure the integrity and security of the examination process. By following these protocols, schools aim to uphold academic standards and maintain the credibility of the examination system.

Upon the culmination of the examination sessions, the gathered answer scripts are then submitted to the examination administrators for the rigorous grading process, as elucidated by Ibara (2008). In order to ensure a smooth and successful examination or testing procedure, the maintenance of cleanliness in the classrooms and exam rooms until all test materials and documents, whether utilized or not, have been accounted for by the test administrators, is of paramount importance, as underscored by Rukundo and Magambo (2011). This meticulous approach is crucial in upholding the precision, integrity, and fairness of the grading process and, in turn, the overall management of the examinations.

As per the recommendations of Rukundo and Magambo, examination administrators, especially invigilators, are advised to meticulously verify the number of answered scripts of examination candidates, ensuring they matched the entire number of names listed in the exam register of attendees. This practice effectively mitigates the occurrence of discrepancies where the attendance register indicates a student's presence in the examination hall, but their script is found to be missing. Additionally, to ensure the utmost security and integrity of the completed scripts,

they ought to be kept in an entity that is safe and locked, safeguarding them from any unauthorized access or tampering. These measures play a crucial role in upholding the credibility and reliability of the examination process. Upon securing the answered scripts, the examination process proceeds to the standardization phase, as emphasized by Ibara (2008).

During this crucial step, examiners meticulously familiarize themselves with the marking schemes and diligently assess the scripts. As a testament to the institution's commitment to quality control, the students' graded answer scripts, which have undergone evaluation by course facilitators, are subjected to careful scrutiny by team leaders to ensure consistency and uniformity in the marking exercises. Additionally, external examiners are entrusted with the task of reviewing the markers' performance to ensure impartiality and accuracy. Once the necessary approvals are obtained, the final results are made public on noticeboards and the internet, thus ensuring transparency and accountability in the evaluation process. This rigorous approach safeguards the integrity and reliability of the examination outcomes.

Babatola (2018) emphasized the critical role of external moderation by external examiners, which serves to ensure the appropriateness of set standards for awards, the comparability of students' performance standards with similar programs in other institutions, and the integrity of the assessment and examination processes. When the exam results are available, including coursework, module, and interim assessment findings, have been meticulously marked and evaluated, they are made public for students' access through posting on public noticeboards and announcements or publications at graduation ceremonies. Nevertheless, it is vital to acknowledge that examination results constitute personal data and should not be disclosed to others

without the explicit consent of the respective owners or candidates. Respecting individuals' privacy rights in this context is of paramount importance. As a result, the organizations in charge of publishing and disseminating exam results take on the responsibility of contacting students with information about where and how to get their results. Ibara (2008) pointed out that receiving feedback on students' exam performance is an essential component of efficient quality monitoring in examination management. Because of this, post-examination studies are carried out on a course-by-course basis to detect grade patterns and gauge the efficiency of teachers managing particular courses.

Additionally, test takers have the option to challenge their findings if they think there were procedural mistakes made during the marking of their answers or the computation or recording of their scores (Babatola, 2018). Examinee misbehavior has, regrettably, evolved into an unwanted but necessary component of every examination procedure in higher education. It is essential for educational institutions to remain vigilant in combating such misconduct and upholding the integrity of their examination systems. As Babatola (2018) elucidates, examination misconduct encompasses any improper, unjustified, or unbecoming behavior displayed by a candidate during the examination process, which includes engaging in activities that could provide them or others with an unfair advantage.

In response to such occurrences, if evidence of academic misconduct is found, candidates are brought in the presence of the disciplinary proceedings panel, and appropriate penalties are imposed upon those found responsible (Rukundo & Magambo, 2011). However, candidates who are deemed guilty of more severe offenses retain the right to appeal the decision of the Head of Department, provided

they can present valid grounds for their appeal. In many states in Sub-Saharan Africa, the set-up is the same with assessment practices adopted by principals being considered as critical in determining pupils' academic integrity. For example, in Nigeria, Obanya (2012) asserts that assessment practices such as setting assessment purpose, assessment tasks, assessment criteria, monitoring outcomes and feedback are critical determinants of pupils' academic success. According to Obanya (2012), students typically find alternative assessment strategies like projects and lab observations to be more engaging and motivating than standard evaluation systems like multiple-choice examinations.

The assessment procedures, according to Obanya (2012), allow administrators to grade academic success while taking into account students' conduct and effort. Abel, Sima, and Shavega (2020) report that assessment procedures implemented are recognized as key features in assessing academic integrity in both internal and national examinations, which describes a situation that is comparable in Tanzanian institutions. In the context of Kenya, the manner in which examination results are reported through the media has a significant impact on the prevalence of examination practices, as noted by Afolabi (2010). In the conventional education setup, a wide range of stakeholders, including parents, quality assurance officers, education officials, and influential individuals, place significant pressure on college tutors to ensure that their institutions receive positive media coverage by being perceived as high-performing establishments.

Unfortunately, this emphasis on media recognition can sometimes overshadow the importance of upholding academic integrity. Consequently, tutors and candidates may find themselves enticed to adopt unethical practices, such as cheating, in a bid

to artificially inflate their performance scores and secure a favorable portrayal in the media.

2.1.2 The Concept of Academic Integrity

The practice of upholding moral standards in all areas of academic activity and abiding by established norms and regulations while administering exams is referred to as academic integrity. Academic integrity is based on values like honesty, fairness, trust, and accountability, as stressed by the University of Wollongong (2017). In essence, it comprises maintaining integrity in the planning, execution, and submission of assignments and exams as well as encouraging integrity in relationships between students and between teachers and their pupils (Bertram & Drinan, 2018). The concept of academic integrity serves as a fundamental benchmark for every profession, ensuring the cultivation of a culture of trust and credibility in academic pursuits.

Throughout history, significant efforts have been devoted to combatting scholarly fraudulence (AD) at various levels of education, with the ultimate goal of averting the propagation of unethical practices into the professional world. A study conducted in Italy by Boehm, Justice, and Weeks (2019) underscores the paramount importance of upholding academic integrity for educational institutions. Such commitment not only adds value to the academic qualifications earned but also enhances the reputation of the institution itself.

Tertiary institution students' dedication to academic integrity has been extensively acknowledged, evident in numerous references to their achievements in conferences, official correspondence and statements. However, Smilansky and Shefatya (2010) highlight that despite this elevated recognition, there remains a prevailing lack of

understanding and relatively limited practical implementation of academic integrity measures worldwide. The experience of academic integrity, unfortunately, continues, both institutionally and nationally, confined to a small number of nations. Nonetheless, it serves as a crucial pillar for fostering transparency in higher education systems and ensuring the credibility of qualifications (Rubin, Kenneth & Coplan, 2010). Despite their broad scope, it is the fundamental role they play that renders academic integrity so vital. Emphasizing outcomes-based approaches, academic integrity influences various aspects of education, including curriculum design, teaching methodologies, learning strategies, and assessment practices, all while upholding quality assurance standards.

In the twenty-first century, academic integrity, according to Smith, Dalglish, and Herzmark (2011), is likely to play a bigger part in higher education, leading to a reexamination of basic issues regarding what, who, how, where, and when we educate and grade students. Amidst the current context of questioning the very essence and purpose of education, the significance of academic integrity becomes more pronounced than ever, serving as a vital instrument in elucidating the learning outcomes for students, citizens, employers, and educators within tertiary institutions. In the domain of curriculum design and development, academic integrity assumes a prominent role in driving educational transformation, particularly in early childhood programs. It represents a shift away from traditional tutor-centered perspectives, favoring a learner-centered approach that places the focus on the constantly changing interaction between instruction, learning, and evaluation.

According to Smith et al. (2011), learner-centered learning accentuates the interconnectedness of instructional design, delivery, and measurement, thereby underscoring the fundamental links that shape and govern the learning experience.

Academic integrity is a dynamic concept that extends its influence beyond the realm of early childhood curriculum design. Instead, it plays a pivotal role in a broader range of educational contexts, encompassing various aspects such as the fusion of academic and vocational education and training (VET), assessment of prior experience learning (APEL), creation of thorough frameworks for lifelong learning certifications, and creation of effective credit accumulation and transfer systems. These multifaceted applications exemplify the wide-reaching impact of academic integrity, not only in promoting coherence and efficacy in educational pathways but also in acknowledging and valuing learners' diverse experiences and accomplishments.

Bandura's emphasis on the importance of clearly identifying and measuring learning outcomes, with a focus on producing observable and measurable results, has been a significant driver in the development of the academic integrity approach among tertiary institution students. This approach has not only gained traction in nations like Australia, New Zealand, South Africa, Denmark, the United Kingdom, Ireland, Sweden and other regions of Europe, but it has additionally broadened its influence beyond vocational education and training disciplines to cover schooling as a whole. The evolving recognition of academic integrity's value across diverse educational contexts and subject domains underscores its pivotal role in promoting transparent and effective learning outcomes for students at all educational levels.

Academic integrity serves as a clear and comprehensive statement of the expected knowledge, understanding, and capabilities that learners should be able to demonstrate upon completing a specific learning period. These statements explicitly outline the learning outcomes, representing the tangible results of education. Typically, academic integrity encompasses a diverse mix of knowledge, skills, abilities, attitudes, and

comprehension that individuals achieve through successful engagement in college-level activities. The academic integrity attitude signifies a conceptual shift in the direction of imbuing learning with greater meaning and effectiveness. In many instances, tertiary institution students may view education as detached intellectual labor, lacking personal relevance. To make learning more meaningful for such learners, it is vital that they develop a perception of the educational journey as a means to enrich and empower their lives, rather than solely as a task aimed at fulfilling external expectations. Encouraging a sense of ownership and purpose in education can foster greater engagement and deeper learning experiences, ultimately contributing to a more fulfilling and impactful academic journey. (Smith et al, 2011).

The academic integrity approach, with its emphasis on explicit knowledge application, grants the educational community a profound comprehension of the purpose behind educational endeavors. By defining what students are expected to achieve with their knowledge, educators can design meaningful learning experiences that align with real-world applications. Moreover, adhering to academic integrity not only benefits individuals academically but also positively impact their overall well-being. Embracing honesty and ethical practices reduces undue stress in life, contributing to heightened happiness, improved health, and enhanced productivity.

For instance, a student who enters a test room with the purpose of cheating may experience heightened anxiety, which can hinder their ability to think clearly and perform well, even if cheating attempts do not occur or are thwarted. Students who uphold academic integrity approach exams and learning experiences with confidence, leading to better academic outcomes and overall fulfillment. This shift towards meaningful learning experiences empowers individuals to view education as a means to

enrich their lives, rather than merely complying with external demands. In India, educators express genuine concerns about academic misconduct, requiring more than just preventive measures, as Davis, Grover, Becker, and McGregor (2016) advocate. Cultivating a culture of academic integrity involves fostering trust through open dialogues and clear communication, while offering ample opportunities for learners to showcase their knowledge. Identifying and addressing academic misconduct are integral components of this approach.

Institutional support plays a vital role, encompassing robust policies, positive integrity campaigns, student involvement, and comprehensive training (Davis et al., 2016). Developing learners' moral vocabulary, teaching appropriate responses to cheating, and inspiring self-belief are pivotal for promoting academic honesty. Nevertheless, academic misconduct remains a persistent issue, as Lambert, Hogan, and Barton's (2013) study revealed, with 83% of students admitting to cheating. A comprehensive approach is needed, focusing on building an academic integrity culture and instilling accountability among learners. By fostering an environment that values and upholds academic integrity, we can address this challenge effectively.

Awaah (2019) in Ghana revealed that children aren't naturally inclined towards integrity and its associated behaviors, such as honesty and social responsibility. Instead, academic integrity is instilled through cultural socialization, with schools playing a pivotal role in this process. By observing adult role models and peers, students develop a grasp of integrity principles, extending its influence beyond the classroom to other areas of their lives. Emphasizing academic integrity in education helps shape responsible and ethical individuals who make positive contributions to society. In different countries, many learning institutions have not upheld academic integrity in

practice, except in lip-service. In Uganda, a report by Asankha and Yamano (2011) reveals that academic integrity has been low in national examinations. Academic integrity embodies the steadfast commitment to ethical principles in all academic pursuits and the strict observance of rules and regulations during examinations. According to the University of Wollongong (2017), it entails conducting oneself with unwavering honesty, fairness, trustworthiness, and a profound sense of responsibility.

In essence, academic integrity encompasses truthfulness in all aspects of academic tasks, including assignment preparation, completion, and submission, along with fostering respectful exchanges between learners and instructors, as well as regarding learners and their teachers (Bertram & Drinan, 2018). It stands as a crucial cornerstone in every profession. In the past, considerable attention has been dedicated to combating academic dishonesty across different educational levels, aiming to avert the transfer of unethical undertakings to the professional sphere. A study conducted in Italy by Boehm, Justice, and Weeks (2019) revealed that upholding academic integrity is of paramount importance for institutions, as it not only adds value to the academic qualifications obtained but also enhances the reputation of the institution itself.

Scholarly honesty encompasses upholding moral standards in academic exertion, fostering honesty, fairness, and trust in interactions among students and educators. It is a crucial benchmark for every profession and contributes to a meaningful and effective learning experience. Studies emphasize the importance of maintaining academic integrity to enhance the value of qualifications and uphold the reputation of educational institutions. Acting with integrity not only benefits individuals by reducing stress and promoting well-being but also ensures a fair and transparent assessment of learning outcomes.

In India, educators are focused on minimizing academic misconduct through open communication, clear policies, and student involvement. Davis et al. (2016) propose that creating a culture of academic integrity entails fostering trust through open communication, offering multiple opportunities for learners to showcase their knowledge, actively identifying academic misconduct, and implementing strong institutional support with clear policies and integrity campaigns. Student leaders' involvement and comprehensive training programs for all university members are crucial components. The authors assert that learners develop academic honesty when their moral values are reinforced, and they learn how to respond appropriately to cheating.

By using meaningful quotes and inspiring students to believe in themselves, a positive impact on academic integrity can be achieved. Nonetheless, instances of academic misconduct persist despite these efforts. In a study by Lambert, Hogan, and Barton (2013), it was discovered that as many as 83% of the population of students acknowledged to engaging in cheating of some kind, with some students confessing to multiple instances of such misconduct. Similarly, Awaah (2019) conducted research in Ghana and established that integrity-related attributes, such as honesty, honor, respect, authenticity, social responsibility, and courage, are not innate qualities in children. Instead, academic integrity is cultivated through cultural socialization, influenced by various aspects of a teenager's life, including their experiences in schools.

According to Awaah (2019), within the school environment, pupils imbibe the principles and actions that support moral conduct by observing the conduct of adult role models and peers. Their understanding of the fundamental principles of academic integrity serves as a significant factor in this process.

As students grasp the concept of integrity in the classroom, they are better equipped to apply these principles to shape their actions and choices in other spheres of life. In different countries, many learning institutions have not upheld academic integrity in practice, except in lip-service. In Kenya, for example, cases of examination malpractice and dishonesty have been on the rise. In line with previous findings, Kiogotho (2019) reported that despite acknowledging the ethical implications of cheating, approximately 21% of students still succumb to such behavior. Kenya has also not escaped this issue. Siringi (2019) highlights that more than 60% of post-secondary and higher education learners acknowledged to using exam cheating techniques.

The Kenya Certificate of Secondary Education (KCSE) test revealed that 1.5% of pupils who took part were found to have cheated, according to Khaemba (2020). Masaba District had the second-highest percentage of cheating instances (4.56%) throughout the 2018 KCSE exams, after only Migori District (0.79%). 1,205 applicants who were suspected of cheating in the 2017 KCSE test had their scores thrown out (Magoha, 2018). Kenya, like many other regions, has witnessed a surge in cases of examination malpractice and dishonesty. As previously mentioned, Kiogotho (2019) highlighted that despite acknowledging cheating as unethical, nearly 21% of students still participate in such behavior.

Regrettably, Kenya has also been impacted by this problem. According to Siringi (2019), more than 60% of Kenyan college and university students admitted to using fraudulent testing strategies. Approximately 1.5% of pupils who took the Kenya Certificate of Secondary Education (KCSE) test were alleged to have cheated, according to Khaemba's (2020) results. Additionally, Masaba District registered a significant 4.56% rate of cheating during the 2018 KCSE exams, coming in second only to Migori

District with 0.79% occurrences. Similar to this, 1,205 applicants who were suspected of cheating in the 2017 KCSE test had their scores thrown out (Magoha, 2018). These statistics highlight the concerning prevalence of examination malpractice in Kenya. In an assessment of flaws in examination practices in Kenya: a case of Kisumu East District, Obonyo (2010) reported that the tendency of regional markers and examiners to rush through the allotted scripts and ask for more. Obonyo (2010) notes that instances of students receiving results for tests they did not take are due to inadequate exam management and evaluation. Examination malpractice in Kenya has led to doubts about result authenticity, prompting some candidates to request remarking of their scripts to address the issue. Immediate actions are needed to tackle academic dishonesty and restore examination credibility.

Ministry of Education (2019) noted that there have been cases of examination malpractice in different primary schools and this has led to interdiction of many headteachers. Additional report by the Ministry of Education (2021) signposts that levels of academic integrity in public primary schools have gone down from 78.3% to 54.1% within a period of five years (2017-2021). This points to the magnitude of dishonesty that exists in the examination sector.

2.1.3 Examination Setting Practices and Academic Integrity

Beguin and Ehren (2011) emphasize that the careful design of tests, whether low-stakes or high-stakes, is crucial in accurately assessing students' understanding and competency in applying course content. There are certain criteria that a good examination must satisfy; they include objectivity that is free from scoring subjectivity or scoring biases. Beguin and Ehren (2011) further argue that, for this to be accomplished it means that the tasks in the exams must be very definitive such

that the reasons for awarding or withholding a mark are obvious both to the tutor and student. Test developers often encounter significant variability in the time and effort required to prepare an examination (Rowentry, 2009). Psychometrically sound exams must possess both reliability and validity. Reliability indicates consistent and reproducible results, with students performing similarly across different versions of the test.

Rowentry (2009) emphasizes that the validity of an examination is contingent on its reliability and its ability to assess the pupils' targeted knowledge and skills. In order to ensure validity, an accurate representation of the goals of instruction must be covered, and students must demonstrate that they have the necessary proficiency to complete those objectives. Test takers must meet a variety of time and effort requirements in order to achieve what they want as grades or scores on various exams. Well-designed exams should include Bloom's six cognitive areas of expertise, as laid out by Bloom (1994). Bloom's cognitive domains encompass a range of skills and abilities required for effective learning and assessment.

These domains include knowledge, which involves recalling facts and concepts without necessarily understanding their significance; application, which lets students use newly learned skills to address issues in unfamiliar contexts; comprehension, where students show comprehension by coordinating, contrasting, translating, and summarizing key concepts; analysis, in which pupils look at material, dissect it into parts, pinpoint connections, deduce reasons or motives, and gather proof to back their conclusions; synthesis, which enables kids to build patterns or structures out of various components and combine pieces to create a cohesive whole; and lastly, assessment, which gives pupils the ability to express and defend perspectives,

evaluate information, determine the veracity of ideas, and analyze the caliber of work using predetermined standards. In the realm of test construction, the amount of time and effort invested by a test developer is contingent upon various factors, as emphasized by Walsh and Betz (2005). These factors encompass the importance of the exam, the test takers' degree of skill, the structure of the test, class size, the test due date, and the background of the test creator. Notably, the process of test creation has been facilitated by certain advantages.

For instance, many test developers were once students themselves, which enables them to draw from their own testing experiences, leading to the adaptation or incorporation of relevant test questions from their past encounters (Walsh & Betz, 2005). This firsthand familiarity with being a test taker allows developers to enhance the quality and appropriateness of the test items they incorporate. Publishers of instructional literary works sometimes provide extensive teaching packages to university professors in several nations, such as the United States, who use their books for a variety of disciplines. (Zoeckler, 2007). These packages may include test banks containing a substantial number of peer-reviewed, time-tested, and moderated sample test questions, amounting to thousands in some cases. Instructors utilizing such test banks can conveniently select a specific number of questions to form their own tests.

Regarding the preparation time for test takers, Zoeckler (2007) contends that it is influenced by elements including the test's severity, its creator, and its relevance. In general, non-standardized examinations that are brief, often given, and have little bearing on the final grade or score for the course do not need substantial prep from test takers.

On the other hand, inconsistent examinations that are lengthy, uncommon, and do contribute significantly to the test taker's total course grade or score typically need a significant amount of preparation time. These results support the idea that exams play a significant role in graduate school. How, when, and what students study has a significant influence on the exam format and questions. Exams should be utilized as an instructional instrument to affect the learning process as well as a control to ensure that a student is qualified. Students will learn, memorize, and recall information and details if the evaluation is largely focused on practical knowledge.

In the context of 13 motherlands, including Belgium (French and Flemish Communities), Ireland, Hungary, Finland, Spain, France, Lithuania, Austria, the United Kingdom (Scotland), Estonia (for tutors only), Romania and Iceland, test questions are complemented by background questionnaires administered to school heads, tutors, parents, and/or students (Hargreaves, 2001). This practice is predominantly applied to tests and examinations conducted for monitoring purposes. The data collected through these questionnaires delve into various aspects, such as learner's financial status, motivation, social networks, and general school atmosphere (Frery, 2008). The survey includes questions on prior teaching experience, participation in career-advancing activities, endorsed methodologies for instruction, and other pertinent subjects.

The comprehensive data collected through these questionnaires facilitates a thorough contextual analysis of test results, enabling the identification of various factors linked to colleges, tutors, home background, and students that may significantly impact academic performance. Jennings and Bush (2006) revealed that the inclusion of identical questions in national examinations varies among countries. While the majority of countries employ the same questions for all students taking a specific test, in Ireland,

France, Romania, and Lithuania this practice is limited to certain national tests, as other examinations may feature different sets of questions (Jennings & Bush, 2006). There are certain criteria that a good examination must satisfy; they include objectivity that is free from scoring subjectivity or scoring biases. Cognizant of these assertions, Beguin and Ehren (2011) argue that, for this to be accomplished it means that the tasks in the exams must be very definitive such that the reasons for awarding or withholding a mark are obvious both to the tutor and student. Test developers face significant variability in the time and effort required to design a test, as noted by Rowentry (2009). Similarly, test takers experience diverse challenges in terms of the amount of effort and time required to get the grade or exam result they want.

Walsh and Betz (2005) conducted a study in New Jersey, revealing that the time and effort required for test construction vary significantly depending on factors such as the test's importance, the proficiency level of the test takers, the exam's structure, number of students, test the due date, as well as the developer's background. The endeavor of creating tests has been made much easier by the fact that many test developers were once students themselves, allowing them to adapt test inquiries from their own creations to change or adopt past examinations (Walsh & Betz, 2005).

Publishers that publish instructional books frequently provide thorough teaching packages, including test banks, to university professors who use their books for a variety of disciplines in several nations, such the United States (Zoeckler, 2007). These test banks are made up of a sizable database of up to 4,000 sample exam questions that have been rigorously peer reviewed, time tested, and moderated. When creating their examinations, instructors using the aforementioned question banks can pick from the collection a certain number of questions.

Similar to how tests are constructed, elements like the frequency of the test, the person who created the test, and the importance of the exam all affect how much time is needed for preparation (Zoeckler, 2007). In a broader sense, non-standardized tests that are brief, administered frequently, and hold minimal significance in the entire grade for the course or score is not required for extensive preparation from test takers. Conversely, non-standardized tests that are extensive, infrequent, and carry substantial weight in the test taker's final course grade or score generally demand significant preparation.

Moreover, test developers enhance the test questions with background questionnaires targeted at various stakeholders, including school heads, tutors, parents, and students, from the following 13 countries or regions: Austria, Belgium (French and Flemish Communities), Estonia (for tutors only), Finland, France, Hungary, Iceland, Ireland, Lithuania, Romania, Spain, the United Kingdom (Scotland), and others (Hargreaves, 2001). This practice is predominantly implemented in tests and examinations organized for monitoring purposes. Frary (2008) indicates that the gathered data encompasses various aspects, such as the socioeconomic status of the learners, their drive, the help that is available, and the general atmosphere of the school. Along with other pertinent questions, the background surveys ask about teaching experience, participation in professional development programs, preferred teaching styles, and other factors.

By analyzing the gathered evidence, it becomes conceivable to conduct a circumstantial analysis of test fallouts and identify elements related to colleges, tutors, home background, and students that may impact performance. For instance, Austria, Belgium (French and Flemish Communities), Estonia (for tutors only), Finland, France, Hungary, Iceland, Ireland, Lithuania, Romania, Spain, and the United Kingdom (Scotland) among others.

Some countries have all students answering the same questions in a particular test, while others, like Ireland, France, Lithuania, and Romania, apply this approach to only some national tests, having different questions for other exams. Contrarily, in most Sub-Saharan African countries, the questions in a national examination either remain similar or differ periodically, not being identical for all students taking the test (Vandeyar, 2005). The variation of test questions in different countries is driven by various reasons, ranging from catering to individual learning alterations and desires to operational contemplations for test investigation and evaluation, as well as the desire to thwart cheating (Vandeyar, 2005). For instance, in four countries, questions are tailored to accommodate individual learning levels and needs.

In Nigeria, national examinations based on ICT are specifically modified to the unique levels of each student, presenting personalized tests that challenge them accordingly (Agbo, 2011). Similarly, in Morocco, students taking the 'junior certificate' are provided with test papers that range in complexity, including upper, standard, and basic levels. Certain educational systems allow students to choose from different question sets within test papers. For instance, in Botswana, the optional national curriculum assessment for 14-year-olds includes four tiers in mathematics, assessing various levels of achievement. Tutors determine the most suitable tier based on each child's ability, enabling a more personalized assessment of their knowledge and skills. This approach ensures that students can demonstrate their proficiency at the appropriate level.

In the realm of science, there exist two tiers, each designed to assess different levels of competency. As is the case with the mathematics assessments, tutors carefully assess and determine the tier that aligns best with the individual abilities of each child, thus facilitating a tailored and personalized approach to evaluation.

There are certain criteria that a good internal examination must satisfy; they include objectivity that is free from scoring subjectivity or scoring biases. Cognizant of these assertions, Beguin and Ehren (2011) argue that, for this to be accomplished it means that the tasks in the exams must be very definitive such that the reasons for awarding or withholding a mark are obvious both to the teacher and student. Test developers encounter significant variability in the time and effort required to prepare a test, as noted by Rowentry (2009). Similarly, test takers also experience substantial diversity in the time and effort they need to invest in order to achieve their desired grade or score in a particular test.

Walsh and Betz (2005) conducted a longitudinal study in New Jersey, revealing that the time and effort required for test construction by test developers depend on various factors. These factors include the weight of the exam, test takers' knowledge, and test structure, number of participants, test time constraints, and the assessment developer's background. In addition, it has made the process of creating tests easier by the fact that many test developers were once students themselves, enabling them to adapt or adopt test questions from their previous experiences (Walsh & Betz, 2005).

In certain countries, like the United States, educational book publishers frequently offer comprehensive teaching packages to college professors that use their published works for a variety of themes (Zoeckler, 2007). These teaching packages often include test banks, which are made up of up to 4,000 sample exam questions that have been extensively tested, moderated, and subjected to peer review. When using these test banks, teachers may easily create their examinations by choosing a certain amount of test inquiries from the bank. Zoeckler (2007) argued that the preparation time for a test is influenced by factors such as the regularity, the developer's knowledge, and the

significance of the test. In essence, unstandardized tests that are short, frequent, and carry less weight in the overall course grade do not demand extensive preparation from the test taker. On the contrary, non-standardized examinations that are time-consuming, uncommon, and have a big impact on the final evaluation of a course often demand a lot of preparation from the test taker.

Incorporating background questionnaires alongside test questions is a common practice in 13 countries or regions, including Austria, Belgium (French and Flemish Communities), Estonia (for teachers only), Finland, France, Hungary, Iceland, Ireland, Lithuania, Romania, Spain, the United Kingdom (Scotland), and others (Hargreaves, 2001). These questionnaires are primarily used in tests and internal examinations for monitoring and assessment purposes. They capture important information on the social and economic standing of students, their drive, available resources, and the general climate of the school, offering insights into variables that might affect test results. The information gathered relates to students' socioeconomic status, drive, available supports, and learning environment (Frary, 2008). Additionally, the questionnaires for teachers encompass topics such as teaching experience, professional development activities, and teaching methods.

The information gathered through these questionnaires allows for a contextual analysis of test results, enabling the identification of factors related to schools, teachers, home background, and pupils that might influence performance. This comprehensive approach facilitates a deeper understanding of the variables that can impact test outcomes and aids in devising targeted interventions to enhance overall academic achievement. In the context of Finland, Jennings and Bush (2006) revealed that the level of inclusion of undistinguishable questions in a state internal examination varies among

countries. In the vast majority of nations, the questions on a given test are the same for all students taking it. This only applies to some national exams in nations like Lithuania, France, Romania, and Ireland and the questions in other exams could be different (Jennings & Bush, 2006). Contrarily, in the majority of Sub-Saharan African nations, questions in any particular state internal assessment frequently display resemblance or variation and are not identical for all students taking the test (Vandeyar, 2005). This diverse approach in question selection reflects the varied strategies employed by different countries to assess pupils' knowledge and competencies in their respective education systems.

The reasons behind varying the questions in national internal examinations range from accommodating individual learning variations and requires to concerns regarding methodology for assessment synthesis and assessment, as well as a need to avoid cheating by students or teachers (Vandeyar, 2005). As a result, certain countries adopt the practice of customizing test questions to suit pupils' diverse learning levels and requirements. For instance, Nigeria's national internal examinations, which are ICT-based, are meticulously adjusted to match each pupil's proficiency level, thus providing a personalized testing experience (Agbo, 2011). Similarly, in Morocco, pupils taking the 'junior certificate' are presented with internal examination papers of varying difficulty levels, including higher level, ordinary, and foundation, providing them with choices that align with their aptitude and capabilities.

This flexible approach in question selection reflects an effort to cater to the unique educational needs of pupils and to create equitable assessment opportunities for all students. In Botswana, the curriculum assessment for 14-year-olds offers an optional assessment with four different tiers for mathematics, each designed to evaluate various

levels of achievement. The teachers play a pivotal role in determining which tier is most suitable for a child's abilities and learning progress. Additionally, in the realm of science, there are two distinct tiers, each assessing different aspects of knowledge and skills. Much like with the mathematics assessments, teachers take on the responsibility of assessing and selecting the appropriate tier based on individual students' capabilities, allowing for a more personalized evaluation that caters to their unique learning strengths and challenges. This tiered approach in curriculum assessment ensures a more tailored and effective educational experience for students.

In both Kenya and Uganda, the testing system follows a tiered approach, with tests categorized from A to F, aligning with specific attainment outcomes for pupils at various educational stages (Afolabi, 2010). These tests are tailored to match the diverse learning levels of students within the school system. Notably, the National Assessment Bank comprises numerous equivalent tests at each level, ensuring that pupils in different schools, despite being tested at the same level, do not encounter the same questions (Afolabi, 2010). This practice effectively curtails the possibility of students from one school sharing test content with those from other schools. Furthermore, there are instances where national internal examination questions are diversified, a measure driven by methodological considerations to enhance the effectiveness and fairness of the assessment process.

In Kenya, the evaluation of schools employs a matrix sampling approach where secondary school students are presented with a common set of questions, as well as additional diverse questions. This sampling method ensures that the tasks are distributed in a statistically sound manner, covering a suitable spectrum of knowledge and skills without overwhelming or causing undue stress to individual students (MoE, 2018).

The majority of secondary educational institutions in Mathira Sub-county use a similar technique, however the questions given to pupils taking the "national studies of student attainment" test vary. However, the tests are skillfully designed to maintain consistency in difficulty level within the same subject area. Despite the research conducted by MoE (2018) and other empirical studies, there is still exist a deficiency of comprehensive evidence demonstrating the effectiveness of internal examination setting and test preparation procedures in influencing The educational standing of high school learners. Equally in Kenya and Uganda, tests adopt a tiered system (A to F) that aligns with specified attainment outcomes for students at various stages of schooling (Afolabi, 2010).

The exams at different levels are specifically tailored, and the National Assessment Bank, utilized by tutors for test preparation, offers numerous equivalent tests at each tier. Consequently, students taking exams at the exact same threshold at various universities might not always interact with the identical set of problems (Afolabi, 2010). By employing this approach of varying examination questions, the possibility of students from one school leaking test content to students from other schools is significantly minimized. Furthermore, the practice of varying national examination questions serves methodological purposes, ensuring a fair and unbiased evaluation of students' knowledge and skills. This strategy enhances the credibility and integrity of the examination process, promoting equal opportunities for all students and providing accurate assessments of their academic abilities.

In both Kenya and Mandera County, the approach to examination administration incorporates statistical methods that allow for the utilization of diverse question sets for students.

This strategy ensures fairness and comprehensiveness in the assessment process, providing a statistically representative sample of students' knowledge and skills without burdening or causing undue stress to individual learners (MoE, 2018). Similarly, the evaluation process in Kenyan tertiary institutions adopts a matrix sampling method, where students encounter both common and additional distinct questions. This methodology ensures adequate coverage of various knowledge and skill areas while maintaining a balanced and equitable assessment for all students in Mandera County.

The tests are made to have a consistent level of difficulty across all topic areas. However, MoE (2018), as did other empirical studies, has not exhaustively indicated how examination setting and test preparation procedures are effective in determining academic standing of students taking part in national exams at publicly funded colleges. The studies have not indicated which kinds of questions, whether multiple choice or essays, are effective in enhance students' academic performance. Across Sub-Saharan African countries, national examinations typically feature questions that differ from one administration to another, with each student receiving a unique set of questions (Vandeyar, 2005). This practice arises from various reasons, including the intention to accommodate individual learning variations and needs, methodological factors in test analysis and evaluation, and the goal of preventing cheating by students or tutors (Vandeyar, 2005). Consequently, some countries have adopted the approach of varying questions to tailor examinations to the specific learning levels and requirements of individual students.

In Nigeria, the national examinations are tailored to the individual levels of students using Information and Communication Technology (ICT), resulting in personalized tests for each student (Agbo, 2011).

However, it is important to consider that while these tests may demonstrate high reliability and ease of grading, their validity could be compromised (Agbo, 2011). To effectively evaluate the fulfillment of higher education's aims and objectives, assessments must encompass diverse aspects, including tests of understanding, application, analysis, evaluation, and synthesis, alongside assessments of communication skills. When students are aware of the comprehensive nature of the examinations, they are motivated to enhance their learning, acquiring valuable and enduring knowledge and skills. This indicates that examinations should serve as a learning opportunity for students, enabling them to comprehend the scope of expected answers.

Moreover, the students' responses are valuable for teachers to discern areas of difficulty in understanding or application, thus facilitating necessary adjustments in their teaching methods. Similarly, in Morocco, the 'junior certificate' students are provided with examination papers of varying difficulty levels, including higher level, ordinary and foundation. In addition, students are afforded the flexibility to select specific questions from within individual test papers. In research conducted in Botswana, Tabulawa (2012) emphasized that the optional national curriculum assessment for 14-year-olds encompasses four distinct tiers for mathematics, each evaluating a spectrum of achievement levels.

Tutors evaluate and determine the tier that best aligns with a child's abilities. Similarly, in the subject of science, there are two separate stages, each evaluating diverse proficiency levels. Just like the mathematics assessments, tutors ascertain the most suitable tier for each child's capabilities in science as well. Likewise, in Kenya and Uganda, examinations encompass diverse levels (A to F), which are aligned

with specific achievement targets for most students at different educational stages (Afolabi, 2010). Apart from featuring distinct tests or questions for each level, the National Assessment Bank offers numerous equivalent tests for each tier. As a result, students who are evaluated at the comparable rank multiple organizations could not come across the same set of inquiries (Afolabi, 2010). This approach effectively reduces the likelihood of students from one institution disclosing test content to those in another institution. Additionally, in certain cases, national examination questions are diversified for methodological purposes.

In the educational context of Kenya, the application of statistical methods allows for the use of different sets of questions among students during assessments, avoiding uniformity (MoE, 2018). Similarly, during school evaluations, a matrix sampling method is employed, wherein tertiary institution students tackle both a set of common questions and additional diverse questions (MoE, 2018). This strategic distribution of tasks ensures a statistically sound representation of a comprehensive range of knowledge and skills, preventing undue burden or stress on individual students. This process of question preparation plays a crucial role in evaluating the content learned (Ogula, Muchoki, Dimba, & Machyo, 2006).

As a customary practice, academic staff are accountable for creating their own tests, along with scoring schemes, which are subsequently submitted to external examiners for moderation. Ogula et al. (2006) emphasize the significance of meticulous steps in crafting top-notch examination papers. These steps encompass internal moderation, validation by external examiners, timely printing, and thorough proofreading. In the pursuit of fairness and validity, examiners must be mindful of various aspects. For instance, they should consider the impact of using color in questions on color-blind

students. Moreover, the selection of question styles should aim to avoid excessively high variations in students' marks, which can arise when challenging questions disproportionately affect hard-working but weaker students, leading to disparities in their performance. Achieving an optimal balance in question difficulty is imperative for ensuring a reliable and equitable assessment process. Examiners should endeavor to formulate questions that cater to the abilities of weaker students, ensuring that they can tackle at least some parts of the assessment.

To achieve this, questions should be thoughtfully designed to create a coherent and progressive flow, avoiding disjointed and disconnected elements. Additionally, it is crucial to refrain from directly reproducing questions from classroom materials, as this may compromise the examination's authenticity and originality. Instead, examiners should provide explicit guidance to students by introspectively questioning whether they comprehend the examination's expectations, possess the requisite level of detail and precision in their responses, and are well-versed with the format and content to be evaluated. By offering such guidance, examiners can enhance students' preparedness and performance during the examination process.

Ogula and colleagues (2006) stress the importance of meticulous examination paper preparation by university academic staff, who have the responsibility of crafting their own test questions. They must diligently proofread the questions to ensure accuracy and clarity, leaving no room for errors or confusion. In line with this approach, tertiary institutions in Mandera County also adopt a standardized approach, providing students with the same set of questions. This uniformity guarantees consistent difficulty levels across the subject area, ensuring equitable assessment for all students.

However, MoE (2018), as did other empirical studies, has not exhaustively indicated how examination setting and test preparation procedures are effective in determining students' academic integrity in national examinations in public tertiary institutions. The studies have not indicated which kinds of questions, whether multiple choice or essays, are effective in enhance students' academic performance; the present inquiry aimed to fill up the gaps in inquiry and expertise.

2.1.4 Examination Storage and Distribution and Academic Integrity

Examinations partakes a vigorous role in discriminating among individuals and evaluating the attainment of educational objectives. Once the examination tests have been crafted, their administration requires meticulous attention under suitable circumstances. Formulating examination administration policies should involve active collaboration between tutors and students to establish explicit expectations for student conduct and implement robust security protocols to minimize opportunities for academic dishonesty. Cohen, Swerdlik, and Sturman (2012) stress that well-crafted policies must also clearly outline the consequences associated with any breaches of these regulations. Regrettably, in the context of academic dishonesty, students often face an ethical dilemma concerning the trade-off between the potential punishment (cost) and the allure of achieving better grades (benefit).

Ip, Nguyen, Shah, Doroudgar, and Bidwal (2016) discovered that 11.8% of pharmacy students confessed to engaging in academic dishonesty during their time in pharmacy school, mainly driven by factors such as fear of failure, stress, and procrastination. Ip et al. (2016) found that cheating during undergraduate studies predicted academic dishonesty in pharmacy school. Institutions should adopt proactive measures to address this issue and cultivate a culture of academic integrity.

Consistency in setting expectations, enforcing examination policies, and reinforcing a strong code of conduct are essential. Maximizing attendance and synchronizing exams in multi-campus institutions can ensure examination security. Scheduling exams to avoid conflicts with professional events can reduce the need for make-up assessments. These strategies discourage cheating and promote ethical behavior in academic evaluations, preserving the integrity of the educational process.

To enhance examination integrity, implementing policies that restrict acceptable absences and demand advanced notice with proper documentation for anticipated absences can act as deterrents. Additionally, requiring identification, unless the student is already familiar to the proctor, can help prevent dishonesty through the use of proxies. For makeup examinations, it is essential to schedule them after the regular examination for the course has been administered. This approach ensures fairness and minimizes any opportunity for leaked information or unfair advantages. By adhering to these measures, educational institutions can foster an environment of academic honesty and uphold the integrity of the evaluation process. Cohen et al (2012) observed that employing diverse assessment questions or formats (e.g., essay instead of multiple choice) for make-up examinations could minimize the frequency of such requests to only those truly essential.

Nevertheless, this approach introduces considerations of fairness perceptions among students (e.g., varying study time or test structures), additional faculty workload, and scheduling complexities when a substantial number of students necessitate make-up exams. An innovative solution might entail conducting the make-up examination off-site with a proctor, for instance, when a faculty member accompanies students to a conference.

Alternatively, the utilization of technology allows for remote proctoring services, presenting a viable alternative. Students' punctuality during examinations is crucial to ensure both security and minimal disruption to others already engaged in the exam. Several programs adopt either fixed cut-off times for entry or policies that disallow new candidates after the first examinee has departed, with the intention of safeguarding examination integrity. However, this approach may raise practical concerns if no separate makeup examination is provided. In such cases, it might be more reasonable to allow the student to begin the exam promptly rather than causing further delays. This consideration balances the need for security while promoting efficient examination administration.

Enforcing penalties such as shortened exam duration or automatic point deductions can act as a strong deterrent and foster a sense of punctuality among students in future assessments. In the case of electronic exams, tardy students may be required to verify that they did not receive an unauthorized password from another test taker already present in the examination room. Allowing students to leave the exam room should be limited to genuine reasons, and a strict one-student-at-a-time policy should be adhered to, ensuring the security and integrity of their examination materials. These measures play a crucial role in upholding the fairness and credibility of the examination process.

Norcini (2003) emphasizes that in order to ensure fairness, evaluation processes must be free from all forms of malpractices. 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.

Resources for safety and examination administration need to be provided. It also features classrooms and supporting rooms. In accordance with these assertions, Beynon (2012) outlines school resources as encompassing various elements such as offices, staff rooms, laboratories, classrooms, workshops, equipment, stores, libraries, hostels, staff houses, and the school grounds. These resources exert significant influence on the integrity of examinations conducted in primary schools. To reinforce these perspectives, Rivkin, Hanushek, and Kain (2011) conducted a study in the United States of America, demonstrating the connection between the availability of physical resources and the effective administration of examinations. Rivkin et al (2011) established that schools which had conducive classrooms for examinations, good furniture and adequate spacing during examinations, had minimal cases of examination malpractice and other forms of academic dishonesty.

The assertions made by Beynon (2012) further solidify the notion that school physical resources play a vital role in expanding educational opportunities and upholding academic integrity. These findings emphasize the responsibility of school administrators to ensure the availability of ample classrooms, well-ventilated examination rooms, and resource centers that can adequately accommodate all learners during examinations, without leading to overcrowding.

In a study conducted in Oman, Al-Issa (2007) highlighted the significance of evaluation in the education process as it serves as a means of assessing the attainment of educational objectives. Al-Issa (2007) also expounded on the multiple facets of evaluation in education, including providing essential information for decision-makers, conducting a systematic investigation of the worth or merit of an object, and systematically collecting information about the nature and quality of educational

objects. Consequently, the process of evaluation should be thoughtfully designed and executed to ensure fairness and objectivity in its outcomes. 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. Examinations serve as discriminative criteria for individuals and serve as a means to assess the achievement of educational objectives. Ensuring equity in the evaluation process, Norcini (2003) emphasizes the necessity for fair assessment free from any malpractices. The proper distribution of examinations entails the appointment of individuals with integrity to handle tasks such as packing scripts, dispatching examinations to examination centers or classes, and storing the examination materials securely.

In a comprehensive study carried out in Oman, Al-Issa (2007) emphasized the vital role of evaluation in the education process as it serves as a mechanism to assess the achievement of educational objectives. Furthermore, Al-Issa (2007) highlighted that scholars view evaluation in education as not only providing crucial information for decision-makers but also involving a systematic investigation to determine the worth or merit of an object, along with the collection of systematic information concerning the nature and quality of educational components. Therefore, it is of utmost importance to carefully design and implement the evaluation process to ensure fairness and objectivity in its outcomes.

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.

Internal examinations serve as discriminatory criteria for individuals and assess the attainment of educational goals. To ensure fairness, Norcini (2003) emphasizes the elimination of all malpractices in the evaluation process. Proper distribution of internal examination requires appointment of people of integrity to participate in Packing of scripts, dispatching internal examination to internal examination centers or classes and in storage of the internal examination. In a study conducted in Oman, Al-Issa (2007) highlighted that evaluation in the education process serves as a means to assess the achievement of educational objectives. Furthermore, various scholars view evaluation in education as providing valuable information for decision-makers, a systematic investigation into the value or merit of an object, and the collection of systematic information regarding the nature and quality of educational elements.

Consequently, evaluation should be thoughtfully crafted and implemented to guarantee fairness and objectivity in its outcomes. However, to achieve such effective evaluation, the procedure of distribution of internal examination scripts should be brought into perspective. In United Kingdom and other Commonwealth Nations, Wheeler (2007) posits that distribution of national internal examinations is the responsibility of Ministry of Education though management of internal examinations exclusively rests with the

individual school. The scenario is similar in most Sub-Saharan countries where such responsibilities rest with schools though under the directive of the Ministry of Education. In Kenya, the entire internal examination management process, including candidate evaluation, mark sheet issuance, and result publication, falls under the responsibility of individual schools (Ingolo, 2009). Each school sets its own rules and regulations to ensure uniformity in conditions for all students taking internal examinations, with the aim of promoting fairness (GOK, 2003). However, concerns persist about the fairness of the internal examination process, as cheating has become a prominent issue within internal examination circles, possibly influenced by the "backwash effects" of internal examinations (Yussufu, 2005).

Internal examination malpractice in Kenyan secondary schools has reached alarming levels and has become deeply entrenched within the system (Kithuka, 2004). Despite the efforts of government authorities and educational stakeholders to address the issue, the problem persists (Kithuka, 2004). As a consequence of this malpractice, many academically unqualified students' progress to higher classes and subsequently face failure in institutions of higher learning (Aullo, 2004). In response to the escalating concern surrounding the surge in malpractices, the Ministry of Education has taken decisive actions to combat the issue by enforcing more stringent regulations during the distribution of internal examinations (MoE, 2010).

Mwandikwa and Ocharo (2007) contributes to this concept that the Kenya National Internal Examinations Council (KNEC) has implemented rigorous dealings in schools to prevent cheating and impose severe penalties on offenders. Wasanga (2007) stressed the fact that the governing body has put procedures in place to stop anomalies and maintain the validity of internal audits.

However, the pervasive use of technology to facilitate cheating and exam leakages remains a prevalent issue, not only in national internal examinations but also in internal examinations conducted within individual secondary schools (MoE, 2010). Despite the establishment of a comprehensive legal framework, the issue of internal examination irregularities continues to persist, resulting from deliberate wrongdoings that contravene official rules of distribution and aim to give candidates unfair advantages or disadvantages (MoE, 2010). In order to ensure an equitable and just evaluation process, it is imperative to eradicate all forms of malpractices from internal examinations. Both internal and external examinations in Kenya have been plagued by the persistent problem of malpractices, despite the implementation of various policies for internal examination management over the years (MoE, 2010).

In Kenya, tertiary institutions are responsible for the entire examination management process, including evaluation of candidates, issuance of Assessment sheets and the outcomes release (Ingolo, 2009). Each institution establishes its own rules and regulations to ensure equivalent conditions for all students taking the examinations, aiming for fairness and equity (GoK, 2003). However, examinations continue to be viewed as discriminatory criteria that influence opportunities allocation within society (Yussufu, 2005). Despite efforts to promote fairness, concerns persist about examination integrity, with cheating becoming a prevalent issue in examination circles, often considered a consequence of the (backwash effects) of examinations.

Examination misconduct in tertiary institutions has reached distressing levels, with sophisticated and institutionalized malpractices observed (Kithuka, 2004). Despite endeavors by the government and educational stakeholders to combat this problem, significant progress remains elusive (Kithuka, 2004).

The prevalence of examination malpractice has resulted in a large number of academically inadequate students advancing to higher levels of education, only to face failure in higher learning institutions (Aullo, 2004). To address the escalating cases of malpractice, the Ministry of Education in Kenya has taken measures to curb these practices, implementing stricter rules during examination distribution (MoE, 2010). The Kenya National Examinations Council (KNEC) has also enacted stringent measures in colleges to regulate examinations, aiming to deter cheating and imposing severe punishments on offenders (Mwandikwa & Ocharo, 2007). These measures were designed to eliminate test irregularities and guarantee the overall validity of the exams (Wasanga, 2007).

The surge in cheating and leaks facilitated by technological means is not limited to national examinations but also extends to examinations conducted by individual tertiary institutions (MoE, 2010). Despite the existence of a legal framework, examination irregularities continue to occur with each result release, mainly due to examination malpractices, which involve deliberate wrongdoings that violate official examination rules with the aim of gaining an unfair advantage or disadvantage (MoE, 2010). This study aims to address the lack of systematic research documenting the efficiency of test dissemination techniques in reducing fraud.

Examinations play a pivotal role in allocating scarce opportunities, making it essential to ensure that they are conducted with absolute fairness and devoid of any form of malpractices. Throughout the years, both internal and external examinations in Kenya have been plagued by instances of examination malpractices, despite the presence of examination management policies (MoE, 2010). Yet, little has been documented to determine how each of the distribution practices impact on students' performance in

examinations in various Sub-Saharan African countries, a similar pattern emerges, where the state of physical infrastructure in public primary schools significantly influences both learner achievement and the prevalence of examination malpractices. For instance, a survey led by Orim (2017) in Nigeria revealed that learners who take examinations in schools or centers with well-maintained and conducive physical infrastructure reported less than 2.3% of examination malpractice cases, whereas those in dilapidated structures experienced over 34.8% cases of academic dishonesty during examinations.

This highlights the crucial role of physical facilities in maintaining the integrity of examinations and ensuring the standard of instruction at elementary institutions. In essence, inadequate provision of physical resources in many primary schools can lead to low-quality education, a rise in academic dishonesty, and diminished learner achievement. In Kenya, the responsibility for examination management, evaluation of candidates, issuing of mark sheets, and publication of results lies with individual colleges (Ingolo, 2009). In order to verify equitable distribution of the few chances available in society, these schools set norms and regulations that guarantee the same circumstances for every student sitting the tests (GoK, 2003). However, concerns about the fairness of the examination process persist, with cheating becoming a prevalent issue in examination circles, which some attribute to the "backwash effects" of examinations.

In a comprehensive study focused on exam-focused strategies for excellent instruction in Kenyan elementary schools, Mackatiani (2017) discovered that effective planning for examination administration entails identifying the necessary resources, conducting needs assessments to meet quality standards, and evaluating the status of available

resources to minimize instances of examination malpractices. A current Ministry of Education report (2019) further highlighted that the physical infrastructure of many primary schools and examination centers in Kenya is not conducive to creating an optimal examination environment. The report showed that many classrooms are overcrowded and furniture not adequate to cater for many learners during examinations.

In many tertiary institutions, examination malpractice in Kenya has reached alarming levels, with the frauds more complex and entrenched (Kithuka, 2004). Major improvement has eluded administrators and players in the school system despite their best attempts to reverse this alarming trend (Kithuka, 2004). Because test fraud is so common, there is a significant turnover of academically weak students who move on to higher education only to fail in institutions of higher learning (Aullo, 2004). The nation's Ministry of Education has put steps in place to address the problem, including tightened regulations for the delivery of exams, in response to growing worries about the rising number of instances of malpractice.

The Kenya National Examinations Council (KNEC) has been highlighted by Mwandikwa and Ocharo (2007) has established strong procedures at tertiary institutions to regulate examinations, with the main objective of making stealing challenging and inflicting harsh repercussions on offenders. Wasanga (2007) said that the council has taken considerable steps to prevent examination anomalies and maintain the validity and trustworthiness of the majority of tests while releasing these efforts. The surge in cheating and leakage of exams through the use of technology is not confined to national examinations; it also extends to examinations conducted within individual tertiary institutions (MoE, 2010). Despite the existence of a legal framework, examination irregularities continue to occur with each release of results, attributable to examination

malpractices. These malpractices involve deliberate wrongdoings that defy official examination rules, aiming to grant certain candidates unfair advantages or disadvantages. Similarly, in Mandera County, the prevalence of examination malpractices remains an issue, yet no comprehensive interviews have been conducted to assess the efficacy of the examination circulation process in cutting these irregularities, which is the main focus of the current survey. Examinations serve as prejudiced criteria, influencing the allocation of limited opportunities for individuals and society. To ensure fair evaluation, examinations must be free from any form of malpractices.

Despite the implementation of examination management policies (MoE, 2010), both internal and external Kenyan tests have been plagued with cases of irregularities over the years. Yet, little has been documented to determine how each of the distribution practices impact on academic integrity in examinations. Therefore, the primary objective of this survey was to explore the impact of different examination storage and distribution methods on the academic integrity of students in tertiary institutions within Mandera County.

2.1.5 Examination Invigilation Practices and Academic Integrity

In ensuring the integrity of examinations, it is imperative for all invigilators to have a thorough understanding of examination room protocols and remain vigilant for any suspicious behavior or use of unauthorized aids. This includes monitoring actions such as moving desks, having extra papers, reaching into pockets, whispering, or engaging in conversations with others. They should also be watchful for the presence of unauthorized materials like extra notes, study sheets, papers concealed in pencil or calculator cases, as well as cell phones and electronic devices. Furthermore, invigilators should carefully inspect washroom facilities to prevent the use of unauthorized

materials. According to Moss (2001), it is the invigilators' responsibility to uphold examination integrity and create a quiet environment for students during the examination. They should stay alert and regularly move around the room to monitor the proceedings. In case any issues arise, invigilators must adhere to the faculty's policies and document any observed irregularities. Students are encouraged to seek clarification from the invigilators if they have any doubts or queries regarding examination procedures, such as permitted aids or washroom usage. This proactive approach ensures that examinations are conducted fairly and transparently, promoting academic integrity in the educational setting.

The primary objective of exam supervision is to maintain constant surveillance over all candidates throughout the entire examination period. Moss (2013) emphasizes that for effective supervision, principals and supervisors must create a supportive and pleasant atmosphere for the candidates while ensuring strict measures to avert any form of communiqué between contenders, such as replication, murmuring, or signaling. Additionally, any exchange of papers or objects and unauthorized access to books, papers, or electronic media must be strictly prohibited, unless explicitly authorized for the examination.

To achieve this, careful consideration should be given to the recruitment of supervisors, planning for supervision, and the design of seating plans. In research executed in Australia thanks to James and Pedder (2016), it became apparent that supervisors also play a key role in guaranteeing the security of the test hall before, during, and after the exam. Exam supervisors should be on the lookout and aggressively monitor the examination room from the time the question papers are given out until all responses are gathered.

Maintaining alertness is especially important for sections that include a variety of and questions with brief answers. The ultimate aim is to prevent any potential candidate malpractice or administrative failures. By upholding strict supervision protocols and fostering a conducive environment, exam supervisors contribute significantly to the overall integrity and credibility of the examination process. In colleges, supervision of both internal and external examinations involves principals and teachers as well as other officers from the Ministry of Education who follows a set of supervision schedule that is prepared.

Despite appreciating the fact that examination supervision is key to enhancing academic integrity of tertiary institution learners, Hargreaves (2017) asserts that planning and preparing the examination supervision has traditionally been a difficult assignment in and of itself because of the many considerations the oversight schedule panel must take into account. Eckstein and Nvah (2018) found that exam supervisors in Singapore must receive thorough briefings and training before overseeing examinations. Being well-informed about examination regulations and procedures is essential for effective supervision in the examination halls.

Eckstein and Nvah (2018) emphasized the crucial role of exam supervisors, stressing the need for their timely arrival at the test hall, no less than an hour before the exam begins, and their presence for an additional hour after the exam for the completion of necessary tasks. Their responsibilities encompass setting up the examination venue, ensuring the availability of required materials, and providing clear instructions to candidates, making their role indispensable in the examination process. Smith (2019) supported these assertions, underlining the significance of unwavering attention and vigilance from exam supervisors during the examination, refraining from engaging in

other tasks, and remaining attentive and mobile throughout the duration of the exam. The figure of supervisors obligatory for different types of examinations varies accordingly. According to his recommendations, to ensure active surveillance and supervision in the exam room for general written exams, there ought to be at least one person in charge for every 30 students. Additionally, exam supervisors must promptly address candidates' inquiries and provide assistance as required, adhering to strict regulations to ensure effective service delivery. Conversely, when supervisors compromise supervision standards and disregard examination ethics, they inadvertently encourage examination malpractice to take root.

Arggarwal (2017) indicated that in India, the criteria of appointment of supervisors include; possessing a Grade A Certification or Diploma in Education, having exhibited honesty, having at least three years of instructional expertise, being in good physical shape, and pledging to work diligently at testing facilities. Furthermore, they must undergo a vetting process after appointment by Directors of Education, but the study discovered that vetting is often overlooked in many regions. The identification of potential supervisors is a time-consuming process, as Directors of Education rely on suggestions from Education Coordinators and Tutors, as highlighted by Arggarwal (2017).

Given the time constraints in obtaining names and sorting out previous offenders, it is crucial to reevaluate the supervisor recruitment process. With rising malpractice cases, improving the selection of supervisors becomes imperative for maintaining examination integrity. This highlights the significant role of invigilators in achieving educational goals and objectives. Besides, invigilators form critical actors in ensuring that academic integrity is upheld in schools and thus, their training or capacity building is paramount

(Gross, Glacuinta & Bernstein, 2010). In other words, invigilators need to be proficient and equipped with talents on how to undertake examination assessment. An Australian survey conducted by Goddard and Leask (2012) revealed that invigilators' work involves assessing students' performance, which is often not easily observable, making it challenging to judge their effectiveness accurately. This underscores the need for effective assessment practices in teaching and examination to maintain academic integrity. The goal of exam invigilation is to closely monitor all candidates throughout the examination period. Moss (2001) emphasizes the reputation of fashioning an encouraging and supportive environment for candidates to ensure effective invigilation.

In addition to creating a conducive environment, invigilators play a crucial role in preventing any form of communication or unauthorized access to materials during the examination, such as copying, whispering, or using electronic devices. Therefore, careful consideration should be given to the recruitment and training of invigilators, as well as the planning and design of seating arrangements. Invigilators are essential for ensuring test security and deterring cheating behaviors among students (Mafa & Gudhlanga, 2012; Stonecypther & Wilson, 2014). Their vigilance and adherence to examination rules are vital in upholding the integrity of the examination process.

Shon (2006) emphasizes that cheating can occur when invigilators are not attentive, prompting the need for heightened awareness during exam management. Alabi (2014) defines active invigilation as actively monitoring student behavior, upholding order, regulating the educational process, and keeping a regulated atmosphere, especially in pharmacy education. To enhance the effectiveness of invigilators, Alabi (2014) highlights the importance of targeted training to handle misconduct and

emergent situations. Minott (2019) suggests the use of reflective practice, like journaling, to help invigilators develop essential skills such as adaptability and improve their performance in ensuring academic integrity during examinations. Ray, Daugherty, Lebovitz, Rudolph, Shuford, and DiVall (2018) advocate for the presence of a faculty member to assist with supervision during examinations. They additionally recommend: use a 1:25 overseer to learner ratio. However, there is a lack of comprehensive research on the optimal forms of invigilator training, as Minott (2019) points out, with limited attention devoted to invigilator responsibilities, roles, and professional development in the literature.

Despite searching through numerous databases, Minott (2019) found only a few relevant studies. Pittman (2015) contends that in-person surveillance is still the best technique for ensuring exam integrity and cost-effective exam administration in relation to distant and virtual instruction. James and Pedder (2006) undertaken an Australian and highlighted the importance of exam invigilators in ensuring the testing room's security prior to, during, and following the test. They underlined the importance of constant monitoring, paying careful consideration to inquiries with a wide variety and brief answers from the moment exam papers are issued until all responses are gathered. The main goal is to mitigate potential applicant misconduct and administrative mistakes.

In tertiary institutions, invigilation of both internal and external examinations involves both tutors and officers from the Ministry of Education who follows a set of invigilation schedule that is prepared. Despite appreciating the fact that examination invigilation is key to enhancing academic integrity in tertiary institution students, Hargreaves (2001) asserts that planning and preparing the examination invigilation

has generally been a difficult assignment in and of itself because of the many considerations the surveillance protocol committee must take into account. Eckstein and Nvah (2001) conducted a study in Singapore, which exposed that before the commencement of the examination, invigilators must undergo comprehensive briefings and training to effectively carry out their invigilation duties in their assigned venues. It is crucial for exam invigilators to be well-versed with the relevant with the rules and procedures prior to entering the examination room. This preparation ensures a smooth and effective invigilation process.

As per Eckstein and Nvah's (2001) recommendations, exam inspectors are required to go to the exam room one hour prior to the exam is due to begin and stay in the room for an extra hour following the exam for the proper collection and organization of examination scripts. This emphasizes the crucial role exam invigilators play in the examination process, ensuring a well-prepared and smoothly functioning venue. They are accountable for arranging essential materials such as response books, reference books, candidacy numerals, and extras on contenders' desks, creating an efficient and well-equipped examination environment. Their attentive watch and active monitoring during the exam are pivotal in upholding the integrity and security of the examination, effectively deterring any malpractice or administrative oversights.

Exam invigilators have a significant impact in ensuring the smooth conduct of examinations. They are in charge of presenting the relevant information for the applicants and setting the proper time on the clock at the testing location. Further, they help students locate their assigned seats and monitor out for the entrance of forbidden objects such mobile phones, smartwatches, headphones, portable

audio/video/gaming gadgets, and textbooks. Smith (2009) provides evidence in support of these claims by emphasizing that throughout the test, invigilators must devote all of their whole attention to the examination procedure, maintaining a vigilant and attentive presence to uphold the integrity and security of the examination environment. During the examination, invigilators must maintain vigilant, mobile, and attentive presence, solely focusing on their supervisory duties without engaging in other tasks. The number of invigilators required hinge on on the specific type of examination being conducted. For broad-spectrum written exams, a ratio of at least one invigilator for every 30 students is recommended to ensure effective patrolling and vigilance in the examination hall.

Invigilators should be responsive to candidates' queries and provide necessary assistance promptly, adhering to established regulations, which enhances their effectiveness in delivering their supervisory responsibilities. When invigilators compromise their supervisory standards and ignore examination ethics, they inadvertently contribute to the occurrence of examination malpractice, leading to a failure of academic integrity. In India, Arggarwal (2007) highlighted the criteria for appointing invigilators, which includes a minimum of three years of teaching expertise, possession of Tutors' Service Number, integrity, Grade A Certification or Diploma in Education, Optimum health, and demonstrated obligation and diligence in test centers. These stringent requirements are aimed at ensuring the selection of qualified and trustworthy invigilators to maintain examination integrity.

Furthermore, after being appointed by Directors of Education, all scrutineers are expected to submit to a scrutinizing process. However, the study's findings indicated that vetting is often neglected in many regions.

Arggarwal (2007) also discovered that the identification of potential invigilators is a time-consuming process as Directors of Education rely on suggestions from Education Coordinators and Tutors. Consequently, they may find themselves with little time to weed out individuals who have a history of violating exam rules. Considering the escalating number of malpractice cases, it becomes crucial to scrutinize the recruitment practices for invigilators to uphold academic integrity effectively.

A major focus of educational policies in the US is assuring the caliber of examiners. The Federal No Child Left Behind Act of 2001 mandates that every state must have highly qualified invigilators in every classroom to teach and conduct tests' assessments (Gross et al., 2010). Addressing the challenge of having "highly qualified" invigilators brings attention to the importance of invigilator training, quality, and factors influencing academic integrity in students' learning, which are essential aspects in current educational objectives. Continuous training and professional development are crucial for invigilators to remain effective throughout their careers and enhance learners' outcomes (Goddard & Leask, 2010).

According to Fullan (2011), an invigilator's academic and professional characteristics and experiences significantly impact the effectiveness and efficiency of examination assessment after teaching and learning. Exam invigilation's main goal is to make sure that every applicant is actively supervised for the whole of the test. According to Moss (2001), invigilators must foster a friendly and encouraging environment for applicants in order to be effective. They must, however, use caution in order to stop any type of candidate interaction, such as duplicating or mumbling, signaling, exchanging papers or objects, and accessing unauthorized materials like

books, papers, or electronic devices during the exam. This emphasizes the importance of careful consideration in recruiting invigilators, planning invigilation procedures, and designing seating plans to uphold the integrity of the examination process. James and Pedder (2006) conducted a study in Australia, underscoring the vital responsibility of invigilators in maintaining the security of the examination hall. Throughout the entire examination process, from the distribution of question papers to the collection of answers, invigilators play a pivotal role. Their duty involves active patrolling, particularly during crucial segments such as multiple-choice and short-answer questions, to ensure heightened vigilance. The primary objective is to prevent any potential candidate malpractice and administrative lapses during the examination.

In tertiary institutions, invigilation of both internal and external examinations involves both tutors and officers from the Ministry of Education who follows a set of invigilation schedule that is prepared. Despite appreciating the fact that examination invigilation is key to enhancing academic performance of tertiary institution students, Hargreaves (2001) asserts that planning and preparing the examination The invigilation schedule committee faces the daunting task of considering numerous factors, making invigilation an inherently challenging endeavor.

In a comprehensive study conducted in Singapore by Eckstein and Nvah (2001), it was emphasized that exam invigilators must undergo extensive briefing and training prior to assuming their invigilation responsibilities in their respective venues. Familiarizing themselves with the examination regulations and procedures is deemed essential for exam invigilators before their presence in the examination hall. Additionally, the researchers posited that exam invigilators should make it a practice to arrive to the

testing location no later than an hour before the test is scheduled to start, and stay for another hour after the test to properly gather and arrange the test materials. This meticulous approach ensures a well-prepared and effective invigilation process, contributing to the smooth execution of the examination. These findings confirm the significance of exam invigilators in the examination process, as they are responsible for preparation for the examination, invigilators meticulously organize the examination venue. They arrange essential materials, including answer booklets, reference booklets, candidate numbers, and supplementary materials, on each candidate's desk.

Additionally, invigilators ensure that the clock is accurately set and prominently display necessary instructions at the front of the examination hall for the candidates' convenience. During the examination, invigilators play a crucial role in guiding students to their designated seats, ensuring a smooth seating process. They also maintain strict enforcement of the prohibition of prohibited items such as cell phones, smartwatches, headphones, portable audio/video/gaming devices, and textbooks. This strict approach is essential to uphold a controlled and fair examination environment, fostering an atmosphere of integrity and academic honesty.

To support these claims, Smith's (2009) study in Venezuela emphasized that in the examination hall, invigilators are required to be fully focused on the examination process, demonstrating attentiveness, alertness, and mobility while refraining from engaging in any other tasks. The number of invigilators needed for different types of examinations depends on the specific nature of each examination. For general written exams, maintaining a ratio of at least one invigilator for every 30 students is recommended, ensuring effective supervision and vigilant patrolling throughout the examination duration.

Smith (2009) posited that during this time, exam invigilators should promptly address candidates' inquiries and provide necessary assistance based on their needs. It was further revealed that invigilators who adhere to these regulations effectively carry out their duties. However, when invigilators compromise invigilation standards and neglect examination ethics, they inadvertently contribute to the occurrence of examination malpractice.

Arggarwal (2007) emphasized that in India, the selection criteria for invigilators encompass several factors, such as a minimum of three years of teaching expertise, possession of Tutors' Service Number, integrity, and holding a Grade A Certificate or Diploma in Education. Additionally, invigilators must demonstrate optimum health, obligation to their work, and carefulness in examination centers. Furthermore, after being appointed by Directors of Education, all officials are expected to undergo a vetting process. However, the study's findings revealed that the vetting process is not consistently implemented in most regions. Arggarwal (2007) also brought to light the time-consuming nature of identifying potential invigilators, as Directors of Education heavily rely on suggestions from Education Coordinators and Tutors. This often results in limited time to scrutinize candidates who may have beforehand failed to uphold exam guidelines. Given the escalating instances of misconduct, it becomes imperative to thoroughly review and enhance the recruitment practices for invigilators.

As observed by Agbo (2011) in Nigeria, the mounting pressures faced by tutors who also serve as invigilators often push them towards engaging in cheating practices. This phenomenon is not limited to Nigeria but is prevalent in many regions worldwide. There is a tendency to perceive that a tutor's success is contingent on their students' performance in examinations, leading to the temptation of compromising the integrity of

exams. Nevertheless, the pressure faced by tutors cannot justify defiling the exam confidentiality. literature about stealing on exams sheds light on the involvement of invigilators in such malpractices. In Nigeria, some tutor-invigilators succumb to aiding exam cheating for financial gains through actions like compromising examination standards, neglecting their teaching duties because of personal obligations or protests, and selling their own textbooks to students instead of teaching them (Agbo, 2011). Furthermore, some tutors are implicated in cheating by engaging in activities such as correcting answers or outrightly providing answers to students during the marking process, as well as leaking examination papers.

The fundamental purpose of exam invigilation is to ensure constant and attentive supervision of all candidates throughout the entirety of the internal examination. Moss (2001) contends that achieving such efficacy requires invigilators to cultivate a congenial and supportive environment for the candidates. Nonetheless, they must also be resolute in thwarting any form of communication among candidates, be it through copying, whispering, signaling, exchanging materials, or accessing unauthorized resources like books, papers, or electronic devices during the stipulated exam duration. It is therefore necessary to take to consideration how invigilators are recruited, how planning for invigilation is done and how seating plans should be designed.

According to a study conducted in Australia by James and Pedder (2006), examiners are essential to maintaining the safety of the examination's internal room prior to and following the internal test. From the time the exam papers are handed out until all the answers are gathered, they are in charge of keeping a close eye on the area. In particular, during multiple-choice and short-answer questions, the study underscored the need for increased caution.

The primary objective of invigilators is to prevent any potential candidate misconduct and avoiding operational mistakes during the internal examination. In secondary schools, invigilation of both internal and external internal examinations involves both teachers and officers from the Ministry of Education who follows a set of invigilation schedule that is prepared. Despite appreciating the fact that internal examination invigilation is key to enhancing academic performance of secondary school students, Hargreaves (2001) asserts that planning and preparing the internal examination invigilation has consistently been a difficult assignment in and of itself because of the many considerations the oversight schedule committee must take into account.

According to a study conducted in Singapore by Eckstein and Nvah (2001), it is crucial that exam invigilators receive thorough briefing and training before conducting their duties in the internal examination hall. Familiarity with the internal examination regulations and procedures is essential for their role. Likewise, those in charge must show up at the internal assessment site at least one hour before the test begins and stay until the internal test scripts are finished, which takes an extra hour. These results highlight the value of exam monitors in ensuring a smooth internal examination process by effectively preparing the examination venue and providing necessary materials for candidates.

Invigilators are responsible for setting the clock accurately and displaying clear instructions in the internal examination hall to ensure a smooth examination process for all candidates. Additionally, they aid in directing candidates to their assigned spots and enforcing the ban on prohibited objects in the internal examination hall, such as mobile phones, smartwatches, headphones, portable audio/video/gaming gadgets, and textbooks.

Smith (2009) went on to say that throughout the internal assessment, those in charge must give the examination their whole attention while remaining watchful, active, and attentive and refraining from performing any other work. Depending on the particular form of internal examination, a varying number of invigilators may be needed. In the case of general written internal examinations, it is recommended to have to ensure monitoring and oversight in the internal assessment hall, there must be a minimum of one coordinator available for every 30 learners.

Invigilators are expected to promptly address candidates' queries and provide necessary assistance. Adherence to these regulations is crucial for effective service delivery. However, when invigilation standards are compromised and internal examination ethics are disregarded, invigilators contribute to the occurrence of internal examination malpractice. As per Argharwal's (2007) study in India, the criteria for appointing invigilators include a minimum of three years of teaching experience, possessing a Teachers' Service Number, being honest, having a Grade A Certificate or Diploma in Education, being in excellent health, being dedicated to their jobs, and showing diligence in internal assessment centers. Additionally, all invigilators are anticipated to go through a screening procedure after being chosen by Directors of Education.

The results of the study do show that vetting is not routinely done in most areas, though. As Directors of Education rely on recommendations from Education Coordination staff and Head Instructors, the process of finding qualified invigilators takes time as well, leaving little opportunity to correct any prior violations of internal examination laws. However, it is crucial to examine the invigilator recruiting process given the exponential growth in malpractice incidents. As Agbo (2011) pointed out in Nigeria, the increasing pressures on teachers who also serve as invigilators may tempt them to resort to

cheating. This phenomenon is not unique to Nigeria but occurs over most of the globe. There is a tendency to equate students' failure in internal examinations with the teacher's failure in their duties. However, such pressures cannot justify compromising the integrity of internal examinations. The literature on internal fraud on exams highlights the involvement of invigilators in such malpractices. In Nigeria, some teacher-invigilators engage in exam cheating for financial gains, which includes compromising criteria for internal exams, absences from class because of personal obligations or strikes, as well as selling their own educational materials to pupils in place of effective instruction (Agbo, 2011).

Cheating in internal examinations can manifest through actions like correcting answers or providing answers outright while marking. Additionally, teachers may be involved in malpractice by leaking internal examination papers. In Kenya, a research study in Kisumu conducted by Obonyo (2010) exposed a lack of attention to invigilators' Immoral conduct in the administration of internal exams. Internal testing misconduct is when a teacher or the examiner arrives late or doesn't show up at the test site, since this fosters a cheating-friendly climate.

Even within the internal examination hall, invigilators may get distracted by reading newspapers or engaging in discussions, compromising the essential aspect of vigilant supervision. Such laxity in invigilation creates a conducive environment for internal examination malpractice to thrive, undermining the integrity of the internal examination management process. This leniency may lead to instances of candidate impersonation, unauthorized entry of parents or paid individuals into the internal examination halls, and a culture of cheating without consequences prevailing in the internal examination venues, with serious violations being overlooked.

Despite these assertions, little has been done to interrogate the recruitment process for invigilators, planning for invigilation and design of internal examination seating plan and how such practices enhance students' performance. In Kenya, a research study conducted in Kisumu by Obonyo (2010) revealed a concerning lack of attention to invigilators' unethical conduct in examination management. Instances of tutors or invigilators arriving late to examination venues or being absent during invigilation constitute examination malpractice. Such negligence creates an enabling environment for cheating to occur. Additionally, within the examination hall, invigilators may engage in activities like reading newspapers or having discussions that interfere with their vigilant supervision, undermining the core essence of invigilation. These lax practices contribute to the thriving of examination malpractice and weaken the overall examination management process.

Regrettably, Mandera County is not exempt from such malpractice either. In numerous instances, various parties entrusted with safeguarding the sanctity of examinations compromise their integrity by accepting bribes (MoE, 2018). Students often contribute money to influence these individuals in shirking their sacred duty and national responsibility. As a consequence, impersonation of candidates goes unchecked, and parents or hired accomplices gain access to examination halls, fostering an environment of cheating with impunity. Gross examination violations are disregarded, contributing to the erosion of the examination system's credibility.

Despite these assertions, little has been done to interrogate the recruitment process for invigilators, planning for invigilation and design of examination seating plan and how such practices enhance students' performance in national examinations in public tertiary institutions.

Akinsolu's (2010) study in Ghana highlights that dominant invigilator characteristics in cross-country research are related to qualifications, experience, attitude, and personality, which greatly impact their effectiveness during examinations. Akinsolu (2010) further asserts that availability and adequacy of qualified and trained invigilators determine how learners conduct themselves during administration of examinations and uphold academic integrity throughout. This, therefore, means that equipping invigilators with skills to administer and assess examinations is key in enhancing academic integrity.

Agbo (2011) observed that in Nigeria, the dual role of tutors as invigilators puts increasing pressure on them to achieve success, leading to potential cheating and compromising academic integrity. This phenomenon is not limited to Nigeria but exists in various regions globally. It is important to resist the temptation to link students' failures in academic integrity solely to invigilation, as pressure should not be used as an excuse to undermine the integrity of examinations. The literature on examination cheating underscores the involvement of invigilators in compromising academic integrity. Some tutor-invigilators engage in exam cheating for financial gain, resorting to practices like compromising examination standards, absenteeism from classes for personal reasons or strikes, and selling their own textbooks to students instead of proper teaching (Agbo, 2011). Such actions contribute to the erosion of academic integrity and undermine the sanctity of examinations.

Actions such as the alteration of answers and directly providing solutions to students during the marking process constitute acts of cheating that compromise the integrity of academic assessments. Furthermore, some tutors are implicated in unethical practices, including the leakage of examination papers. A research study conducted in Kisumu, Kenya by Obonyo (2010) revealed a concerning lack of attention to invigilators'

unethical conduct during examination management, thus further undermining academic integrity. The occurrence of invigilators arriving late or being absent from examination venues contributes to examination malpractice and weakens the overall academic integrity. Such situations create an enabling environment for cheating to thrive. Additionally, instances of invigilators reading newspapers or engaging in distracting discussions within the examination hall disrupt the core purpose of vigilant invigilation, hindering proper examination management and jeopardizing academic integrity. The aforementioned factors, in combination, foster an environment conducive to the occurrence of examination malpractice, consequently weakening the overall examination management process.

Bennaars, Otiende, and Boisvert (2010) contend that the presence of untrained, poorly trained, dissatisfied, and disheartened invigilators obstructs the realization of the desired academic integrity and honesty in primary schools. The transition from paid primary education to free primary education, which has led to a surge in primary school enrollments, necessitates heightened vigilance and attention from invigilators and school administrators to uphold academic integrity and effectively combat malpractices. Invigilators face the arduous task of not only delivering instruction for a new curriculum but also navigating the complexities of the social system within schools. To effectively embrace the new program, they must take ownership and possess expertise in various subjects and assessment methodologies.

Despite the increase in school enrollments and the proliferation of educational institutions, the challenge of ensuring an adequate number of qualified invigilators persists, leading to an uneven distribution and affecting access to quality education (Mwandikwa & Ocharo, 2012).

Muriuki (2014) highlights the pivotal role of human resources in primary schools, with teaching staff being a critical component. Ensuring academic integrity requires providing invigilators with necessary retraining in assessment approaches. Consequently, schools must prioritize capacity-building programs for invigilators to enhance academic integrity and foster equitable learning opportunities. Regrettably, Mandera County is no stranger to such malpractices, where bribery compromises the sanctity of examinations (MoE, 2018).

In this disconcerting arrangement, students contribute money to compromise the integrity of the examination process, leading to alarming consequences. Impersonation of candidates goes unchecked, parents or paid individuals gain unauthorized access to examination halls, and a culture of cheating with impunity prevails, resulting in gross examination violations being overlooked. This deplorable situation undermines the sanctity of examinations and erodes academic integrity. Despite these assertions, little has been done to interrogate the recruitment process for invigilators, planning for invigilation and design of examination seating plan and how such practices enhance students' performance in national examinations in public tertiary institutions.

2.1.6 Examination Marking and Grading Practices and Academic Integrity

To ensure proper academic integrity, colleges should give marks to students after marking their examination scripts. Marks assist learners to know their attainment levels in examinations. Marking should be objective and not subjective if objectives of subjects taught are to be achieved. In order for any marking to be fair and objective and achieve academic integrity, colleges require to constitute examination panels, set grading systems and moderate results. Cross, Robert, Frary, and Weber (2010) emphasize that marking systems used by tutors should not be considered in

isolation but must be understood within the broader context of the educational systems in which they are applied. To comprehend the multidimensional and diverse nature of tutors' marking practices, it is essential to consider the educational setting where such practices are employed and the intended purpose of the grading system. The authors emphasize that tutors should establish the purpose of grades before selecting a grading method, ensuring that the grading process is guided by a clear and defined plan. They further highlight that systems for grading examination results can vary significantly across different educational settings.

Various universities and colleges adopt different grading systems, ranging from a simple pass or fail to more detailed scales like pass with distinction. The use of a detailed grading system has both advantages and disadvantages, as outlined by Cross et al. (2010). In the examination process, four key elements are involved: questions, which may contain sub-questions referred to as queries, sample solutions providing complete answers to the queries (distinct from indicative solutions used as grading guides), mark schemes that specify mark allocations, and student answers. These components collectively contribute to the grading process in academic assessments.

Cross et al. (2010) emphasize that the primary goal of marking is to evaluate an answer by comparing it to a specimen solution and assigning a mark that reflects the accuracy of the response. Prior to considering any automatic grading algorithm, it is crucial to recognize the challenges commonly encountered in the traditional, manual examination grading process. For instance, challenges may arise from incomplete, erroneous, or inconsistent data provided in a question, or when candidates are required to draw conclusions that are either inherently incorrect or cannot be deduced from the available information.

Ambiguity poses a more subtle problem, occurring when a candidate's interpretation of the question differs from that of the question setter. Students are motivated by the prospect of receiving credits for good results, which can enhance their employability and encourage greater dedication to their studies (Cross et al., 2010). However, an overly detailed grading system might lead teachers to opt for examination methods and questions that are easy to grade, such as fact-based and detail-oriented written exams, which can potentially hinder student learning and the achievement of higher education objectives, as discussed earlier.

Moreover, a detailed grading system could potentially foster increased competition among students, diminishing their willingness to collaborate with one another and possibly encouraging cheating. Such a grading scheme must take into account the requirements of both tutors and students (Crooks, 2008). According to MacMillan and Nash (2001), rating learner work is a complex process that is impacted by a variety of things, including assessment outcomes, tutor views and principles, and overall education objectives. Part of the grading practice involves providing students with feedback, recognizing that grades hold significant implications in students' lives, shaping their perceptions and influencing their future endeavors.

Grades also bear ethical ramifications since they encompass notions of fairness and students' rights. The credibility of grades is contingent upon the grading practices embraced by tutors, which must align with principles of reliability, validity, comparability, and equity (Reynolds, Livingston & Willson, 2009). Despite efforts to minimize errors and ambiguity in examination questions, discrepancies between the specimen solution and the 'true' solution may still arise. Examiners usually strive to ensure question clarity before the exam, but issues may only surface when

candidates review the paper or during the grading process. As noted by Reynolds et al (2009), the specimen solution serves as a guide for markers but may represent an idealized answer that differs from candidates' responses, reflecting the examiner's interpretation of the question. Ambiguous questions can lead to significant disparities between the specimen solution and candidates' responses. Various issues may arise with candidates' answers, including unclear expression due to language skills or knowledge gaps, and differing interpretations of the question compared to the question setter. Lack of knowledge may result in incomprehensible answers, and lengthy responses can obscure such deficiencies. Frequent spelling and typing errors can also hinder the recognition of phrases in candidates' answers.

Gibbs and Simpson (2004) argue that candidates may employ personal abbreviations, leading to unclear phrases. To address these challenges in the manual examination marking process, multiple examiners are often involved in reaching a consensus on questions, specimen solutions, and mark schemes. In the examination process, both manual and automatic marking require markers to address the challenges arising from ambiguous questions and candidates' diverse responses. Providing quality feedback to students is vital for their learning and academic standards, but tutors often find it challenging to accomplish (Daniel & King, 2011).

Effective feedback should be prompt, specific, encouraging, and focused on the student's work rather than the student themselves (Crooks, 2008; Gibbs & Simpson, 2004). To minimize the impact of such challenges, multiple examiners may be involved in agreeing upon questions, specimen solutions, and mark schemes. However, regardless of the marking method, ensuring accurate and helpful feedback remains crucial for guiding students in their learning process.

In the United States, Zoeckler (2007) conducted a study aiming to investigate grading practices and the moral aspects involved in grading. The study explored how tutors assessed fair grades by considering both academic achievement and non-academic factors. It also examined the influence of tutor expectations within a theoretical framework that encompasses concepts like truth, worthwhileness, trust, intellectual attentiveness, and moral considerations in grading processes. The research delved into issues of judgment, communication, and character development, shedding light on the moral complexities underlying the grading system.

In research by Zoeckler (2007) involving instructors in high schools in remote areas in upstate New York, information was gathered through interviews. The results showed that tutors struggled with the difficulty of upholding impartiality in assessing students' work. The main contention made by Zoeckler (2007) was that the subjective character of the grading process was reflected in the tutors' grading and feedback to students, which was heavily impacted by the instructors' personal values and opinions. Zoeckler (2007) contended that moral considerations of tutors in assessment significantly influence their grading practices, even though these issues are often unexplained. Ensuring a common standard and interpretation of the marking scheme among examiners is crucial to avoid favoring or disadvantaging any student.

Developing marking guidelines with input from the marking team can enhance their effectiveness and foster greater commitment and understanding. However, in disciplines like the Humanities, marking schemes may be more complex due to their "content-advisory" nature rather than being "content specific" (O'Donovan, 2005). In the realm of science-based examination papers, questions typically feature more distinct right or wrong answers, and the reliability of marking heavily relies on well-constructed

marking schemes. Delap (1993) undertook studies to assess marking reliability and identify factors contributing to variation among examiners, aiming to mitigate potential sources of inconsistency. Ensuring academic rigor in the assessment process, examination moderation, as elucidated by Hughes (1989), revolves around adhering to agreed-upon marking criteria to maintain high academic standards. Universities acknowledge the diversity in moderation practices by recognizing the distinct demands of various disciplines and the specific requirements of different types of assessed materials. Hughes (1989) emphasizes the importance of colleges choosing the most appropriate moderation practices for their programs based on agreed criteria models.

Effective moderation practices should ensure accuracy and fairness, align with the discipline's nature, suit the assessed material and means of assessment, and be evident in the feedback given to students. Moderation policies typically encompass all aspects of student assessment contributing to the award or final classification, encompassing conventional examinations, formally assessed coursework like projects or dissertations, and practical work like laboratory assignments (Johnson, 2001). Price and Rust (1999) contended that, in most cases, the uniformity of marking is improved by the use of specific evaluation criteria. However, Moskal and Leydens (2000) argued that enhancing the scoring rubric is likely to have a positive effect on both inter-rater and intra-rater reliability in teachers' assessment of students' work.

In contrast, Meadows and Billington (2005) observed that despite the widespread belief that a clear and detailed marking scheme results in higher marking reliability, intended improvements to the marking scheme do not always yield the expected enhancement in reliability. In their study, Braid, Greatorex, and Bell (2004) investigated the impact of standardization meetings, providing some examiners with exemplar scripts and

feedback on their marking, while others received only the marking scheme. In the second investigation, the researchers explored the effects of engaging in discussions about the marking scheme. All examiners received both the marking scheme and exemplar script, but only a portion of them attended a standardization meeting. Strikingly, the study demonstrated that neither the utilization of exemplar scripts nor the examiner discussions resulted in an enhancement of marking reliability. Intriguingly, these findings contradict the earlier research conducted by the same researchers, Grotorex, Baird, and Bell (2002).

The researchers found that examiners view standardization meetings as reliable because they aid in comprehending the marking scheme and clarifying the principal examiner's interpretation. Attendance at these meetings also instills confidence in some examiners, assuring them that they are marking appropriately and sharing a common understanding of the marking scheme with their colleagues. This underscores the significance of assessment moderation in ensuring consistent marking, where any marker would award the same mark to an assessment item. Moderation becomes essential when multiple individuals mark assessment items within a unit or when a unit is taught across different schools.

According to Sadler (2009), the primary aim of moderation is to minimize disparities among assessors before students receive their marks. It goes beyond mere mark checking; it entails examining the entire assessment process, from item development to ensure fairness, validity, and reliability, thereby enabling equivalence and comparability (ALTC, 2012a). The interplay between student assessment, grading, quality assurance, and academic standards has been a critical concern (James, 2003). Upholding assessment consistency within a unit and moderating these assessments present

challenges when a unit is offered across multiple campuses and online (Kuzich, Groves, O'Hare & Pelliccione, 2010). While marking and grading in numerous disciplines inherently involve subjectivity (Hughes, 2011), adopting a systematic approach to identifying significant tacit beliefs may aid in reducing grader variation (Hunter & Docherty, 2011). Johnson (2001) presents various models of moderation, including universal double-blind marking where the first marker evaluates the work without leaving any notes, and the second marker independently assesses the work later. Both examiners then award marks and make comparisons.

Another model is universal non-blind double marking, where the first marker provides feedback to the student, and the second marker evaluates the work with this knowledge but without accessing the first marker's awarded marks. Other models include moderation of the entire cohort as a check or audit, where the first marker provides feedback and awards a mark, and moderation by sampling of the cohort, where the second marker samples already first-marked work with attached feedback and marks to check overall standards. Partial moderation can also be applied to specific types, such as fails, firsts, or borderlines, using any of the above approaches.

In order to better understand the motivations behind tutors' evaluation and grading techniques as well as the variables that influence their choices (McMillan & Nash, 2001). They discovered through surveys with instructors that their eagerness to adopt strategies that increase student involvement, motivation, and mastery had an impact on grading judgments. In their research, the majority of tutors said that grading was an essential component of their approach to teaching and learning, which aimed to take into account the individual variations among pupils. While indicators like aptitude and improvement were regarded as aligning with wider

attitudes about the need of identifying individual variations in the student population, unsuccessful achievement characteristics like effort were seen as a way to assess motivation and engagement. Tabulawa (2012) conducted a comprehensive survey among pre-service tutors who were currently enrolled in education classes at the esteemed University of Botswana.

The main aim of the study was to delve into the students' unique experiences pertaining to the evaluation of their academic work and the kind of feedback they received from their lecturers (Tabulawa, 2012). The findings brought to light several noteworthy observations: lecturers often fell short in providing sufficient and meaningful comments to aid students in comprehending their mistakes, they assigned low marks without adequately explaining the rationale behind them, failed to reconcile the awarded marks with the accompanying comments, and displayed inconsistencies in their use of ticks alongside the given grades (Tabulawa, 2012). Consequently, the main argument that Tabulawa (2012) fervently put forth was that these discrepancies between the comments and grades served as a source of frustration for the students, depriving them of the valuable opportunities to foster growth and improvement in their academic endeavors. The study highlighted the imperative need to provide tutors with ample assessment training, thus enabling them to refine their grading practices and equipping them with the necessary skills to deliver feedback that is both effective and beneficial to the students.

By adopting a narrative perspective on the various views about grading and the process of giving students feedback, the study aimed to comprehensively address this pertinent issue in the realm of education. According to Gullickson (2002), the process of assessment and feedback, particularly when incorporated into the learning

journey, serves as the most effective means for students to develop accountability in their academic work and personal lives. Emphasizing the importance of tutors utilizing grading and feedback practices that best serve the students' interests, Gullickson (2002) provided some valuable recommendations. One of these recommendations was that tutors should clearly demonstrate what the students accomplished, what was expected of them, and then assist them in comparing and contrasting the two aspects.

Reflecting on the South African context, the Department of Education (2011) conducted a comprehensive study to document the variations in assessment and grading practices across a range of subjects within a specific class, as taught by different tutors in tertiary institutions. The study uncovered that tutors employed a diverse array of factors when evaluating students' academic work. The determination of grades involved a combination of factors, conveniently divided into four different categories: academic success, academic facilitators (such as effort, capacity, enhancement, and involvement), dependence on external standards, and taking into account additional credit and controversial instances.

The study found that academic achievement held the highest importance in grading students' work, with two-thirds of participating tutors supporting the incorporation of academic enablers, such as effort, ability, and improvement, into the grading process. Tutors justified the use of non-achievement factors, like effort, as they considered them to act as indicators to help determine grades, serving as reliable proxies for student achievement. In the assessment process, tertiary institution tutors have been observed to utilize non-achievement factors to adjust grades, both in raising or lowering them, particularly in borderline cases.

Additionally, they tend to reward diligent effort by raising borderline grades, while conversely, they may lower borderline grades when students demonstrate a lack of effort (Department of Education, 2011). Colleges are able to give marks to students after marking their examination scripts. Marks assist learners to know their attainment levels in examinations. Marking should be objective and not subjective if objectives of subjects taught are to be achieved. In order for any marking to be fair and objective, colleges require to constitute examination panels, set grading systems and moderate results.

Cross, Robert, Frary, and Weber (2010) emphasize that tutors' grading methods should not be seen in isolation but rather within the context of the educational systems they operate in. Understanding the dimensionality and variability of tutors' grading practices requires considering the educational context and the purpose of the grading system. It is crucial for tutors to establish the function that grades will have before selecting a grading method, necessitating a well-defined grading plan that caters to both tutors and students' needs (Crooks, 2008).

MacMillan and Nash (2001) contend that the procedure of evaluating pupils' work is difficult influenced by various factors, including assessment outcomes, tutors' beliefs, values, and overall learning goals. One important aspect of grading involves providing students with feedback, which, since it encourages learning and guarantees that academic requirements are met, is essential to their schooling. The significance of grades in student assessment cannot be underestimated, as they can have far-reaching implications for individuals' perceptions and life opportunities. Thus, the ethical implications of grading are considerable, focusing on fairness and students' rights. To maintain the legitimacy of grades, tutors must adopt grading practices that are reliable,

valid, comparable, and fair (Reynolds, Livingston & Willson, 2009). Gibbs and Simpson (2004) assert that feedback serves as a guiding system, aiding students in their learning and mastery of the subject matter. Regrettably, providing students with high-quality feedback is a challenging aspect of teaching, causing tutors to frequently skip this important part of the grading process (Daniel & King, 2011). Feedback needs to be given right away, be closely related to the event, and be positive in order to be genuinely successful. It should also offer specific insights into what was done well and what areas need improvement, without overwhelming students with an excessive focus on multiple aspects simultaneously. The feedback should maintain clarity and direct its focus towards the work itself, not delving into personal judgments of the student (Crooks, 2008; Gibbs & Simpson, 2004).

In order to investigate the nuances of grading procedures and the ethical considerations that underlie them, Zoeckler (2007) carried out research in the United States. Taking into account both accomplishment and non-achievement criteria, this study investigated how tutors deal with the difficulties of determining a fair grade. With the use of a theoretical framework that included ideas of truth, worthwhileness, trust, intellectual, and moral attention in grading procedures, the study also looked at the impact of instructor expectations. Tutors from rural high schools in upstate New York were interviewed by Zoeckler (2007) to gather data.

The findings revealed that tutors grapple with issues of fairness while grading students' work, and the process is significantly influenced by their values and beliefs. The study emphasized that tutors' moral considerations, though often unarticulated, significantly shape their assessment practices. In their study, McMillan and Nash (2001) examined the rationales behind tutors' assessment and grading practices, as well as the factors

influencing their decisions. Through interviews with tutors, the research revealed that their grading practices were driven by a desire to foster student engagement, motivation, and comprehension. The majority of tutors in McMillan and Nash's study perceived grading as an integral component of their teaching philosophy, one that should be responsive to individual differences among students. McMillan and Nash (2001) investigated the motivations behind instructors' evaluation and grading techniques as well as the variables that affected their choices. The researchers discovered through interviews that tutors were driven to employ grading procedures that promoted student involvement, motivation, and understanding.

According to the majority of tutors in McMillan and Nash's (2001) study, grading is an essential component of their teaching and learning philosophy and takes into account the specific variations of each student. While these tutors saw ability and growth as being consistent with their larger views about recognizing and accepting individual differences among students, they saw non-achievement criteria like effort as important markers of student motivation and engagement. Another study by Tabulawa (2012) surveyed pre-service tutors as students at the University of Botswana studying education to understand their experiences with grading and the feedback provided by their lecturers.

Tabulawa's study revealed that lecturers often failed to offer adequate comments to help students grasp their mistakes, and some tutors assigned low marks without transparent justifications. Furthermore, the study found a lack of alignment between the marks awarded and the accompanying feedback, and tutors sometimes used ticks that did not correlate appropriately with the given marks. The central argument put forth by Tabulawa (2012) emphasized that if there is a mismatch within the feedback from

instructors and the marks pupils are given, it leads to frustration and hampers their potential for improvement. As a solution, the study highlighted the necessity for tutors to receive comprehensive assessment training, equipping them with the skills to deliver effective, efficient, and constructive feedback to students. Gullickson (2002) presents a narrative perspective on grading and providing feedback to students, asserting that assessment and feedback are crucial tools for instilling accountability in students' academic endeavors and personal lives. The author emphasizes the importance of tutors adopting grading and feedback practices that prioritize the students' best interests.

Gullickson (2002) puts forth several recommendations, suggesting that tutors should offer explicit explanations of students' work, delineate the expected outcomes, and aid them in comparing and contrasting their achievements. By adhering to these guidelines, tutors can create an environment that fosters students' growth, learning, and a sense of responsibility, benefiting both their academic progress and personal development. The Department of Education (2011) in South Africa conducted a comprehensive study to investigate the diverse assessment and grading practices employed by tertiary institution tutors across various subjects in a specific class.

The findings revealed that tutors utilize a wide array of factors when evaluating students' work. These variables were broken down into four separate categories: academic success, academic facilitators including effort, aptitude, further development, and involvement, use of outside benchmarks, and taking into account additional credit and borderline instances. Among these components, academic achievement emerged as the most significant aspect in determining students' grades. Notably, two-thirds of the tutors involved in the study acknowledged the importance of academic enablers, such as effort, ability, and improvement, when assigning grades.

Tutors justified their use of non-achievement factors, particularly effort, as they viewed them as a suitable means to assess borderline cases and as reliable indicators of student achievement. Interestingly, the study found that tertiary institution tutors occasionally use non-achievement factors to adjust grades, except in borderline cases. Furthermore, they were observed to recognize and reward diligent students by elevating borderline grades, while others lowered borderline grades for lack of effort (Department of Education, 2011). These findings shed light on the complex and multifaceted nature of grading practices, emphasizing the significance of considering various factors to ensure fairness and accuracy in assessing students' academic performance.

Schools are able to give marks to students after marking their internal examination scripts. Marks assist learners to know their attainment levels in internal examinations. Marking should be objective and not subjective if objectives of subjects taught are to be achieved. In order for any marking to be fair and objective, schools require to constitute internal examination panels, set grading systems and moderate results. Cross, Robert, Frary, and Weber (2010) argue that when examining marking systems, it is essential to avoid viewing them in isolation and instead consider the broader context of the educational systems in which they are implemented.

Considering the complexity and diversity of teachers' marking practices, it is crucial to consider the educational system's context where these practices are implemented, along with the objectives of the grading system. Teachers should determine the intended purpose of grades even before selecting a grading method, emphasizing the need for a well-defined grading plan that caters to both teachers and students' needs (Crooks, 2008). MacMillan and Nash (2001) posit that the process of grading students' work is a multifaceted and intricate undertaking, driven by a confluence of interconnected

elements. These elements encompass the outcomes derived from assessments, the individual beliefs and values held by teachers, and the overarching learning objectives set for students. An integral part of the grading process involves providing students with valuable feedback on their performance. Beyond mere academic performance, grades hold significant implications for students, influencing their self-perceptions, confidence, and future opportunities. Moreover, the ethical dimension of grading demands careful consideration, encompassing concerns of fairness, equity, and the rights of students.

The credibility of grades hinges entirely on the grading practices employed by teachers. To ensure their authenticity, grades must be rooted in robust, valid, comparable, and equitable evaluation methodologies (Reynolds, Livingston & Willson, 2009). Offering effective feedback plays a pivotal role in the realm of education, not only fostering a culture of learning but also enabling students to comprehend their strengths and areas for growth, ultimately elevating educational standards as a whole. Gibbs and Simpson (2004) assert that feedback plays a pivotal role as a guiding system, enabling students to navigate their path towards mastery of the subject matter. However, the task of providing high-quality feedback poses a considerable challenge for teachers, often leading them to avoid delving deeply into this crucial aspect of the grading process (Daniel & King, 2011).

To ensure the effectiveness of feedback, certain key attributes must be upheld. Promptness is essential, ensuring that feedback is delivered close to the learning event, maximizing its impact. Encouragement becomes a potent force, motivating students to persevere and excel. Specificity is of utmost importance, offering precise insights into what aspects were commendable and where improvements can be made, while avoiding overwhelming the student with multiple points of focus simultaneously.

Maintaining a clear and objective approach to feedback is paramount. The focus should remain on the student's work, promoting constructive criticism and guidance, rather than making judgments about the student's overall worth as an individual (Crooks, 2008; Gibbs & Simpson, 2004). Embracing such principles, teachers can unleash the full potential of feedback, fostering an environment of growth and excellence in the realm of learning. Zoeckler (2007) embarked on a study in the United States to delve into the intricacies of grading practices, encompassing features of judgment, dialogue, and growth in personality in a context that exposed the ethical challenges of rating. His research aimed to understand how teachers determined a fair grade by carefully considering both achievement and non-achievement factors.

Incorporating a theoretical framework that delves into notions of accuracy, worthwhileness, reliance, and rational and moral attentiveness, Zoeckler (2007) further investigated the influence of teacher expectations on grading practices. By conducting interviews with remote middle school instructors in upstate New York, he gathered valuable data that revealed the ongoing challenges teachers face in achieving fairness when grading their students' work. Considering both accomplishment and non-achievement criteria, Zoeckler (2007) carried out research in the United States to investigate grading procedures and the underlying moral difficulties in grading. The framework of truth, worthwhileness, trust, and moral attention was used to assess teacher expectations.

Data were gathered through speaking with teachers at rural high schools in upstate New York, revealing their struggles with fairness in grading students' work. Zoeckler argued that teachers' values and beliefs significantly influence their grading and feedback practices, even if these moral considerations often go unexplained.

Similarly, McMillan and Nash (2001) investigated reasons behind teachers' grading practices, finding that they seek to encourage student engagement, motivation, and understanding, accommodating distinct differences. Instructors also saw the importance of non-achievement factors, such as effort, as indicators of student motivation, while recognizing the significance of ability and improvement in acknowledging student diversity.

In a study by Tabulawa (2012), Pre-service instructors at the University of Botswana who are enrolled in instructional classes participated in a survey, wherein students shared their experiences regarding how their work was graded and the feedback provided by their lecturers. The findings of the study revealed significant issues with teachers' grading practices. Specifically, teachers were observed to offer inadequate comments that failed to clarify students' mistakes, and they assigned low marks without clear justification. Additionally, there was a lack of correlation between the given marks and accompanying comments, leading to confusion for students. Moreover, teachers' use of incompatible ticks added to the discrepancies in assessment. The main argument put forward by Tabulawa (2012) in the study was the detrimental impact of disparities between teachers' comments and grades on students' learning and growth. This discrepancy robbed students of the potential to improve as they lacked a clear understanding of their performance.

To address these issues, the study emphasized the importance of providing teachers with proper assessment instruction to improve their grading procedures and provide them the know-how to give students valuable, productive, and successful feedback. By doing so, teachers can create a more conducive learning environment and promote students' academic development.

In presenting a narrative perspective on the significance of grading and providing feedback to students, Gullickson (2002), evaluation and feedback, particularly when used in the context of learning, are the most efficient ways for students to develop accountability in both their academic work and personal life. Gullickson (2002) underlines the necessity of grading and feedback procedures that prioritize the best interests of students while highlighting the significance of instructors' roles in this process.

As part of the recommendations, Gullickson (2002) suggests that when assessing and giving feedback to students, teachers should strive to clearly illustrate what students have accomplished, what was expected of them, and then guide them through a comparison and contrast of the two aspects. Such an approach to grading and feedback is instrumental in fostering a deeper understanding and engagement among students, enabling them to take ownership of their learning journey and make meaningful progress in their educational pursuits.

The Department of Education in South Africa (2011) conducted research to look at the differences in assessment and grading procedures used by instructors within a particular class for various topics. The results showed that secondary school instructors use a wide range of variables to judge their pupils' performance. Academic accomplishment, academic enablers including effort, ability, improvement, and involvement, use of external standards, and consideration of additional credit and borderline instances were all put together under four different categories. This comprehensive approach to grading allows teachers to consider various dimensions of student performance, enabling a more holistic and fair assessment of their academic progress and achievements. In the study, academic achievement emerged as the primary factor in grading students' work,

indicating its significance in assessing their performance. The majority of teachers, approximately two-thirds, concurred with the inclusion of academic enablers, including effort, ability, and improvement, when determining students' grades. Teachers defended the incorporation of non-achievement factors, like effort, as they believed these elements served as crucial indicators for identifying borderline cases and were valuable proxies for gauging student achievement. By considering both academic achievement and various academic enablers, teachers sought to ensure a more comprehensive and well-rounded evaluation of their students' capabilities and progress.

In awarding grades to students, teachers have been observed to consider non-achievement factors, sometimes adjusting grades either upward or downward, especially in borderline cases. The Department of Education (2011) found that some teachers reward diligent effort by raising grades that fall near the borderline, while others may lower grades for students who demonstrate a lack of effort. However, in Kenya, certain educators discourage the use of non-achievement factors and instead prioritize achievement-related factors in the grading process (Mwandikwa & Ocharo, 2007). They argue that limiting grades to measured achievement at a specific time leads to clearer grade interpretations. These educators believe that making valid and reliable assessments based on ability, growth, and effort can be challenging and may not yield accurate results (Mwandikwa & Ocharo, 2007).

In the context of Kenya, there are differing perspectives among educators regarding the inclusion of non-achievement factors in grading practices. While some educators discourage the use of such factors and place greater emphasis on achievement-related elements, others argue in favor of their inclusion. Those who advocate against non-achievement factors contend that grades should primarily reflect measured achievement

at a specific time, aiming for clearer interpretations. They assert that making valid and reliable assessments based on abilities, growth, and effort may prove challenging (Mwandikwa & Ocharo, 2007). In Mandera County, this debate resonates, particularly concerning the impact of non-achievement factors on low-performing students. Critics argue that valuing effort over mastery of content and skill attainment can have significant implications for learning outcomes. In Kenya's educational landscape, the issue of striking a balance between achievement and non-achievement factors in grading has generated ongoing debates among educators (Mwandikwa & Ocharo, 2007). While some argue in favor of limited grading based solely on measured achievement, others contend that assessing ability, growth, and effort poses significant challenges (Mwandikwa & Ocharo, 2007).

The marking process involves evaluating students' academic work against specific criteria, which include various grade categories, ranging from 70% to 100%, 60% to 69%, and 0% to 39% (Ogula et al., 2006). To ensure consistency across different assessments within schools or departments, markers receive pertinent marking advice (Ogula et al., 2006). These ongoing discussions continue to shape the educational framework in Kenya. In the pursuit of equitable, valid, and dependable assessment practices, universities employ a process of dual evaluation, preferably conducted in a "blind" manner to keep the initial marker's judgment concealed from the second evaluator. Furthermore, for formal written examinations, many universities adopt an anonymous grading system to ensure impartiality.

In Mandera County, a similar contention arises concerning the incorporation of non-achievement factors in the grading process. This issue bears significant implications, particularly for academically struggling students who might place greater value on

effort rather than focusing on the mastery of subject matter and skill acquisition. This persistent discourse underscores the educational complexities encountered within the region. Despite these assertions, Mwandikwa and Ocharo (2007) has not indicated how marking systems adopted by different tertiary institutions have a direct link with the performance of students in national examinations. This has compromised good academic integrity and poor management of examinations.

2.2 Theoretical Literature Review

The study was guided by three theories which included; the Systems theory, the Academic Achievement theory and the Lemon theory.

2.2.1 The Systems Theory

Utilizing the theoretical framework put forth by Luhmann Nklas (2004) known as Systems theory, this study was conceived. Systems theory posits that organizations function as managed systems, converting inputs like raw materials, individuals, and resources into outputs comprising their products or services. A core principle within this framework entails management's interaction with the external environment to obtain inputs and deliver the desired outputs of production. Consequently, this research investigates the impact of unethical examination management as inputs, interfacing with various examination management roles, and resulting in examination malpractice as the undesirable output, thus jeopardizing the overall academic integrity.

Examination management involves the comprehensive process of meticulously planning, organizing, and administrating examinations. It encompasses various stages, from classroom instruction and question preparation to examination administration, grading, and certificate issuance.

Key stakeholders, such as tutors, examination administrators, students, and parents, are integral components of the examination management process. Effective examination management necessitates skillfully marshaling and coordinating all necessary material and human resources to ensure a seamless examination conduct. The efficacy of examination management profoundly impacts the prevalence or absence of malpractices and cheating during the examination process.

Examination malpractice or cheating inherently entails the compromise of ethical standards. This involves the overt or covert violation of rules, regulations, standards, and best practices governing the conduct of examinations. Such malpractices signify the transgression of fundamental principles of sound examination management by all parties involved in the process. Thus, the rationale of using this theory in this study is that it underscores the fact that effective examination management is key to academic integrity of tertiary institution students.

2.2.2 The Academic Achievement Theory

The research was additionally guided by the academic achievement theory, developed by Walberg (2012). According to this theory, individual learners' psychological attributes and their immediate psychological surroundings play a significant role in shaping educational outcomes and academic integrity, including cognitive, behavioral, and attitudinal aspects. Walberg (2012) identified nine critical variables influencing academic integrity, encompassing learners' ability and prior achievement, motivation, age or developmental level, the quantity and quality of instruction, classroom climate, parental involvement, home environment, peer group, and exposure to external mass media beyond the school setting. Walberg (2012) goes on to emphasize that psychosocial attributes, such as self-concept, attitudes,

behaviors, intrinsic motivation, and overall learner engagement in the learning process, play a crucial role in curriculum evaluation studies. These characteristics can provide valuable insights to educators, enabling them to create more effective and well-functioning classrooms. In the context of this study, enhancing academic integrity requires careful consideration of both educational process goals and achievement goals. Thus, the relevance of this theory is that academic integrity is interpreted to include students' perceptions of the social environment, creativity, self-concept, participation in extra-curricular activities, and interest in learning. In order to achieve this, there is recognition of effective management of examination starting from point of setting to marking and grading. This will ensure proper academic integrity in college examinations.

2.2.3 The Examination Malpractice Lemon Market Theory

The Lemon Market Theory was also used by the researcher to anchor the dependent variable of the study which is "academic integrity". The general weakening in the quality of education worldwide has reached high records which has made products from educational institutions to be regarded as Lemon Products. The Lemon Market Theory was a derivative of George Akerlof's 1970 ground breaking paper about the consequences of information asymmetry where he made descriptions of lemon markets where quality of products and markets mechanisms are uncertain.

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.

The buyer, however, knows this; eventually he or she may take the average quality of the products or services into consideration for his or her future buying decisions and behaviour. This may have as a result that the quality product or service may leave the market since they may only sell for average market quality goods and services. As results the average quality market may deteriorate and the market may shrink. In terms of education, the academic integrity may be compromised such that poorly trained manpower will be witnessed. Another important element in the lemon market conceptualization includes the cost of dishonesty which lies not only in the amount by the purchasers are cheated, but the cost also includes the loss incurred from driving legitimate business out of existence.

The extension to this theory in this paper stems from the fact that production of graduates from many tertiary institutions in recent times are becoming lemon products where the quality of graduates cannot be assessed directly by the job markets at periphery level except the practitioners in higher education who have adequate information about the quality of their products and services which they provide. The model presents the wider repercussions of the current irregularities associated with educational records creation and management in many tertiary institutions in Kenya.

Students and society in general have recognized the benefits of higher education for economic emancipation yet no serious efforts are being made to take their studies serious instead they indulge in negative devices as another means of motivation for making their grades and academic achievements. They use materials and monetary rewards to be given practitioners including records officers for securing higher achievement which negates meritocracy demands of educational assessment and achievements (Adjei & Azameti, 2014).

2.3 Theoretical Framework

The theoretical framework was based on the three theories discussed in the theoretical literature. The theories are the Systems Theory, the Academic Achievement Theory and the Lemon Market Theory. These theories dealt with the independent and dependent variables. The independent variable is examinations management practices and the dependent variable is academic integrity. The last two theories deal with the dependent variable.

2.3.1 The Systems Theory

The use of systems theory in this research serves to highlight the requirement for marshaling and organizing all the resources—both human and material—necessary for a successful examination process. at other words, the academic integrity of students at tertiary institutions depends on competent examination management techniques. In a similar line, academic success theory emphasizes that both educational process objectives and accomplishment goals must be taken into account in order to promote academic integrity. Additionally, students' judgments of the social environment, inventiveness, self-concept, involvement in extracurricular activities, and motivation in studying are all considered to be part of academic integrity.

2.3.2 The Academic Achievement Theory

In order to achieve academic integrity, the psychological characters of learners and their immediate environment have to be taken into account. There are some variables that impact academic integrity for example, the students' prior achievement, motivation, age, quantity of instruction and parental involvement among others. The home environment as well as the peer group matter to the learners. There is impact of outside environment such as social media which affect the students as far as

academic integrity is concerned. To acquire proper academic integrity, there must be consideration on the learners' characteristics both in college and outside the college.

2.3.3 Examination Malpractice Lemon Market Theory

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 may be no academic integrity hence poor quality of education in tertiary colleges. This may result into poorly produced graduates. This theory deals with exam malpractices and dishonesty which make it impossible to achieve proper academic integrity.

2.4 The Conceptual Framework

The conceptual framework was based on examination management techniques, which were represented by methods for setting, storing, and distributing exams, as well as for invigilating, marking, and grading exams. These practices served as the independent variables, while the dependent variables were academic integrity. As indicated in Figure 1, intervening influences were government policy, academic dishonesty cultures and attitudinal factors.

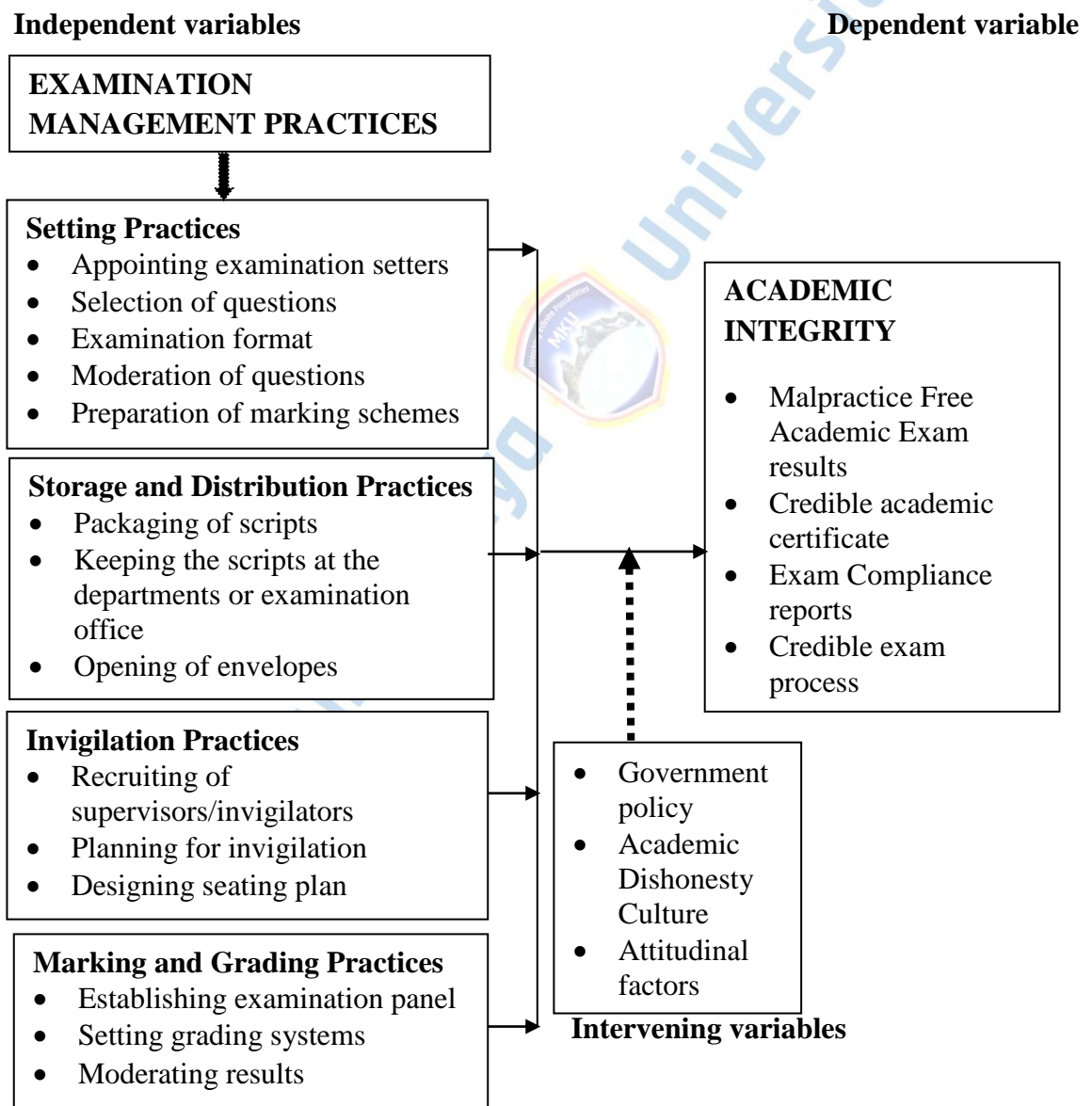


Figure 1: The Conceptual Framework
Source: Researcher (2024)

2.5 Research Gaps

Beguin and Ehren (2011) established that there was a bank of examinations from where the tertiary colleges can choose their exams. There was no proper process in the exam banks system such that academic integrity was taken care of. This current study will consider the exam setting process which will ensure proper exam integrity free from malpractices so as to ensure academic integrity. The Government of Kenya (2010) put measures in place to decentralize exams storage and distribution into sub counties. The Ministry of Education put containers in sub counties in various strategic places where storage and distribution were done under tight security. When the exams went to the institutions, they were put under supervisors and invigilators. Anything could happen to compromise integrity during the taking of these exams. This current study considered putting invigilation and supervision process which will enable the exam integrity. Education sent containers in.

Agbo (2011) and Obonyo (2010) emphasized on the invigilation of exams in Nigeria and Kenya respectively. However, the important issue of marking and grading was left out. This study looked into these issues bearing in mind that the academic integrity can be compromised in the process of marking and grading especially with this digital era in mind. The academic integrity can be compromised in due course. This study considered academic integrity in terms of how candidates are awarded marks and grades and especially the moderation process.

From the literature review, it is evident that examination management practices are significant in enhancing academic integrity of exams in tertiary institutions. Practices such as examination setting, distribution, invigilation and marking determine the performance of tertiary institution students in national examinations.

However, the review exposed numerous research and knowledge gaps. For example, on examination setting practices, MoE (2018) as well as empirical studies have not exhaustively indicated how examination setting and test preparation procedures are effective in determining tertiary institution students' academic integrity in examinations. The reviewed studies have not indicated which kinds of questions, whether multiple choice or essays, are effective in enhance students' academic performance.

On examination distribution practices, much needs to be since MoE (2010) has not indicated how each of the distribution practices impact on the academic integrity in examinations. On examination invigilation practices, MoE (2018) has not interrogated the recruitment process for invigilators, planning for invigilation and design of examination seating plan and how such practices enhance academic integrity in examinations. On examination marking and grading practices, Mwandikwa and Ocharo (2007) as did other empirical studies have not indicated how marking and grading systems adopted by different colleges for their examinations have a direct link with the academic integrity in examinations. These were the research gaps which the study sought to address.

2.6 Summary of Literature Review

This literature review summary section began with the introductory part followed by highlighting the examinations management practices as the independent variable and academic integrity as the dependent variable of the study. Then further literature was reviewed on the first objective of the research which is examination setting practices. Examination storage and distribution practices was looked at as the second objective. Examination invigilation practices was reviewed as the third objective.

Literature regarding examination marking and grading was the last objective whose literature was reviewed. Three theories pertaining examinations management practices and academic integrity were discussed. Theoretical framework discussed on how the three theories were related to the current study. The conceptual framework was discussed and finally, the gaps in research were identified in the process.



CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.0 Introduction

This chapter delineates the research methodology employed for conducting the study. It centers on elucidating the research design, study location, target population, sample size, sampling techniques, research instruments, piloting of research instruments, reliability and validity measures, data collection techniques, data analysis procedures, and ethical considerations.

3.1 Research Methodology

In this study, a mixed methodology approach was employed, incorporating both quantitative and qualitative methods. Mixed methodology is a research design that amalgamates elements from both qualitative and quantitative research approaches. By incorporating diverse viewpoints, data collection techniques, analysis methods, and inference techniques, this approach aims to achieve a comprehensive understanding, depth of insight, and corroboration of findings. Mixed methods research requires a purposeful mixing of methods in data collection, data analysis and interpretation of the evidence. The key word is 'mixed' as an essential step in the mixed methods approach is data linkage, or integration at an appropriate stage in the research process.

Purposeful data integration enables researchers to seek a more panoramic view of their research landscape, viewing phenomena from different viewpoints and through diverse research lenses (Creswell, 2014). The mixed methodology was chosen due to its capacity to overcome limitations of relying solely on quantitative or qualitative methods, ensuring a comprehensive examination. By combining both approaches, the study achieves depth of understanding and corroboration, reinforcing the research

findings. Incorporating both quantitative and qualitative methods in the study is advantageous, as it leads to better and more reliable results. This is due to the fact that increased evidence contributes to enhanced outcomes, as emphasized by Creswell (2014).

3.2 Research Design

The study utilized the concurrent triangulation research design, a single-phase approach in which both quantitative and qualitative methods were implemented simultaneously and with equal emphasis. This design was chosen for its flexibility in accommodating both types of data and allowing their integration. Participants received both instruments concurrently for data collection, enabling the researcher to gather and analyze quantitative and qualitative data separately, thus enhancing the depth of understanding of the research problem.

Implemented in the study was the concurrent model, where both quantitative and qualitative data underwent separate analysis, and their results were subsequently combined and compared. This design effectively addressed conflicting strengths and distinct limitations of quantitative methods. The researcher concurrently collected and analyzed both data types, ensuring a comprehensive grasp of the research problem, in line with Creswell's (2014) emphasis. During interpretation, the researcher merged the two data sets to amalgamate the findings. This design was well-suited to the study, facilitating the collection of quantitative information, which could be numerically represented along a continuum.

Qualitative description research design is used in qualitative research for studies which are descriptive in nature. In this design, researchers generally draw from a naturalistic perspective and examine a phenomenon in its natural state.

The fundamental aim of qualitative descriptive studies is to present a comprehensive summary, using everyday language, of specific events encountered by individuals or groups. Additionally, descriptive research seeks to portray a phenomenon and its characteristics. In this particular research, the focus lies on "what" rather than "how" or "why" something occurred. In contrast, qualitative research adopts a holistic approach, gathering diverse and substantial data from multiple sources to gain profound insights into individual participants, encompassing their opinions, perspectives, and attitudes.

Qualitative data collection and analysis predominantly rely on qualitative methods, involving an inductive exploration of the data to identify recurrent themes, patterns, or concepts, which are then described and interpreted accordingly (Gall & Borg, 2007). Employing self-report measures on carefully selected samples, survey research represents a quantitative approach that offers adaptability in exploring a wide array of basic and applied research questions. Through survey design, data is collected from a predefined group of respondents to gain valuable insights into various topics of interest.

Researchers utilizing survey methods benefit from several advantages. First and foremost, surveys serve as an exceptional tool for accumulating a wealth of information from a large number of individuals. Secondly, when aiming to obtain a representative depiction of attitudes and characteristics within a substantial population, survey research proves to be the optimal choice. The potential for generalizability is a significant advantage associated with surveys, along with their cost-effectiveness. Surveys allow researchers to collect data from large samples at a relatively low cost, making them well-suited for probability sampling techniques (Converse, 1987). This research design facilitated the collection of data describing events, followed by organization, tabulation, depiction, and description of the data collection process.

Visual aids, such as graphs and charts, were employed to aid readers in comprehending the data distribution. Furthermore, in-depth and narrative descriptions were presented for a select number of cases. For a more detailed understanding of the design, please refer to Figure 2.

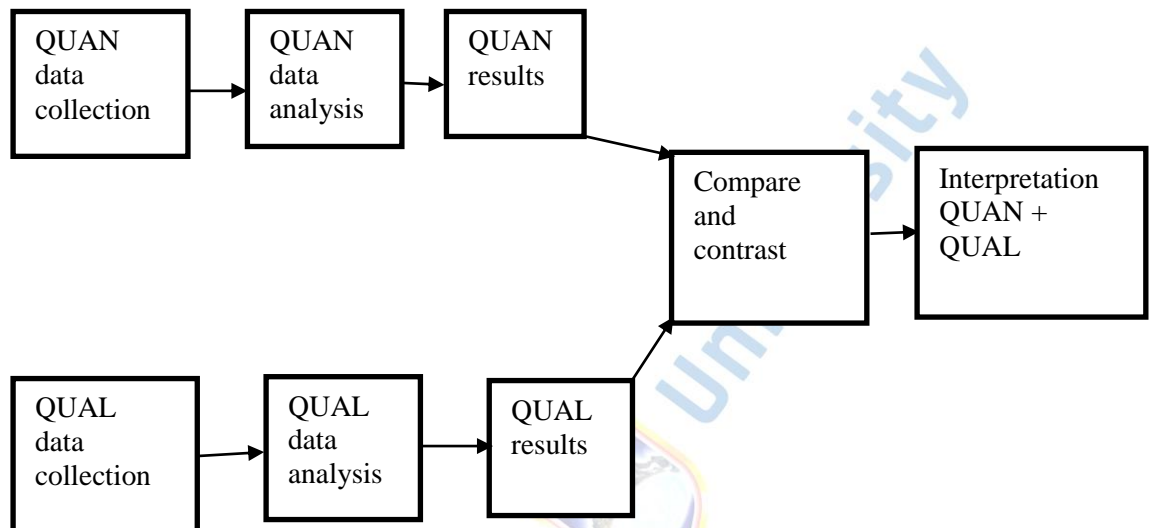


Figure 1: Triangulation design. Source, Creswell (2014)

3.3 Location of Study

Public tertiary institutions in Mandera County hosted the study. With a population of 1772.70 people and a total area of 25, 797.7 km², the county has a 69 person/km² population density (KNBS, 2019). Pastoralism, subsistence farming, and trading are the primary economic activities in the Mandera County. The county also has challenges with most of its population living in the rural areas with instances of abject poverty.

In tertiary institutions in Mandera County, MoE (2020) asserts that levels of management and integrity of every step of the examination process is still wanting since many students display low academic integrity in national examinations. As noted in Table 1 Mandera had 17.1 % cases of malpractice in 2015, 57.1 % in 2016, 44.3 % in 2017 and 72.1 % in 2018 (Mandera County Education Office, 2018).

This points to an increasing trend in students' academic integrity in terms of malpractices in public tertiary institutions, thus, the focus on Mandera County as the location of study.

3.4 Target Population

The total target population drawn from three colleges was 1,394 participants which comprise three principals, 150 College Tutors, seven Examination Officers and 1234 students as shown in Table 2.

Table 2: Target Population

Respondents	Target Population
Principals	3
College Tutors	150
Examination Officers	7
Students	1,234
Total	1,394

Source: Mandera County Education Office (2023)

3.5 Sampling Procedures and Sample Size

To achieve the desired sample size for students that aligns with the study's objectives, several sampling techniques were employed. The researcher utilized Yamane's Formula, given by:

$$N_0 = \frac{N}{1 + N(e^2)}$$

Where N_0 represents the desired sample size at a 95% confidence interval, N is the target population, and e is the confidence level of 5% (with a decimal equivalent of 0.05). Consequently, the desired sample size was calculated as follows:

$$N_0 = \frac{1394}{1 + 1394(0.05)^2}$$

$$N_0 = 463 \text{ respondents}$$

As mentioned earlier, all the three principals and examination officers were selected using purposive sampling. Creswell (2014) highlights that the objective of purposive sampling is to gain a comprehensive understanding of the variation in the phenomenon of interest within the setting and to test emerging ideas about the setting. However, to prevent bias, a sample of 101 students was selected from each college, resulting in a total of 303 students using simple random sampling. This sampling procedure facilitated the inclusion of three principals, seven examination officers, 150 teachers, and 303 students, yielding a final sample of 463 participants, as illustrated in Table 3.

Table 3: Sampling grid

Categories	Target Population	Sample Size	Sampling Techniques
Principals	3	3	Purposive Sampling
College Tutors	150	150	Purposive sampling
Examination Officers	7	7	Purposive Sampling
Students	1234	303	Simple random sampling
Total	1394	463	

Source: The researcher (2023)

3.6 Research Instruments

These are the instruments that were utilized to acquire data about the particular set themes of the study objectives. These included questionnaire for college tutors and students and interview guides for principals and examination officers.

3.6.1 Questionnaire for College Tutors and Students

For data collection from tutors and students, the study employed a self-reporting questionnaire comprising closed-ended test items.

This approach was selected as it aligns with Morse's (2010) definition of a questionnaire - a research instrument consisting of questions and prompts to gather information from respondents, often intended for statistical analysis of responses. The questionnaire featured sections specifically designed to capture data on various study variables. Section A collected demographic information, including respondents' gender and level of education. Sections B, C, D, and E included test items directly related to the study objectives.

Section B sought information on the first objective on exam setting. Section C asked information on the second objective which is on exam storage and distribution. Section D solicited data for the third objective which is on invigilation of exams. Finally, section E gathered information on the last objective which is on marking and grading of examinations. The use of 5-point Likert-type questions in the test items was appropriate as it aligns with Creswell's (2014) recommendation. The Likert scale provides a structured response format with theoretically equal intervals, making it ideal for collecting quantitative data. This approach allowed the researchers to gather numerical data that could be analyzed and interpreted more effectively.

3.6.2 Interview Guides for Principals and Examination Officers

A structured face-to-face interview was carried out with the principals and examination Officers. The interview items followed the study objectives, but the responses were unstructured in order to encourage respondents to give open-ended responses on their own terms. An interview provides access to what is inside a person's mind and makes it possible to measure what a person knows, what a person likes or dislikes, that is, values and preferences, and what a person thinks, that is, attitudes and beliefs (Creswell, 2014). It is always helpful in gathering classified information and of personal nature about the

respondents. Unstructured interviews were conducted by the researcher to gather information from principals. However, for this study, structured interviews were deemed essential as they provided the opportunity to ask probing and supplementary questions, fostering a strong rapport with the respondents. Structured interviews represent a purposeful and focused approach for the interviewer to obtain reliable and valid verbal responses from one or more interviewees. This method ensured a systematic and goal-directed data collection process, facilitating the acquisition of valuable insights from the participants.

3.7 Piloting of Research Instruments

A pilot study was conducted in Wajir County among 47 respondents, constituting 10% of the overall sample size (10.0% of 463), as per Kothari's (2005) recommendation. The primary aim of the pilot was to assess the suitability and clarity of the research instruments, the relevance of the information sought, and the appropriateness of the language used. Furthermore, the pilot results were utilized to pretest the research instruments, confirming their reliability and validity. The pilot study also anticipated potential challenges faced by respondents, such as difficulties in interpreting the questionnaires and managing time during data collection. Additionally, the interview guides underwent trial runs to ensure well-phrased questions that elicited an appropriate range of responses, enabling the researcher to identify areas for revision. It is noteworthy that the respondents who participated in the pilot study were not included in the subsequent actual data collection.

3.7.1 Validity

To assess the validity of the research instruments, content validity analysis was performed, involving the researcher and experts in educational management.

Each item and the responses were thoroughly examined to ascertain if the items generated the required information. Test items that were deemed inadequate in generating the desired information were eliminated, while suggestions for more appropriate items were incorporated. In this study, upon completing the interviews, the researcher transcribed the results and shared them with the interviewees for approval or disapproval of the interpretations made. Feedback and suggestions from the interviewees were considered to enhance the validity of the conclusions drawn. As emphasized by Creswell (2014), content validity evaluation involves seeking input from a panel of experts to determine the validity of the questions. In essence, validity refers to the meaningfulness and appropriateness of the individual's scores obtained from an instrument, enabling the researcher to draw reliable conclusions from the sample studied to the broader population.

3.7.2 Reliability

To ensure the instruments' reliability was improved, the researcher, alongside university supervisors, carefully assessed the consistency of responses on the pilot questionnaires. Through the test-retest technique, the test items were administered twice to a group of respondents. To determine the reliability index, the Cronbach Alpha Method was utilized, resulting in a coefficient of $r = 0.725$ between the two sets of scores. A higher Cronbach Alpha Coefficient indicates greater internal consistency of the test items within the scale. The study achieved a Cronbach Alpha Coefficient of $r \geq 0.700$, signifying high internal reliability, which was deemed acceptable.

3.7.3 Credibility

To ensure the credibility of the instruments, data triangulation was employed through multiple analysts, as participants/readers are best positioned to judge the credibility of

the results. Credibility is concerned with establishing the believability of the research outcomes, placing greater emphasis on the quality rather than the quantity of work (Kothari, 2005). Creswell (2014) reinforces this notion, stating that credibility is established by relying on the richness of the information gathered rather than the sheer volume of data collected.

3.7.4 Dependability

To ensure dependability in this study, each qualitative data collection process was meticulously documented, facilitating the potential repetition of the inquiry and the attainment of consistent results. As noted by Kothari (2014), dependability guarantees the consistency and reproducibility of research findings. This was evaluated based on the rigor with which the research was conducted, analyzed, and presented. By providing comprehensive details of each process, external researchers were enabled to replicate the inquiry and achieve similar outcomes. This transparency also allowed other researchers to comprehend the methods used and assess their effectiveness.

3.8 Data Collection Procedures

The researcher followed a systematic procedure to obtain necessary approvals and permits for the study. An introductory letter from The School of Postgraduate Studies of Mount Kenya University, an Authorization Letter, and a Research Permit from the National Commission for Science, Technology, and Innovation were requested. Additionally, authorization letters were sought from The County Commissioner and County Director of Education, Mandera. Once all the required permits and letters were obtained, the researcher scheduled appointments with the participants. Informed consent forms were signed before administering questionnaires and conducting interviews to collect data for the study.

For quantitative data collection, questionnaires were administered to the participants, and the duly filled forms were securely stored for later data analysis. Qualitative data was collected through interviews at a convenient time for the interviewees, and the participants were assured of confidentiality throughout the process. The data collection procedure is summarized in Table 4.

Table 4: Data collection procedures

Research Questions	Questionnaire Questions	Interview Schedule Questions
RQ1	• Tutors 4 & 5 Students 3 & 4	• Principals 1 & 2 Examination Officers 1 & 2
RQ2	• Tutors 6 & 7 Students 5 & 6	• Principals 3 & 4 Examination Officers 3 & 4
RQ3	• Tutors 8 & 9 Students 7 & 8	• Principals 5 & 6 Examination Officers 5 & 6
RQ4	• Tutors 10 & 11 Students 9 & 10	• Principals 7 & 8 Examination Officers 7 & 8

Source: Researcher (2023)

Key:

RQ1: What is the influence of examination setting practices on academic integrity in public tertiary institutions in Mandera County?

RQ2: To what extent do examination storage practices and distribution practices influence academic integrity in public tertiary institutions in Mandera County?

RQ3: How do examination invigilation practices influence academic integrity in public tertiary institutions in Mandera County?

RQ4: What is the influence of examination marking and grading practices on academic integrity in public tertiary institutions in Mandera County?

3.9 Data Analysis Procedures

The data analysis process commenced by identifying common themes. Relevant information was then extracted and organized into phrases or sentences that represented specific thoughts. Close-ended item responses were coded and labeled. Frequency counts of the responses were computed to provide insights into the characteristics of the respondents and to illustrate the overall trends in the investigated variables. Qualitative data were thematically analyzed in line with the study objectives and presented in narrative and verbatim formats. For the quantitative data, descriptive analysis using frequencies and percentages was conducted. Descriptive statistics played a crucial role in summarizing the characteristics of the data, offering straightforward summaries of the sample and the measures used. Additionally, inferential analysis was performed using Pearson's Product Moment Correlation Analysis, facilitated by Statistical Packages for Social Sciences (SPSS Version 23). The results of the quantitative analysis were presented using tables. The data analysis procedures are depicted in Table 5.

Table 5: Data Analysis Procedures

RQs	Independent Variable	Dependent Variables	Quantitative Data Analysis	Qualitative Data Analysis
RQ1	<ul style="list-style-type: none"> Examination Setting Practices 	<ul style="list-style-type: none"> Academic integrity 	<ul style="list-style-type: none"> Frequencies Percentages Pearson's Product Moment Correlation Analysis 	<ul style="list-style-type: none"> Thematic Analysis
RQ2	<ul style="list-style-type: none"> Examination Storage and Distribution Practices 	<ul style="list-style-type: none"> Academic integrity 	<ul style="list-style-type: none"> Frequencies Percentages Pearson's Product Moment Correlation Analysis 	<ul style="list-style-type: none"> Thematic Analysis
RQ3	<ul style="list-style-type: none"> Examination Invigilation Practices 	<ul style="list-style-type: none"> Academic integrity 	<ul style="list-style-type: none"> Frequencies Percentages Pearson's Product Moment Correlation Analysis 	<ul style="list-style-type: none"> Thematic Analysis
RQ4	<ul style="list-style-type: none"> Examination Marking and Grading Practices 	<ul style="list-style-type: none"> Academic integrity 	<ul style="list-style-type: none"> Frequencies Percentages Pearson's Product Moment Correlation Analysis 	<ul style="list-style-type: none"> Thematic Analysis

Source: Researcher (2022)

Key:

RQ1: What is the influence of examination setting practices on academic integrity in public tertiary institutions in Mandera County?

RQ2: To what extent do examination storage and distribution practices influence academic integrity in public tertiary institutions in Mandera County?

RQ3: How do examination invigilation practices influence academic integrity in public tertiary institutions in Mandera County?

RQ4: What is the influence of examination marking and grading practices on academic integrity in public tertiary institutions in Mandera County?

3.10 Ethical Considerations

Research ethics entail describing the study's objectives, what participants had to agree to, how informed permission was gained, and how confidentiality was protected.

3.10.1 Confidentiality and Privacy

The researcher took measures to maintain strict confidentiality regarding any personal information shared by the respondents. Participants were assured that their identities would remain anonymous and not be disclosed in any written or verbal communication. Furthermore, the information provided by the respondents would be solely used for the stated research purpose, reinforcing the commitment to confidentiality and protecting the privacy of the participants.

3.10.2 Anonymity

The researcher provided a categorical assurance to the respondents that their identities would remain entirely confidential. Additionally, no identifying information about the individuals or the institutions involved would be disclosed in any written or verbal communication. This commitment to anonymity and confidentiality aimed to safeguard the privacy and well-being of the participants, reinforcing the ethical principles upheld in the research process.

3.10.3 Informed Consent

The researcher presented the nature and goals of the study to the respondents. In order for the respondents to voluntarily participate, the researcher informed them of the protocol to be performed throughout the data collecting. As a result, the respondents who completed forms of informed consent provided permission to the investigator.

3.10.4 Storage of Data Collected

For simple access, the obtained raw data were filed. After the data had been examined, computer printouts were filed away, and softcopies were put on CDs and flash drives and other storage media.

3.10.5 Right to Voluntary Participation

Respondents were informed that they have the right to decline from participating in the study. They were requested to give information at their own time.

3.10.6 Freedom from Coercion

Respondents were encouraged to read and understand the consent form and freely sign on it that they were participating willingly. The net effect of all these measures was to ensure that no one was offended as a consequence of offering to be a contributor in the study.

3.10.7 Intellectual Ownership and Plagiarism

To ensure clean work free from plagiarism, the researcher uploaded the thesis into TURNITIN programme. Every defense began with this practice. There was no increase in the percentage index above 15%. The references were incorporated in this. Every time the rate increased; the thesis was cleaned before being resubmitted to the software for plagiarism analysis. Added at the conclusion of the paper was the thesis's final plagiarism index.

3.10.8 Participants' Right to Confidentiality and Privacy

The researcher assured the participants that the information they gave would be treated with absolute privacy. The information was used for no other purpose other than the one stated in the study and that no unwanted persons would get in touch with it at any case. This enabled the participants to give frank and absolute information and for this reason, the names of the participants and their dwelling places were not to appear anywhere on

the data collection instruments. There was a cipher system developed and understood only by the researcher to treat the data confidentially.

3.10.9 Participants' Right to Informed Consent

The investigator did not force the participants into circumstances that are not at ease for them so as to allow fair and free interactions. The researcher allowed them to give information willingly and respected their feelings if they refused to give certain confidential information. Thus, the investigator gave details to the participants on the process to be used during the data collection by having them give information freely and willingly. Therefore, the participants read, understood and signed the consent form before participating in the research process.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.0 Introduction

In this chapter, the study's findings are presented, organized in a clear and chronological manner, addressing the four research questions that guided the investigation. Nevertheless, the first section focuses on the presentation of demographic information about the respondents, as this data might be crucial in comprehending and interpreting the insights they provided.

4.1 Response Rate

Throughout the 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 6: 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 (2022)

The data presented in Table 6 demonstrate 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.

4.2 Respondents' Demographic Information

The research instruments collected demographic details (gender, education level) to ensure credible responses aligned with the study's objectives.

4.2.1 Gender of the Respondents

Data on the distribution of respondents by gender was collected, and the findings are presented in Table 7.

Table 7: Distribution of the Respondents by Gender

Gender	Principals		College Tutors		Education Officers		Students	
	f	%	f	%	f	%	f	%
Male	3	100.0	118	79.7	5	71.4	179	59.9
Female	0	0.0	30	20.3	2	28.6	3	40.1
Total	3	100.0	148	100.0	7	100.0	299	100.0

Source: Field Data (2022)

According to Table 7, there are only male principals of state tertiary institutions in Mandera County. However, most (79.7%) of the college tutors were male with 20.3% being female. The majority of education officers (71.4%) were men, while women made up 28.6% of the workforce. Students were fairly distributed with male ones constituting slightly more than half (59.9%) with female students constituting 40.1%. These results show that gender parity was appropriate throughout the survey, and both male and

female stakeholders are very concerned about how much examination management methods affect the academic reputation within publicly funded tertiary institutions.

4.2.2 Level of Education of Principals, College Tutors and Examination Officers

The analysis tools also gathered data on the educational backgrounds of administrators, college instructors, and exam administrators. The outcomes are displayed in Table 8;

Table 8: Level of Education of the Principals, Tutors and Examination Officers

Level of Education	Principals		Tutors		Education Officers	
	f	%	f	%	f	%
Bachelors' Degree	1	33.3	113	76.4	5	71.4
Postgraduate	2	66.7	35	23.6	2	28.6
Total	3	100.0	148	100.0	7	100.0

Source: Field Data (2022)

Table 8 shows that two-thirds (66.7%) of the principals possessed postgraduate degree whereas (33.3%) representing a third had Bachelors' Degrees. However, more than three-quarters (76.4%) of the college tutors had Bachelors' Degrees while 28.6% obtained postgraduate qualifications. According to this data, those surveyed had basic training and education which reinforced the expectations that they were capable of responding to inquiries about how examination management techniques affect learning integrity within open tertiary institutions.

4.2.3 Experience of Principals, College Tutors and Education Officers

The equipment for inquiry also collected data on the number of years which administrators, college tutors and education officers have been in teaching profession.

Table 9 displays the outcomes of the experiment.

Table 9: Experience of Principals, College Tutors and Education Officers in Years

Experience in Years	Principals		College Tutors		Education Officers	
	f	%	f	%	f	%
Less than 1 year	0	0.00	2	1.4	0	0.0
1-5 years	2	66.7	31	20.9	1	14.3
5-10 years	1	33.3	90	60.8	2	28.6
Over 10 years	0	0.0	25	16.9	4	57.1
Total	3	100.0	148	100.0	7	100.0

Source: Field Data (2022)

Table 9 shows that two-thirds (66.7%) of the administrators had a teaching know-how extending between 1-5 years whereas a third had 5-10 years of experience. Majority (60.8%) of the college tutors had between five and ten years of experience teaching, and 20.9% have been educators for one to five years, 16.9% had an experience of over 10 years whereas 1.4% had an experience of less than a year. However, a little over half of the education administrators (57.1%) had experience spanning more than ten years, while 28.6% had expertise spanning five to ten years while 14.3% had worked in the teaching profession between 1-5 years. Considering the impact of test management procedures on academic credibility in publicly funded tertiary educational institutions, these results suggest that the majority of administrators and college instructors had a lot of expertise to offer credible information.

4.3 Examination Setting Practices and Students' Academic Integrity

The goal of the inquiry was to determine examination setting practices adopted by tertiary colleges and how such practices influence students' academic integrity.

4.3.1 Descriptive Findings on the Influence of Examination Setting Practices on Students' Academic Integrity

Students and their instructors provided descriptive information, which was put together and compiled. Tables 10 as well as 11 display the results:

Table 10: Examination Setting Practices

Setting Practices	College Tutors		Students	
	f	%	f	%
Appointing examination setters	43	75.4	45	19.5
Selection of questions	37	64.9	43	18.6
Examination format	25	43.9	162	70.1
Moderation of questions	23	40.4	47	20.3
Preparation of marking schemes	45	78.9	94	40.7

Table 10 shows that majority (75.4%) of the college tutors stated that appointment of examination setters is a common practice as did majority (78.9%) who cited preparation of marking schemes. Majority (64.9%) of the college tutors mentioned selection of questions, 43.9% indicated that they adhere to examination format whereas 40.4% mentioned moderation of questions as the common examination practice. However, appointment of examination setters was not within the purview of students and thus a paltry proportion of 19.5% responded in favor as did selection (18.6%) and moderation (20.3%). Though, they indicated that a common practice, according to them, was adherence to examination format (70.1%) and probably preparation of marking schemes (40.7%).

These findings affirm the fact that most tertiary institutions adopt different examination setting practices at variance which may in the long run impact on academic integrity among students. The outcomes of this research align with a longitudinal study conducted in New Jersey by Walsh and Betz (2005).

Their study proposed that the extent of time and effort invested in constructing a test is influenced by factors such as the test's significance, the proficiency of the test takers, the test format, class size, test deadlines, and the experience of the test developer. Notably, test developers, having been students themselves, possess the advantage of modifying or adopting test questions from their prior assessments, a practice that significantly facilitates the test construction process.

Table 11: Views of College Tutors and Students on the Influence of Examination Setting Practices on Academic Integrity in Public Tertiary Institutions

Test Items	REP	Ratings				
		SA %	A %	U %	D %	SD %
Principals appoint examination setters to determine performance and academic integrity in public tertiary institutions	TR	66.6	9.7	3.9	12.3	7.5
	ST	70.1	12.9	2.3	10.6	4.1
Principals and tutors select questions to enhance performance and levels of academic integrity in public tertiary institutions	TR	64.9	11.5	1.3	13.7	8.6
	ST	59.3	15.3	4.2	11.8	9.4
In public tertiary institutions, there is a designed examination format to enhance performance academic integrity among students	TR	80.7	7.6	4.4	5.2	2.1
	ST	75.3	4.9	3.3	10.1	6.4
In public tertiary institutions, examinations are moderated to improve academic integrity	TR	70.2	11.8	1.3	12.7	4.0
	ST	65.4	19.3	5.6	5.3	4.4
Tutors prepare marking schemes as a way of improving academic integrity in public tertiary institutions	TR	82.5	7.8	1.9	2.3	5.5
	ST	71.9	9.1	2.9	13.6	2.5

Key: REP-Respondents; **TR**-College Tutors; **ST**-Students;

Table 11 shows that a fair majority (66.6% of college tutors and 70.1% students) of the college tutors and students strappingly concurred with the opinion that administrators

appoint examination setters to determine performance and academic integrity in public tertiary institutions. At the same time, 12.9% of learners and 9.7% of higher education instructors approved. Nevertheless, just 3.9 percent of college instructors and 2.3% of learners expressed uncertainty, while 7.5% of higher education tutors and 4.1% of the total of students disagreed severely. 12.3% of college tutors and 10.6 percent of students also expressed disagreement.

Majority of the respondents (64.9% of college tutors; 59.3% students) strongly agreed with the view that administrators and tutors select questions to enhance performance and levels of academic integrity in public tertiary institutions. On the same breath, 11.5% of the college tutors and 15.3% of the students agreed. However, a trivial 1.3% of the college tutors along with 4.2% of learners were unresolved, 13.7% of the college tutors and 11.8% of the students differed whereas 8.6% of the college tutors and 9.4% of the students vehemently opposed. In relation to Jennings and Bush's (2006) assertions, these findings demonstrate that the inclusion of identical questions in national examinations varies across countries, as exemplified by the practices in Finland and other nations. One category of countries adheres to a standardized approach, wherein all pupils facing a specific test are presented with the same set of questions.

On the other hand, a significant number of Sub-Saharan African countries follow a more flexible approach, wherein national examination questions may differ regularly and are not uniform for all students (Vandeyar, 2005). This variability is attributed to factors such as accommodating individual learning differences and needs, methodological considerations for test analysis and evaluation, and the desire to curb cheating among students or college tutors. Majority of the college tutors (80.7%) and students (75.3%) vehemently concurred with the opinion that, in publicly funded tertiary institutions,

there is a designed examination format to enhance performance academic integrity among students. In tandem, 7.6% of the college instructors and 4.9% of the students were in agreement. Nonetheless, a certain percentage of college tutors (4.4%) and students (3.3%) were undecided, while a portion of college tutors (5.2%) and students (10.1%) disagreed, and another percentage of college tutors (2.1%) and students (6.4%) strongly disagreed with the aforementioned perspectives. These findings parallel the results of a longitudinal study conducted in New Jersey, where Walsh and Betz (2005) argued that the time and effort invested in test construction depend on factors such as the test's significance, the test taker's proficiency, the test format, class size, test deadlines, and the experience of the test developer.

In this research, the study's outcomes disclosed a considerable majority of college tutors (70.2% of students) and students (65.4%) who firmly supported the notion that examinations in public tertiary institutions undergo moderation to enhance academic integrity. Moreover, 11.8% of college tutors and 19.3% of students expressed agreement with this perspective. However, a small proportion of college tutors (1.3%) and students (5.6%) remained undecided, while 12.7% of college tutors and 5.3% of students disagreed, and 4.0% of college tutors and 4.4% of students strongly disagreed. These findings align with Zoeckler's (2007) assertions regarding test banks, which may encompass up to four thousand peer-reviewed, time-tested, and moderated sample test questions. Instructors choosing to utilize such a test bank can conveniently select a fixed number of test questions from it to construct their assessments.

In the same vein, most (82.5% represent college tutor; 71.9% student) of the college tutors and students vehemently approved with the view that tutors prepare marking schemes as a way of improving academic integrity in public tertiary institutions whereas

a small portion (7.8% college tutors and 9.1% of the students) supported. However, 1.9% of the TR as well as 2.9% of ST were undecided, 2.3% of the TR and 13.6% of the ST disagreed whereas 5.5% representing the college tutors and 2.5% of the ST strongly opposed. These fallouts point to the statistic that marking schemes play a crucial role in examination management and thus, its preparation cannot be overlooked.

4.3.2 Inferential Analysis of the Influence of Examination Setting Practices on Academic Integrity

To confirm the potential for a connection between examination setting practices and academic integrity, the researcher collected data on frequency of adherence (Very Often = 5, Often = 4, Sometimes = 3, rarely = 2 and Never = 1) to the examination setting practices and the KNEC results for learners, and the outcomes are displayed in the following table:

Table 12: Results of Frequency of Adherence to Setting Practices and Kenya National Examination Council Results

Frequency of Adherence to Examination Setting Practices	KNEC Results (%)
1	25
2	29
3	45
4	59
5	76

Table 12 shows that that in tertiary colleges where only one practice is adopted, students register paltry academic grades whereas in institutions where all the examination setting practices are adopted, students perform well and register impressive end-year examination test scores. Table 13 shows the outcomes of the Pearson's Product Moment Correlation Test Analysis that was applied to these successful outcomes:

Table 13: Pearson’s Product Moment Correlation Test Analysis Showing Relationship between Frequency of Adherence to Examination Setting Practices and KNEC Results

		Frequency of Adherence to Setting Practices	KNEC Results
Frequency of Adherence to Setting 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).

In a matrix format, the results from Table 13 replicate the correlations. To explore the connection between adherence frequencies to examination setting practices and students' end-year test scores, a Pearson Product-Moment Correlation analysis was performed. The obtained correlation coefficient was 0.985, and the corresponding p-value was 0.002, which turned out to be less than the predetermined level of significance (5% or 0.05) denoted by $p\text{-value} = 0.002 < 0.05$. These statistically significant findings provide evidence of a significant relationship between the adoption of examination setting practices and academic integrity. Notably, these results are consistent with the findings of a study conducted by Zoeckler (2007), which reported a p-value of $0.031 < 0.05$.

4.3.3 Thematic Analysis of the Influence of Examination Setting Practices on Academic Integrity

During the interviews, most of the principals and examination officer agreed with the views expressed by the tutors and students. They stated that the appointment of examination setters and preparation of marking schemes are the most common examination practices. Principal, P1, stated;

In my college, I always ensure that there are adequate examination setters who must at the same time, prepare marking schemes for the questions.

These opinions were backed by the examination officers who also detailed that there is always a training for examination setters. They are trained on how to set questions and hence prepare marking schemes for the same questions. The interviewees further corroborated the views expressed by the tutors and students that principals and tutors help in selection of questions as per the content taught to enhance performance and levels of academic integrity in public tertiary institutions. Just as noted in the quantitative fallouts, these views further bolstered credence to the arguments held by Jennings and Bush (2006) who indicated that the proportion of nations that use the same questions in a certain national test varies.

These views further support the assertions of Vandeyar (2005) that questions in any given national examination are similar or shift frequently and may not be identical for every student taking it. Concerning examination format, the principals and examination officers echoed the sentiments expressed by the tutors and students that, in public tertiary institutions, there is a designed examination format to enhance performance academic integrity among students. Principal, P2, responded after more questioning;

In my college, we have a format of setting examinations which is a replica of the national examination format. This has made it easy for students to understand what is expected of them in any examination and thus, reduced incidences of examination malpractice.

Similar views were expressed by the examination officers who concurred with the principals. Examination Officer, EO1, noted;

All training colleges are required to develop an examination format which conforms with the national examination templates. This always follows Bloom's format of setting questions.

These views further support the findings of Walsh and Betz (2005) who noted that, when time and effort invested by a test developer in constructing a test depend on various factors such as the test's significance, the proficiency of the test takers, the test format, class size, test deadline, and the experience of the test developer. The interviewees also indicated that examinations are often moderated as per the set marking schemes to improve academic integrity. This further corroborates that the assertions of Zoeckler (2007) that up to 4,000 peer-reviewed, time-tested, and regulated sample test questions could be found in test banks. In order to create a test, an educator who decides to use this test bank would only need to choose a predetermined amount of examination inquiries from it.

4.3.4 Mixing of Research Findings on Influence of Examination Setting Practices on Students' Academic Integrity

From the mixed survey findings, it is evident that colleges adopt a multiplicity of examination setting practices. These include appointment of examination setters, preparation of marking schemes as the most common examination practices. They also include selection of questions, examination moderation and preparation of marking schemes. This indicates that activities undertaken during setting of examination are crucial in guaranteeing academic integrity among students.

4.4 Examination Distribution Practices and Students' Academic Integrity

The research set out to determine how it impacted of examination distribution practices on academic integrity in publicly funded tertiary institutions.

4.4.1 Descriptive Findings on the Influence of Examination Distribution Practices on Students' Academic integrity

Tables 14 through 15 presents the findings of the descriptive information obtained from higher learning students as well as tutors.

Table 14: 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 14 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 15: Views of College Tutors and Students on the Influence of Examination Distribution Practices on Academic Integrity

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; TR-College Tutors; ST-Students;

Table 15 shows that majority of the college tutors (77.2%) and students (74.0%) vehemently 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%TR; 61.9%ST) of tutors and student consensus was solid with the fact that public tertiary institutions

ensure examinations are dispatched to different destinations to as a way of improving academic integrity. On the same breath, 15.1% of the college educators and 13.7% of the students contracted. However, 3.2% of tutors as well as 5.2% of students were undecided, 9.1% of the college tutors and 8.9% of the students disagreed whereas 4.2% of the college tutors and 10.3% of the 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%) vehemently supported the view that institution administrators and tutors safeguard opening of sealed examination envelopes to improve academic integrity. At the same time, 5.6% of the college 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% TR and 1.5% ST 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. At the same time, 13.4% of the college tutors and 13.9% of the 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.

4.4.2 Inferential Analysis of the Influence of Examination Distribution Practices on Academic Integrity

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 KNCE Results. The outcomes are displayed in Table 16:

Table 16: 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 16 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 17:

Table 17: Pearson's Product Moment Correlation Test Analysis Showing Relationship between Chains of Examination Distribution Practices and Academic Integrity

		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).

The data are shown in a matrix format from Table 17 so that the associations are repeated. The number of chains or outlets for distribution for exams and student end-of-year test scores were correlated using the Pearson 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.

4.4.3 Thematic Analysis of the Influence of Examination Distribution Practices on Academic Integrity

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, P3, 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.

4.4.4 Mixing of Research Findings on the Influence of Examination Distribution

Practices on Academic Integrity

Both qualitative and quantitative findings point to the statement that, to ensure academic integrity in public tertiary institutions, distribution of examinations takes a chain of activities which range from packing of scripts, dispatching and opening of seals. This implies that procedures of examination distribution are key if integrity of examination offered to students is to be guaranteed. In other words, a fair appraisal must be free from all errors 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.

4.5 Examination Invigilation Practices and Students' Academic Integrity

The study sought to determine how examination invigilation practices influence academic integrity in public tertiary institutions.

4.5.1 Descriptive Findings of the Influence of Examination Invigilation Practices on Students' Academic Integrity

College instructors, learners and this leads all provided descriptive data. Tables 18 and 19 contain the findings:

Table 18: Examination Invigilation Practices

Examination Invigilation Practices	College Tutors		Students	
	f	%	f	%
Recruitment of supervisors and invigilators	46	80.7	160	69.3
Planning for invigilation	38	66.7	115	49.8
Designing seating plan	42	73.7	204	88.3

Table 18 reveals that majority (80.7%) of the tutors noted that recruitment of supervisors and invigilators is the most common examination practice as did 69.3% of students. However, 66.7% of the tutors and 49.8% of the students cited planning for invigilation as common examination management practices. However, most (73.7%) of the tutors and 88.3% of students indicated the designing of seating plan is the most common examination invigilation practice. Principals and examination officers expressed similar views tutors and students. They also stated that invigilators play a key role in examination management. Principal, P4, noted;

In my college, I always ensure that, during examination, number of those invigilating exams is always adequate to help reduce cases of examination malpractice.

Examination officers stated that there are rules requiring invigilation of examinations to ensure that questions are leaked to students. These fallouts sustain the fact that most of the respondents are aware of invigilation practices as dynamic which impact on academic integrity among students.

Table 19: Views of College Tutors and Students on the Influence of Examination Invigilation Practices on Academic Integrity

Test Items	REP	Ratings				
		SA %	A %	U %	D %	SD %
Public tertiary institutions ensure recruitment of supervisors and invigilators is well done to enhance academic integrity	TR	73.7	14.4	3.4	5.7	2.8
	ST	72.3	11.1	3.2	5.9	7.5
Principals and tutors plan for number of invigilators per examination center or classroom determines academic integrity	TR	64.9	17.1	4.2	6.3	7.5
	ST	65.4	13.7	5.2	18.3	11.1
In public tertiary institutions, examination seating plan to determine academic integrity	TR	78.9	9.3	2.1	5.3	4.4
	ST	81.0	8.6	3.8	4.1	2.5

Key: REP-Respondents; TR-College tutors; ST-Students;

Table 19 shows that majority (73.7% of the college tutors and 72.3%ST) firmly agreed with the view that public tertiary institutions safeguard recruitment of supervisors and invigilators is well done to enhance academic integrity. At the same time, 14.4% of the college tutors and 11.1% of the students agreed. However, 3.4% of the college tutors as well as 3.2% of students were undecided, 5.7% of the college tutors and 5.9% of the students disagreed whereas 2.8% of the college tutors and 7.5% of the students strongly disagreed.

These findings were consistent with the assertions of Argharwal (2007) who indicated that in India, the criteria of appointment and recruitment of invigilators include; A minimum of three years of teaching expertise is required, as are the following qualifications: integrity, a Grade A certificate or diploma in education, a dedication to hard work, and diligence that may be seen at testing centers. Additionally, all monitors are required to go through a screening process after having been named by directors of education. A further finding from Argharwal (2007) was that it takes time to find potential overseers because directors of education do rely on recommendations from education coordinators and head college tutors. By the time they receive all the names, they are in a hurry to identify people who have recently disregarded test rules.

At the same time, the study revealed that most (64.9% of college tutors and 65.4% of students) stalwartly supported the view that principals and tutors plan for number of invigilators per examination center or classroom determines academic integrity. On the same breath, 17.1% of the college tutors and 13.7% of the students were in agreement. However, an insignificant 4.2% of the college tutors as well as 5.2% of students were unresolved, 6.3% of the college tutors and 18.3% of the students disagreed whereas 7.5% of the college tutors 11.1% of the class objected exceptionally, whereas.

These results corroborate Hargreaves' (2001) claims that setting up and preparing for the test invigilation is typically a difficult task because the surveillance schedule committee must take many factors into account, but it is essential to improving the academic honesty for learners in higher learning institutions. These results support the conclusions of an inquiry undertaken in Singapore by Eckstein and Nvah (2001), which showed that exam overseers must get thorough training and briefing prior to performing their invigilation duties in their various venues. In a nutshell, before entering the examination hall, exam invigilators need to familiarize themselves with all relevant assessment rules and processes.

The poll also revealed that a record number (78.9%TR and 81.0%ST) of higher education instructors and learners were completely in agreement with the idea that the seating layout of exams in public tertiary institutions should be used to gauge the integrity of academia. 9.3% of college instructors and 8.6% of students concurred at the same time. While 5.3% of higher learning tutors and 4.1% of students concurred 2.5% of students and 2.4% of college tutors strongly disagreed, leaving 2.1% of college tutors and 3.8% of students indifferent. These results show that the surveillance of exams and the associated operations carried out by higher education institutions are important factors in determining academic credibility.

4.5.2 Inferential Analysis of the Influence of Examination Invigilation Practices on Students' Academic Integrity

To verify the possibility of the influence of examination invigilation practices on academic integrity, data were collected on the number of invigilators who are often recruited by tertiary institutions and KNCE Results. The outcomes are displayed in Table 20:

Table 20: Number of Invigilators and KNEC Results

Number of Examination Invigilators	KNEC Results (%)
4	25
8	29
12	45
16	59
20	76

From Table 20, it is evident that the smaller the number of invigilators, the lower the grades of students whereas with higher number of invigilators, students register impressive examination test scores and improved academic integrity. These outcomes underwent further analysis using Pearson's Product Moment Correlation Test, with the outcomes displayed in Table 21:

Table 21: Pearson's Product Moment Correlation Test Analysis Showing Relationship between Number of Invigilators and Academic Integrity

		Number of Invigilators	KNEC Results
Number of Invigilators	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).

The data are shown in a matrix format from Table 21 so that the associations are repeated. The total number of overseers and students' end-of-year test scores were compared using a Pearson Product-Moment Correlation, which produced correlation coefficients of $r = 0.985$ and significant levels (p-values) of 0.002, which were below the predefined threshold of statistical significance, 5% (0.05), resulting in a p-value = 0.0020.05. These results are significant according to statistics, proving that there is a strong correlation between the quantity of vigilance officers and academic honesty.

The preliminary results of a study done in Singapore with regard to Eckstein and Nvah (2001), which produced a p-value of 0.044 which is less than 0.05, were supported by these data.

4.5.3 Thematic Analysis of the Influence of Examination Invigilation Practices on Students' Academic Integrity

Principals and examination officials also provided support for the idea that public tertiary institutions have put measures to ensure recruitment of supervisors and invigilators is well done to enhance academic integrity. Principal, P3, stated;

In my college, I have ensured that tutors undertake examination management training which include invigilation of examinations and rules therein. This has often ensured that practices which compromise integrity of examination during invigilation are minimized.

The same opinions were voiced by the examination officers who stated that there are clear invigilation guidelines for examinations which tertiary institution must adhere to as a way of maintaining academic integrity at all times. These include the number of invigilators per examination center or classroom and examination seating plan. Just like in quantitative findings, these views support those of Aringarwal (2007) who indicated that invigilators must be trained since the criteria of appointment and recruitment of invigilators include; a minimum of three years of instructing experience, an institution of higher learning tutors service number, honesty, a Grade A certification or diploma in education, good health, a dedication to work, and diligence shown at testing centers.

This suggests that putting together and preparing the test surveillance has historically been a difficult process in and of itself since the surveillance schedule panel has to take into account a number of things even though it is essential to boosting the academic credibility of scholars in higher-education institutions.

4.5.4 Mixing of Research Findings of the Influence of Examination Invigilation Practices on Students' Academic Integrity

Mixed study findings revealed that invigilation of examination is a major practice which ensures integrity of examination in tertiary institutions. These include training and recruitment of invigilators, setting the number of invigilators per examination center besides seating patterns. The study established that, though not often practised, there are clear invigilation guidelines for examinations which tertiary institution must adhere to as a way of maintaining academic integrity at all times.

4.6 Examination Marking Practices and Students' Academic Integrity

The purpose of the inquiry was to determine the association between examination marking practices and students' academic integrity in public tertiary institutions.

4.6.1 Descriptive Findings of the Influence of Examination Marking on Students' Academic Integrity

College learners and educators provided descriptive data, with the findings displayed in Tables 22 and 23:

Table 22: Examination Marking Practices

Examination Marking Practices	Principals		College Tutors		Students	
	f	%	f	%	f	%
Setting duration of marking	3	60	32	56.1	95	41.1
Establishing marking panel	2	40	23	40.4	90	39.0
Designing grading systems	4	80	41	71.9	205	88.7
Moderation of results	2	40	22	38.6	87	37.7
Release of results	4	80	49	86.0	211	91.3

Table 22 reveals that just more than fifty percent (56.1%) of their educational institution instructors said setting duration of marking is a common examination management practices practice as did 41.1% of the students.

A fair proportion of 40.4% of the college tutors and 39.0% of the students cited establishment of a marking panel as a common practice as did moderation of results. On the contrary, an impressive majority (71.9%) of the college tutors and 88.7% of the students cited that designation of grading systems is the most common practice in examination marking as did release of results. Principals and examination officers also stated there are examination marking practices usually adopted by tertiary institutions.

Principal, P5, noted;

In my college, there is always an examination tasked to set duration of marking, establish marking panel, design grading systems, moderate and release results.

This was supported by the examination officers who stated that all institutions have a set of procedures adopted to ensure prudent marking and grading of examinations. These results support the idea that most of the respondents believe that establishing marking panel and moderation of results are not examination marking practices which may impact on academic integrity among students.

Table 23: Views of College Tutors and Students on the Influence of Examination Marking Practices on Academic Integrity

Test Items	REP	Ratings				
		SA %	A %	U %	D %	SD %
Duration principals and tutors take to mark examination results has been adjusted to improve academic integrity	TR	73.7	14.4	3.4	5.7	2.8
	ST	72.3	11.1	3.2	5.9	7.5
Principals establish marking panels to as a way of enhancing academic integrity	TR	64.9	17.1	4.2	6.3	7.5
	ST	65.4	13.7	5.2	18.3	11.1
In public tertiary institutions, grading and scoring systems are designed as determinants for academic integrity	TR	78.9	9.3	2.1	5.3	4.4
	ST	81.0	8.6	3.8	4.1	2.5
Public tertiary institutions moderate results which have enhanced academic integrity	TR	64.9	17.1	4.2	6.3	7.5
	ST	65.4	13.7	5.2	18.3	11.1
Public tertiary institutions ensure that release of results is done promptly as a way of improving academic integrity	TR	84.2	5.6	1.4	5.1	3.7
	ST	87.9	3.9	2.8	3.9	1.5

Key: **REP**-Respondents; **TR**-College Tutors; **ST**-Students;

Table 23 shows that majority (73.7% of college tutors; 72.3% of students) firmly supported with the view that duration principals and tutors take to mark examination results has been adjusted to improve academic integrity. 11.1% of the learners and 14.4% of the educational institution's tutors concurred at the exact same time. However, 5.7% of higher-education mentors and 5.9% of students disapproved, 2.8% of undergraduate school tutors and 7.5% of students were firmly opposed, and 3.4% of educational institutions tutors and 3.2% of learners were indecisive.

These findings corroborate the assertions of Crooks (2008) that marking should be objective and not subjective if objectives of subjects taught are to be achieved. In order for any marking to be fair and objective, tertiary institutions require to constitute examination panels, set grading systems and moderate results.

In other words, whenever choosing a grading technique, college tutors must first identify what function those grades will serve; as a result, grading should also be based on a specified plan. The requirements of both the higher education institution instructor and the learners must be met by such a grading scheme. The majority of teachers (64.9%) alongside students (65.4%) firmly supported the idea that principals should create marking panels as a strategy to improve integrity in learning. 13.7% of students and 17.1% of tutors concurred at the same time. However, 6.3% of college tutors and 18.3% of students disagreed, while 7.5% of higher learning tutors and 11.1% of students severely objected. In contrast, 4.2% of college tutors and 5.2% of learners were undetermined.

The majority of instructors (78.9%) and learners (81.0%) were unanimously in agreement with the idea that grading and assessment systems in publicly funded higher education institutions are intended to be indicators of academic honesty. 9.3% of the higher-education professors and 8.6% of the pupils concurred at the same moment. Only 2.1% of the instructors and 3.8% of the students, nevertheless, were unsure, and 4.4% of the instructors and 2.5% of those surveyed were strongly against it, while 5.3% of the instructors and 4.1% of the learners disapproved. These results support the claims made by Cross, Robert, Frary, and Weber (2010) arguing that the marking procedures used by college tutors in various nations should not be considered as separate practices, but rather ought to be regarded in the larger picture of the educational establishments in which they are employed.

These results confirm the need to consider both the purpose of the system of evaluation and the context of the educational frameworks where higher education tutors execute their marking practices in order to account for the complexity and fluctuation of those

protocols. The majority of respondents (64.9% college tutor; 65.4% students) unanimously agreed that public colleges and universities filter findings, which has improved their academic credibility. In agreement were 13.7% of the students and 17.1% of the college professors at the same time. Although just 4.2% of higher educational tutors and 5.2% of the learners were indecisive, 6.3% of college instructors and 18.3% of students disagreed, and 7.5% of higher learning instructors and 11.1% of learners severely disapproved, the results were dismal.

The poll also revealed that a record number of college instructors and learners (84.2%TR; 87.9%ST) completely concurred with the idea that public tertiary institutions should ensure that the outcomes are released quickly as a way to enhance academic integrity. 3.9% of students and 5.6% of college tutors concurred at the same period. A pitiful 1.4% of college tutors and 2.8% of students, on the other hand, were undecided, while 3.7% of college tutors and 1.5% of students, disagreed and strongly disagreed, respectively. These results confirm the significance of assessment marking procedures in assessing the integrity of academia in higher education institutions.

4.6.2 Inferential Analysis of the Influence of Examination Marking Practices on Students' Academic Integrity

To verify the possibility of the influence of examination marking practices on academic integrity, data were collected on the number of invigilators who are often recruited by tertiary institutions and KNEC Results. Results are as shown in Table 24:

Table 24: Number of Examiners and KNEC Results

Number of Examiners	KNEC Results (%)
14	25
16	29
18	45
20	59
22	76

Table 24 shows that the smaller the number of markers or examiners, the lower the grades of students whereas with higher number of examiners or markers, students register impressive end-year examination test scores. These outcomes were examined more thoroughly using Pearson's Product Moment Correlation Test Investigation, and the outcomes are displayed in Table 25:

Table 25: Pearson's Product Moment Correlation Test Analysis Showing Relationship between Number of Examiners and Academic Integrity

		Number of Examiners	KNEC Results
Number of Examiners	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).

The data from Table 25 is represented in matrix form, allowing for the replication of correlations. A Pearson Product-Moment Correlation was performed to ascertain the association between the number of examiners and students' test scores. The resulting correlation coefficient was found to be $r = 0.985$, with a corresponding p-value of 0.002, which was lower than the predetermined significance level of 0.05 (5%). Consequently, these findings are deemed statistically significant, indicating a substantial relationship between the number of examiners and academic integrity. Notably, these results align with the outcomes of a prior study conducted by Cross, Robert, Frary, and Weber in 2010, where a p-value of 0.046 was obtained, also falling below the 0.05 threshold.

4.6.3 Thematic Analysis of the Influence of Examination Marking on Students'

Academic Integrity

During the interviews, the principals and examination officers also supported the views expressed by tutors and students that tertiary institutions adopt several procedures of marking examinations ranging from setting marking panel, set grading systems and moderate results as a strategy for enhancing academic integrity. Principal, P1, stated;

In my college, we always set examination marking boards with clear tasks to reduce suspicion. This has improved the integrity of examination results being released to students.

Examination officers also noted that marking practices adopted must be a replica of national standards to guarantee academic integrity. These views further corroborate the assertions of Crooks (2008) that marking should be objective and not subjective if objectives of subjects taught are to be achieved. In order for any marking to be fair and objective, tertiary institutions require to constitute examination panels, set grading systems and moderate results. In other words, College tutors must first establish the purpose of grades before selecting a grading method, leading to a well-defined plan that meets both tutor and student needs.

Considering the intricacies arising from the dimensionality and variability of college tutors' marking practices, it becomes imperative to factor in the context of educational systems in which these practices are applied, along with the purpose of the grading system governing such evaluation methods.

4.6.4 Mixing of Research Findings of the Influence of Examination Marking on Students' Academic Integrity

The quantitative as well as the qualitative data showed that tertiary institutions adopt a multiplicity of examination marking practices geared towards improving academic

integrity. These range from setting examination marking panels, grading systems and moderation of results. This implies that any examination marking practice ought to be objective if objectives of subjects taught are to be achieved. In order for any marking to be fair and objective, tertiary institutions require to constitute examination panels, set grading systems and moderate results. In essence, college tutors must establish the intended purpose of grades prior to selecting a grading method, thereby necessitating a well-defined plan for grading. To summarize, examination marking practices employed by tertiary colleges should consider the context of educational systems and the purpose of the grading system in which these practices are implemented by college tutors.

4.7 Discussion of Research Findings

Within this section, the researcher delves into the study's findings, taking into account the research gaps uncovered during the literature review.

4.7.1 Examination Setting Practices and Students' Academic Integrity

It is evident that colleges adopt a multiplicity of examination setting practices. These include appointment of examination setters, preparation of marking schemes as the most common examination practices. These also entail selection of questions, examination moderation and preparation of marking schemes. This implies that activities undertaken during setting of examination are crucial in guaranteeing academic integrity among students.

4.7.2 Examination Distribution Practices and Academic Integrity

The survey found that, to ensure academic integrity in public tertiary institutions, distribution of examinations takes a chain of activities which range from packing of scripts, dispatching and opening of seals. This implies that procedures of examination distribution are key if integrity of examination offered to students is to be guaranteed. In other words, an impartial appraisal must be free from all errors 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.

4.7.3 Examination Invigilation Practices and Students' Academic Integrity

The survey revealed that invigilation of examination is a major practice which ensures integrity of examination in tertiary institutions. These include training and recruitment of invigilators, setting the number of invigilators per examination center besides seating patterns. The study established that, though not often practised, there are clear invigilation guidelines for examinations which tertiary institution must adhere to as a way of maintaining academic integrity at all times.

4.7.4 Examination Marking and Students' Academic Integrity

Clearly, based on the findings, tertiary institutions adopt a multiplicity of examination marking practices geared towards improving academic integrity. These range from setting examination marking panels, grading systems and moderation of results. This implies that any examination marking practice ought to be objective if objectives of subjects taught are to be achieved.

In order for any marking to be fair and objective, tertiary institutions require to constitute examination panels, set grading systems and moderate results. In order to ensure a systematic and effective grading process, college tutors must first establish the intended purpose that grades will serve. This entails a thoughtful consideration of the grading method and the formulation of a well-defined grading plan. In context of tertiary colleges, examination marking practices should be mindful of the educational system's broader framework and the specific objectives of the grading system where college tutors apply these assessment methods.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a comprehensive overview of the primary research findings, along with the derived conclusions, recommendations, and suggestions for future research, all of which were addressed in alignment with the research objectives.

5.1 Summary of Research Findings

In this section, a meticulous and comprehensive summary of the research findings is provided, centering on the study's objectives. These objectives encompassed an examination of academic integrity in public tertiary institutions, scrutinizing examination setting, distribution, invigilation, and marking practices.

5.1.1 Examination Setting Practices and Academic Integrity

The study has conclusively demonstrated that various examination setting practices play a vital role in promoting students' academic integrity. These include; appointment of examination setters, selection of questions, examination format design, moderation of questions and preparation of marking schemes with appointment of examination setters, designing examination format and preparation of marking schemes being the most common practices.

The study has also established that appointment of examination setters and selection of questions, designing examination format enhance academic integrity. The study's findings indicate that different countries employ diverse examination setting practices to bolster students' academic integrity. While all pupils taking a particular test respond to the same questions, the extent to which identical questions are included in national

examinations varies considerably. This variability arises due to various reasons, ranging from accommodating individual learning differences and needs to methodological considerations regarding test analysis and evaluation, as well as the prevention of cheating by students or college tutors. Additionally, the design of examination formats, moderation procedures, and the preparation of marking schemes play pivotal roles in enhancing students' performance in end-year examinations. These outcomes underscore the significant impact of various factors on test development, including test significance, test taker proficiency, test format, class size, test deadline, and test developer experience. Furthermore, college tutors' test banks may encompass an extensive collection of up to four thousand peer-reviewed, time-tested, and moderated sample test questions.

The college tutor, opting to utilize this test bank, need only select a predetermined number of test questions from the repository to construct the examination. The study has also established that in tertiary institutions where only one examination setting practice is adopted, students register paltry academic grades whereas in tertiary institutions where all the examination setting practices are adopted, students perform well and register impressive end-year examination test scores. In essence, the study establishes a noteworthy correlation between the adoption of specific examination setting practices and the promotion of academic integrity.

5.1.2 Examination Distribution in Relation to Students' Academic Integrity

The study has also established that 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. Packaging of examination scripts enhance academic integrity with most respondents being in favor. These findings lend credence to the fact that to achieve such effective evaluation, the procedure of distribution of examination scripts should be interrogated. The same is replicated for dispatching examinations to different destinations which too enhance academic integrity. These findings corroborate the fact that, ensuring equity demands that fair evaluation remains untainted by any malpractices. 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.

Opening of sealed examination envelopes and arranging for distribution of examinations enhances academic integrity. This attests to the fact that, to ensure equity and fairness, there is need to enforce stricter rules during distribution of examinations. In other words, in tertiary institutions where there are few chains or centers of distribution of examination scripts, students register paltry academic grades whereas in instances where there are several chains or centers of examination distribution, students perform well and register impressive end-year examination test scores. That is, there is significant relationship between number of chains of examination distribution and academic integrity.

5.1.3 Examination Invigilation Practices and Academic Integrity

The study has also established that different examination invigilation practices impact on students' academic integrity. Such practice begins by recruitment of supervisors and invigilators, planning for invigilation and designing seating plan for examinations.

Recruitment of supervisors and invigilators is the most common examination practice as did design of examination seating plan and planning for invigilation affirming the fact that most of the respondents are aware of invigilation practices as dynamic which impact on academic integrity among students. On the same breath, recruitment of supervisors and invigilators, planning for invigilation and designing seating plan enhance academic integrity. These findings support the fact that the criteria of appointment and recruitment of invigilators include; teaching experience, integrity, In addition to good health and commitment to work, demonstrating diligence at examination centers is essential.

Furthermore, the process of identifying potential invigilators is time-consuming. At the same time, planning and preparing the examination invigilation has perpetually posed as a daunting task, considering the multitude of factors that the invigilation schedule committee must take into account though it is key to enhancing academic integrity of tertiary institution students. Before the commencement of examinations, exam invigilators must receive comprehensive briefing and training to effectively carry out their invigilation responsibilities in their designated venues.

This entails acquainting themselves with the appropriate examination regulations and procedures to ensure seamless execution during the examination sessions. Notably, the number of invigilators seems to impact students' performance in end-year examinations. Smaller invigilation teams coincide with lower student grades, while larger invigilation teams correlate with more impressive test scores. This observation underscores a significant association between the number of invigilators and academic integrity.

5.1.4 Examination Marking and Academic Integrity

The study has also confirmed that multiple examination marking practices have a direct influence on students' academic integrity. Such practices include; setting duration of marking, establishing marking panel, designing grading systems, moderation and release of results with designation of grading systems and release of results being the most common examination marking practices. Duration college tutors take to mark examination results enhance academic integrity which lend credence to the fact that marking should be objective and not subjective if objectives of subjects taught are to be achieved.

In order for any marking to be fair and objective, tertiary institutions require to constitute examination panels, set grading systems and moderate results. In other words, college tutors must determine the intended purpose of grades prior to selecting a grading method. This emphasizes the necessity for a well-defined grading plan that addresses the requirements of both the college tutor and the students. In the same vein, establishing marking panel and designing grading and scoring systems as a determinant for academic integrity. These outcomes too lend credence to the assertions that the marking systems that college tutors should not be perceived in isolation; instead, it should be examined within the broader context of the educational systems in which they are employed.

The findings emphasize the significance of considering the educational system's context and the purpose of the grading system when accounting for the diverse approaches and complexities of college tutors' marking practices. This awareness becomes essential to effectively comprehend and address the dimensionality and variability inherent in their evaluation methods.

Moderation and release of results is another examination marking practice which enhance students' academic integrity and the smaller the number of markers or examiners, the lower the grades of students whereas with higher number of examiners or markers, students register impressive end-year examination test scores. In other words, a notable correlation exists between the number of examiners and academic integrity.

5.2 Conclusions

The research findings indicate that various examination management practices effectively promote students' academic integrity. These practices encompass examination setting, distribution, invigilation, and marking procedures.

5.2.1 Examination Setting Practices and Academic Integrity

From the survey findings, there are dissimilar examination setting practices which enhance students' academic integrity. These comprise; appointment of examination setters, selection of questions, examination format design, moderation of questions and preparation of marking schemes with appointment of examination setters, deigning examination format and preparation of marking schemes being the most common practices. These examination practices, when exhaustively adopted enhance academic integrity among students in end-year examinations.

5.2.2 Examination Distribution Practices and Academic Integrity

Besides, 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.

5.2.3 Examination Invigilation Practices and Academic Integrity

The study has identified varied examination invigilation practices that significantly influence students' academic integrity. Such practice begins by recruitment of supervisors and invigilators, planning for invigilation and designing seating plan for examinations. Recruitment of supervisors and invigilators is the most common examination practice as did design of examination seating plan and planning for invigilation affirming the fact that most of the respondents are aware of invigilation practices as dynamic which impact on academic integrity among students.

5.2.4 Examination Marking Practices and Academic Integrity

In the same vein, there are various examination marking practices which impact on students' academic integrity. Such practices include; setting duration of marking, establishing marking panel, designing grading systems, moderation and release of results with designation of grading systems and release of results being the most common examination marking practices.

5.3 Recommendations for the Study

In this particular section, the study presents a series of recommendations that encompass practical suggestions, policy implications, and proposals for future research.

5.3.1 Recommendations for Practice

Based on the above findings, the study makes the following recommendations;

- i. Tertiary institutions and other education stakeholders should organize for training of college tutors in order to acquire pre-requisite skills in setting examinations. This may enable them master the practices and procedures for setting standard examinations.
- ii. 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.
- iii. Tertiary institutions should follow specifications for examination invigilation based on the number of students per class during examination session.
- iv. Marking and grading of examination results should be based on a universal standard in comparison with other tertiary institutions in order for students to rank themselves and thus improve.

5.3.2 Recommendation for Policy

As a policy, the study recommends that the Ministry of Education should ensure implementation of examination management practices.

5.3.3 Suggestions for Further Research

- i. A study should be conducted to establish the effectiveness of strategies adopted to minimize examination malpractice on academic integrity.
- ii. A study should be conducted to examine the role of tertiary institution management in implementation of examination management practices on students' performance.
- iii. A study should be conducted to determine the relationship between college tutors' attitudes towards examination management practices and academic integrity.

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APPENDICES

Appendix I: Letter of Introduction

Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT RESEARCH

I am a doctoral candidate, pursuing my studies at Mount Kenya University when it comes to Educational Administration, Leadership, and Management. My research topic delves into the realm of investigating the: **Influence of Examination Management Practices on Academic Integrity in Public Tertiary Institutions in Mandera County, Kenya**. Your participation in the trial has been approved. Your full participation is kindly requested, and the information collected will be used solely for academic purposes, ensuring your anonymity in the report. The study's findings can be made available to you upon request.

Your assistance and co-operation will be highly cherished.

Thank you in advance.

Yours faithfully,

ALI MOHAMUD ADAN

Appendix III: Questionnaire for Tutors

My name is Ali Mohamud Adan. I am PhD student in Education, Administration, Leadership and Management at Mount Kenya University. I am carrying out a study on **“Influence of Examination Management Practices on Academic Integrity in Public Tertiary Institutions in Mandera County, Kenya”**. I kindly request your assistance by providing accurate and truthful answers to the items in this questionnaire. Any material you make available will be treated with utmost confidentiality and will in no way be divulged to a third party. The information you provide may be useful in policy formulation but it is devoid of any administrative value. Thank you.

Section A: Demographic Information

Please score (√) in the provided square brackets

1. Identify your sex:
 - Male []
 - Female []
2. What is your most advanced stage of education?
 - Ph. D []
 - Masters []
 - Bachelors []
 - Any other.....
3. Please indicate your experience in college teaching?
 - 0-5 years []
 - 6-10 years []
 - 11- 15 years []
 - 16-20 years []
 - Above 20 []

Section B: Examination Setting Practices and Academic Integrity

4. In a scale of 1-3, please gauge how often your institution undertakes the following examination setting practices. **Key: Very Often (3), Rarely (2), Never (1)**

Examination Setting Practices	Very Often (3)	Rarely (2)	Never (1)
Appointment of examination setters			
Selection of exam questions in line with exam coverage checklist and format			
Moderation of exam questions			
Preparation of marking schemes			

5. Please rate how much you agree or disagree with the following assertions about how exam-setting procedures affect academic honesty. Kindly rate your degree of concurrence with the following assertions on a rating system of 1 to 5. **Key: 5 =Strongly Agree (SA), 4 = Agree (A), 3=Undecided (U), 2=Disagree (D), 1= Strongly Disagree (SD).**

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam setting practices influences academic integrity					
b	Exam setting practices influences credible academic certificate					
c	Appointing examination setters influences credible exam process					
d	Selection of exam questions in line with exam coverage checklist and format influences exam compliance reports					
e	Moderation of questions influences credible exam process					
f	Preparation of marking schemes influences credible exam process					

Section C: Examination Storage/Distribution Practices and Academic Integrity

6. In a measure of 1-3, please gauge how often your institution undertakes the following examination storage and distribution practices. **Key: Very Often (3), Rarely (2), Never (1)**

Examination Storage/Distribution Practices	Very Often (3)	Rarely (2)	Never (1)
Exam packaging of scripts			
Exam storage of the scripts at the departments or examination office			
Opening of exam envelopes			
Distribution recording of exam			

7. Please indicate your level of agreement regarding how exam dissemination and storage procedures affect academic integrity, consider the subsequent assertions. On a scale of 1-5, please indicate your level of agreement with regard to these statements

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam storage and distribution practices influence academic integrity					

b	Exam storage and distribution practices influence credible academic certificate					
c	Exam packaging of scripts influence credible exam process					
d	Exams storage of the scripts at the departments or examination office influence credible exam process					
e	Exam distribution recording influence credible exam process					
f	Opening of exam envelopes influence exam compliance report					

Section D: Examination Invigilation Practices and Academic Integrity

8. In a measure of 1-3, please gauge how often your institution undertakes the following examination invigilation practices.

Examination Invigilation Practices	Very Often (3)	Rarely (2)	Never (1)
Recruiting of supervisors/invigilators			
Planning for invigilation/invigilation schedules			
Designing seating plan			
Exam invigilation reports			

9. Please indicate your level of agreement regarding the subsequent statements relate to the influence of exam invigilation practices on academic integrity. On a scale of 1-5, please indicate your level of agreement with regard to these statements

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam invigilation practices influence academic integrity					
b	Exam invigilation practices influence credible academic certificate					
c	Recruiting of supervisors/invigilators influence process					
d	Planning for invigilation/invigilation schedules influence exam compliance report					
e	Designing seating plan influence credible exam process					
f	Invigilation reports influence free malpractice exam results					

Section E: Examination Marking/Grading Practices and Academic Integrity

10. In a measure of 1-3, please gauge how often your institution undertakes the following examination marking and grading practices.

Marking and Grading Practices	Very Often (3)	Rarely (2)	Never (1)
Establishing examination panel			
Adherence to exam grading systems			
Exam Marking and grades reporting			
Exam moderating results			

11. Please rate your level of agreement with the following statements concerning the impact of exam marking and grading practices on academic integrity. Use a scale of 1 to 5 to indicate your level of agreement with each statement.

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam marking and grading practices influence academic integrity					
b	Exam marking and grading practices influence credible academic certificate					
c	Establishing examination panel influences exam compliance reports					
d	Adherence to exam grading systems influence free academic results					
e	Exam marking and grades reporting influences credible exam process					
f	Moderating exam results influences credible academic certificate					

Section F: Academic integrity checklist

The following statements relate to the influence of academic integrity checklist. On a scale of 1-5, please indicate your level of agreement with regard to these statements.

	Statements	SA	A	U	D	SD
		5	4	3	2	1

a	Academic integrity is influenced by examination management practices					
b	Free malpractice exam results are influenced by exam setting practices					
c	Credible academic certificate is influenced by marking and grading practices					
d	Exam compliance reports are influenced by invigilation practices					
e	Credible exam process is influenced by marking and grading practices					



Appendix IV: Questionnaire for Students

Dear Participant,

My name is Ali Mohamud Adan. I am PhD student in Education, Administration, Leadership and Management at Mount Kenya University. I am carrying out a study on “Influence of Examination Management Practices on Academic Integrity in Public Tertiary Institutions in Mandera County, Kenya”. I kindly request your assistance by providing accurate and truthful answers to the items in this questionnaire. Any information you provide will be treated with utmost confidentiality and will in no way be divulged to a third party. Please refrain from indicating your name or the name of your university to ensure anonymity and confidentiality. The evidence you provide may be useful in policy formulation but it is devoid of any administrative value. Thank you.

Section A: Demographic Information

Instruction: Please tick as appropriate in the space provided.

1. Gender: Male Female
2. The year of study
First year Second Year Third Year

Section B: Examination Setting Practices and Academic Integrity

3. In a measure of 1-3, gauge rate how often your institution undertakes the following examination setting practices.

Examination Setting Practices	Very Often (3)	Rarely (2)	Never (1)
Appointment of examination setters			
Selection of exam questions in line with exam coverage checklist and format			
Moderation of exam questions			
Preparation of marking schemes			

4. Please indicate your level of agreement regarding the subsequent statements relate to the influence of exam setting practices on academic integrity. On a scale of 1-5, please indicate your level of agreement with regard to these statements

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam setting practices influences academic integrity					
b	Exam setting practices influences credible academic certificate					
c	Appointing examination setters influences credible exam process					
d	Selection of exam questions in line with exam coverage checklist and format influences exam compliance reports					
e	Moderation of questions influences credible exam process					
f	Preparation of marking schemes influences credible exam process					

Section C: Examination Storage/Distribution Practices and Academic Integrity

5. In a measure of 1-3, please gauge how often your institution undertakes the following examination storage and distribution practices.

Examination Storage/Distribution Practices	Very Often (3)	Rarely (2)	Never (1)
Exam packaging of scripts			
Exam storage of the scripts at the departments or examination office			
Opening of exam envelopes			
Distribution recording of exam			

6. Please indicate your level of agreement regarding the following statements relate to the influence of exam storage and distribution practices on academic integrity. On a scale of 1-5, please indicate your level of agreement with regard to these statements.

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam storage and distribution practices influence academic integrity					

b	Exam storage and distribution practices influence credible academic certificate					
c	Exam packaging of scripts influence credible exam process					
d	Exams storage of the scripts at the departments or examination office influence credible exam process					
e	Exam distribution recording influence credible exam process					
f	Opening of exam envelopes influence exam compliance report					

Section D: Examination Invigilation Practices and Academic Integrity

7. In a scale of 1-3, please rate how often your institution undertakes the following examination invigilation practices.

Examination Invigilation Practices	Very Often (3)	Rarely (2)	Never (1)
Recruiting of supervisors/invigilators			
Planning for invigilation/invigilation schedules			
Designing seating plan			
Exam invigilation reports			

8. Please indicate your level of agreement with the following statements relate to the influence of exam invigilation practices on academic integrity. On a scale of 1-5, please indicate your level of agreement with regard to these statements.

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam invigilation practices influence academic integrity					
b	Exam invigilation practices influence credible academic certificate					
c	Recruiting of supervisors/invigilators influence process					
d	Planning for invigilation/invigilation schedules influence exam compliance report					
e	Designing seating plan influence credible exam process					
f	Invigilation reports influence free malpractice exam results					

Section E: Examination Marking/Grading Practices and Academic Integrity

9. In a scale of 1-3, please rate how often your institution undertakes the following examination marking and grading practices.

Marking and Grading Practices	Very Often (3)	Rarely (2)	Never (1)
Establishing examination panel			
Adherence to exam grading systems			
Exam Marking and grades reporting			
Exam moderating results			

10. Please indicate your level of agreement with the following statements relating to the influences of exam marking and grading practices on academic integrity. On a scale of 1-5, please indicate your level of agreement with regard to these statements.

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Exam marking and grading practices influence academic integrity					
b	Exam marking and grading practices influence credible academic certificate					
c	Establishing examination panel influences exam compliance reports					
d	Adherence to exam grading systems influence free academic results					
e	Exam marking and grades reporting influences credible exam process					
f	Moderating exam results influences credible academic certificate					

Section F: Academic integrity checklist

The following statements relate to the influence of academic integrity. On a scale of 1-5, please indicate your level of agreement with regard to these statements.

	Statements	SA	A	U	D	SD
		5	4	3	2	1
a	Academic integrity is influenced by examination management practices					
b	Free malpractice exam results are influenced by exam setting practices					
c	Credible academic certificate is influenced by marking and grading practices					
d	Exam compliance reports are influenced by invigilation practices					
e	Credible exam process is influenced by marking and grading practices					



Appendix V: Interview Guide for Principals

Section A: Demographic Information

Gender					
Age	25-35 years	36-45 years	46-55 years	55 years and above	
Level of education	Certificate	Diploma	degree	Postgraduate	
Years of service	less 5years	5-10 years	10-20 years	20 years and above	

Section B: Influence of exam setting practices on academic integrity

1. Indicate which of the following exam setting practices influence academic integrity?

(Please tick)

- Appointing examination setters
- Selection of exam questions in line with exam coverage checklist and format
- Moderation of exam questions
- Preparation of marking schemes

2. How do the above exam setting practices influence academic integrity?

- Free malpractice exam results
- Credible academic certificate
- Exam Compliance reports
- Credible exam process

Section C: Influence of exam storage and distribution practices on academic integrity

3. Indicate which of the following exam storage and distribution practices influence academic integrity (Please tick)

- Packaging of scripts
- Exam storage of the scripts at the departments or examination office
- Opening of exam envelopes
- Exam distribution recording

4. How do the above exam storage and distribution practices influence academic integrity?

- Free malpractice exam results
- Credible academic certificate
- Exam Compliance reports
- Credible exam process

Section D: Influence of the exam invigilation practices on academic integrity

5. Indicate which of the following exam invigilation practices influence academic integrity? (*Please tick*)

- a) Recruiting of supervisors/invigilators
- b) Planning for invigilation/invigilation schedules
- c) Designing seating plan
- d) Invigilation reporting

6. How do the above exam invigilation practices influence academic integrity?

- a) Free malpractice exam results
- b) Credible academic certificate
- c) Exam Compliance reports
- d) Credible exam process

Section E: Influences of the exam marking and grading practices on academic integrity.

7. Indicate which of the following exam marking and grading practices influence academic integrity? (*Please tick*)

- a) Establishing examination panel
- b) Setting grading systems
- c) Marking and grades reporting
- d) Moderating results

8. How do the above exam marking and grading practices influence academic integrity?

- a) Free malpractice exam results
- b) Credible academic certificate
- c) Exam Compliance reports
- d) Credible exam process

Appendix VI: Interview Guide for Examination Officers

Section A: Demographic Information

Gender					
Age	25-35 years	36- 45 years	46- 55 years	55 years and above	
Level of education	Certificate	Diploma	degree	Postgraduate	
Years of service	less 5years	5-10 years	10-20 years	20 years and above	

Section B: Influence of exam setting practices on academic integrity

1. Indicate which of the following exam setting practices influence academic integrity?
(Please tick)

- Appointing examination setters
- Selection of exam questions in line with exam coverage checklist and format
- Moderation of exam questions
- Preparation of marking schemes

2. How do the above exam setting practices influence academic integrity?

- Free malpractice exam results
- Credible academic certificate
- Exam Compliance reports
- Credible exam process

Section C: Influence of exam storage and distribution practices on academic integrity

3. Indicate which of the following exam storage and distribution practices influence academic integrity (Please tick)

- Packaging of scripts
- Exam storage of the scripts at the departments or examination office
- Opening of exam envelopes
- Exam distribution recording

4. How do the above exam storage and distribution practices influence academic integrity?

- Free malpractice exam results
- Credible academic certificate
- Exam Compliance reports
- Credible exam process

Section D: Influence of the exam invigilation practices on academic integrity

5. Indicate which of the following exam invigilation practices influence academic integrity? (*Please tick*)

- a) Recruiting of supervisors/invigilators
- b) Planning for invigilation/invigilation schedules
- c) Designing seating plan
- d) Invigilation reports

6. How do the above exam invigilation practices influence academic integrity?

- a) Free malpractice exam results
- b) Credible academic certificate
- c) Exam Compliance reports
- d) Credible exam process

Section E: Influences of the exam marking and grading practices on academic integrity.

7. Indicate which of the following exam marking and grading practices influence academic integrity? (*Please tick*)

- a) Establishing examination panel
- b) Setting grading systems
- c) Marking and grades reporting
- d) Moderating results

8. How do the above exam marking and grading practices influence academic integrity?

- a) Free malpractice exam results
- b) Credible academic certificate
- c) Exam Compliance reports
- d) Credible exam process

Appendix VII: Certificate of Ethical Clearance from Mount Kenya University

Mount Kenya University



REF: MKU/ERC/1903
TO: ALI MOHAMUD ADAN

Date: 23 September 2021

REG: PHDED/2014/65515

Dear Sir/Madam,

RE: INFLUENCE OF EXAMINATIONS MANAGEMENT PRACTICES ON ACADEMIC INTEGRITY IN PUBLIC TERTIARY INSTITUTIONS IN MANDERA COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **976**. The approval period is **23/09/2021 - 22/09/2022**.

This approval is subject to compliance with the following requirements;

- i. Only approved documents including informed consents, study instruments, MTA will be used
- ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
- vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

Dr. Peter G. Kirira
Chairman, Mount Kenya University IERC

The Chairman
Mount Kenya University
Ethics Review Committee
P. O. Box 342 - 0100, Thika

Appendix VIII: Introduction Letter from The School of Postgraduate Studies of Mount Kenya University



DIRECTORATE OF GRADUATE STUDIES

PHDED/2014/65515

28th September, 2021

*The Director, Research Coordination Division
National Commission for Science, Technology & Innovation
Utalii House, 8th & 9th Floor
P.O Box 30623- 00100
NAIROBI*

Dear Sir/Madam,

RE: ALI MOHAMUD ADAN - REGISTRATION NO. PHDED/2014/65515


The purpose of this letter is to introduce the above named student who is pursuing Doctor of Philosophy in Education in the Department of Education Management & Curriculum Studies in the School of Business & Economics.

The title of his research is *"Influence of Examinations Management Practices on Academic Integrity in Public Tertiary Institutions in Mandera County, Kenya."*

He has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data for his research between October and March, 2022.






Any assistance accorded to him will be highly appreciated.

Thank you.


Dr. Samuel M. Karenga, Ph.D.
Director, Graduate Studies
Enc.

Mount Kenya University
P.O. Box 342 - 01000, THIKA
Office of the Director
Graduate Studies

Appendix IX: Authorization Letter from National Commission for Science, Technology and Innovation, NACOSTI

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 567135	Date of Issue: 08/November/2021
RESEARCH LICENSE	
	
<p>This is to Certify that Mr.. ALI adenali048@gmail.com MOHAM of Mount Kenya University, has been licensed to conduct research in Mandera on the topic: INFLUENCE OF EXAMINATIONS MANAGEMENT PRACTICES ON ACADEMIC INTEGRITY IN PUBLIC TERTIARY INSTITUTIONS IN MANDERA COUNTY, KENYA for the period ending : 08/November/2022.</p>	
License No: NACOSTI/P/21/13500	
567135 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	

**Appendix X: Research Authorization Letter from County Commissioner,
Mandera**

OFFICE OF THE PRESIDENT



MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telegraphic Address: "County"
Email: cmandera@hotmail.com
When replying please quote

The County Commissioner
P. O. Box 77 - 70300
MANDERA

Ref No: CC/MDR/RM.71/ VOL I (164)

18th January, 2021

Deputy County Commissioners
MANDERA COUNTY

RE: RESEARCH AUTHORISATION- MR. ALI MOHAMUD ADAN.

Reference is made to license no. 567135 dated 8TH November, 2021 from the Director General's Office, National Commission for Science, Technology and Innovation on the above subject matter.

Mr. Ali has been authorized to carry out research on the "***INFLUENCE OF EXAMINATION MANAGAMENT PRACTICES ON ACADEMIC INTEGRITY IN PUBLIC TERTIARY INSTITUTIONS IN MANDERA COUNTY***" for the period ending 8TH November, 2022.

Kindly be informed.

A handwritten signature in blue ink, appearing to read 'Onesmus Kyatha', written over a horizontal line.

**ONESMUS KYATHA
COUNTY COMMISSIONER
MANDERA COUNTY**

Cc:
The Director General/CEO
National Commission for Science, Technology and Innovation
NAIROBI

**Appendix XI: Research Authorization Letter from County Director of Education,
Mandera**

MINISTRY OF EDUCATION
STATE DEPARTMENT OF BASIC EDUCATION

Telephone: Mandera 2018/2239
When replying please quote.
REF;EDM/7.21/VOL.11



COUNTY DIRECTOR OF EDUCATION,

Mandera County
P.O BOX 30 -70300,
Mandera.

DATE ;24TH OCTOBER,2021.

TO WHOM IT MAY CONCERN.

RE: RESEARCH AUTHORIZATION ALI MOHAMUD ADAN.

Refer to the letter Ref; 567156 dated 8th November, 2021 on the above subject matter.

This is to introduce you to the above named Person who hails from Mount Kenya University.

Mr Ali intending to carry out research on "***An Influence of Examination Management Practices on Academic Integrity in Public Tertiary Institutions in Mandera County, for a period ending 8th Nov, 2022.***

Please accord Mr Ali assistance and Co-operation to conduct the Research accordingly. Thank you.

ABDI. S. SHUEB

FOR; DIRECTOR OF EDUCATION MANDERA.

COUNTY DIRECTOR OF EDUCATION
17 NOV 2021
P. O. Box 30 -70300, MANDERA
mandera@kenya.go.ke

Appendix XII: The Map of Kenya Showing Mandera County



Appendix XIII: Map of Sub-Counties in Mandera County

