



INFLUENCE OF COMPLIANCE WITH SAFETY STANDARDS AND GUIDELINES ON PROVISION OF SAFE LEARNING ENVIRONMENT IN PUBLIC SECONDARY SCHOOLS IN MAKUENI COUNTY, KENYA

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Abstract:

Compliance with safety standards and guidelines by schools plays a key role in ensuring a safe learning environment. However, in public secondary schools in Makueni County, the situation is quite different, with cases of accidents to learners and staff as well as destruction of school infrastructure being on the rise. The objective of this study was to assess the influence of compliance with safety standards and guidelines on the provision of a safe learning environment in public secondary schools in Makueni County, Kenya. The study was guided by Maslow's Hierarchy of Needs Theory. The study adopted mixed methodology and applied quantitative and qualitative approaches. A descriptive research design was employed to collect and analyze data using questionnaires and interview guides. The target population comprised 400 principals, 3769 teachers and 5600 members of the school BoM in public secondary schools in Makueni County, totaling 9769 respondents, from which a sample of 379 respondents was calculated using Yamane's Formula. Stratified sampling was used to create nine strata based on the number of sub-counties in Makueni County. From each sub-county, five principals and

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20 members of the school BoM were selected using purposive sampling. However, simple random sampling was applied to select 26 teachers. Questionnaires were used to collect quantitative data from teachers, whereas interview guides were used to collect qualitative data from principals and members of the school BoM. There was also a document checklist analysis guide for the researcher. Piloting was conducted among 38 respondents from a sample of public secondary schools in Makueni County to establish validity and reliability. Validity was ascertained with the help of university supervisors and experts in educational administration. Reliability was determined using the split-half technique, and a reliability index, $r = 0.725$, between the two halves was obtained using the Cronbach Alpha Method, which indicated high internal reliability. Data analysis began by identifying common themes. Qualitative data were analyzed thematically along the study objectives and presented in narrative form. Quantitative data were analyzed using descriptive statistics such as frequencies and percentages. Statistical Packages for Social Science (SPSS Version 29) was used to analyse data. Data was presented using tables and percentages. The study revealed that the provision of a safe learning environment poses significant challenges in many public secondary schools. Many of these schools have reported various incidents of accidents and injuries affecting both staff and students, alongside recurrent damage to physical facilities. This is partly attributed to the failure of such public secondary schools to adhere to safety standards and guidelines, the lack of stakeholder participation, as well as irregular in-service training programmes on how to create a safe learning environment in schools. Thus, the study recommends that principals should ensure that schools comply with safety standards and guidelines.

Keywords: governance practices, safety standards, safe learning environment

1. Introduction

A safe learning environment is an integral and indispensable component of the teaching and learning process. Actually, no meaningful teaching and learning can take place in an environment that is unsafe and insecure to both learners and staff. Good governance practices are essential for the success of any school. It is therefore important that school administrators facilitate a safe and secure school environment. A safe and secure school environment enhances quality teaching and learning in educational institutions (Maxwell, Reynolds, Lee, Subasic & Bromhead, 2017).

According to Arum (2019), if students feel unsafe in school, they are less able to concentrate in class and perform poorly in assessments because feelings of safety are positively related to both behavioral and academic outcomes. This corroborates the assertions of Lussier and Fitzpatrick (2016) that a safe school is the foundation of a good education because when students feel safe, they learn better, and teachers can become more effective when they know students are under control and can concentrate on their work. Although learning institutions provide security to staff and learners, many

learning institutions around the world are experiencing potential threats to students' and staff safety (UNESCO, 2018).

The United States of America has established a guide for prevention and response to school safety (Federal Government of the United States of America, 2016). These include training school personnel on how to detect, prevent and respond to a violent individual within a school environment, security controls such as access controls, security procedures such as lockdown and evacuation, as well as rapid response to an incident in schools (Janel, 2017). In Spain, Díaz-Vicario and Sallán (2017) explored the concept of safety in learning institutions. It was noted that creating safe and healthy environments was not always an explicitly endorsed principle or goal for schools. However, all members of the educational community were involved in ensuring adequate levels of school safety and diverse management.

Organizational actions and measures were implemented to ensure physical, emotional and social safety, which consequently influenced teaching and learning processes in schools. Van Jaaveld (2011) opined that there is a deep-rooted culture of violence in South African schools that has made schools unsafe and insecure. In response to school safety concerns, the Ministry of Education has developed safety measures and policies to be implemented by schools to improve school safety. Obegbulem (2011) affirms that, to overcome or minimize student mortality and injury rates in learning institutions, school administrators are mandated to plan, organize and facilitate communication and training on safety measures.

Sekiwu and Kabanda (2014) assert that several hazards in schools are attributed to failure to implement safety policies in Uganda. They established that school fires cost the lives of 20 students and two adults; thus, the Minister for Education and Sports reported that the Inspector General of police had identified a lack of safety provisions as being the main contributing factor to this disaster.

Kenya has a history of tragic school safety incidents blamed on failure to implement safety policies. Cases of mortality rates attributed to failure of implementing safety standards have been on the rise, and thus the Ministry of Education compiled a Safety and Standards Manual for use in all Kenyan schools Ministry of Education, (2018). The Safety and Standards Manual comprises of the following safety issues: safety in physical infrastructure, safety in school environment, health and hygiene safety, food safety, safety against alcohol, drug and substance abuse, safety in teaching and learning environments, social-cultural environment of the school, safety of children with special needs, safety against child abuse, transportation safety, school community relations and safety on school grounds (MoE, 2008).

The manual embraces diverse issues that have an influence on the safety of learners, personnel, parents and the catchment communities around the schools. Nthenya (2011) contends that in 2001, 68 students died at Kyanguli Secondary School in Machakos District due to a dormitory fire. The deaths were attributed to a lack of emergency exit doors and overcrowded dormitories. The death of 8 girls at Moi Girls' High School in 2017 in Nairobi County was attributed to overcrowded dormitories and

a lack of fire extinguishers (Achuka, 2017). Cheronon (2018) reported that 7 students were injured at Jamhuri High School in Nairobi, which was attributed to a religious-related confrontation that broke out among the students. This is an indication that school safety is a national concern.

Daily Nation, Wednesday, June 29, 2022, contends that thirteen Kakamega High School students were injured after they fell from the first floor of a building block as they left their classrooms. The injuries were attributed to a commotion that ensued when two students who had been tugging each other were pushed, and the steel guard rails on the stairs came off the stairs to the ground. The safety of the structure and design of the guard rails was questionable. The Daily Nation Newspaper of 4th Feb 2022 indicated about the stampede in Kakamega Primary school, in Kenya's Western region, where fourteen school children, nine girls and five boys died, and dozens were critically injured. Some attributed the cause of the stampede to the pupils being barred from using one of the two staircases in the building, which had been reserved for parents, creating a surge. This questioned the safety of the learners in the three-storey building with respect to compliance with safety standards. This is an indication that school safety is a national concern.

In Makueni County, fire razed down a Maiani Girls mega dormitory in Mukaa sub-county, where nothing was salvaged; however, no injuries were reported (Education News, 29th May 2021). A similar incident had earlier been reported in Mukaa Boys High School that left a dormitory in ashes and a consequent torching of two cubicles in another dormitory (Education News, 29th May 2021). KBC Nyaga (2021) reported about a 132-bed capacity dormitory that was burnt at Makindu Boys Secondary School in Makindu Sub-county, Makueni County, where 7 students were found culpable. Teachers have an integral role in school safety because they are charged with the responsibility of helping students, and they are in charge of classrooms full of students.

When an act of violence, terror or natural disaster occurs, teachers must be able to recognize threats, provide proper guidance should an attack take place, or appropriately respond and address issues in the aftermath. It is imperative that they (teachers) be properly trained and confident in their ability to act, should the need arise (Lee, 2018). Teachers must also be provided with detailed instructions on what to do, where to stay, where the closest exit is and how to account for all students. The more tools and knowledge a teacher has, the stronger their ability will be to properly analyze the situation and make sound decisions to protect their students (Bal, 2021). Munyiri, Thinguri and Edabu (2020) found that in public secondary schools of Nairobi County, hiring of security personnel was an aspect of disaster risk management which is most influenced by school resource allocation. It is against this background that this study assessed the influence of governance practices in the provision of a safe learning environment in public secondary schools in Makueni County, Kenya.

2. Statement of the Problem

Governance practices contribute significantly to improving the status of safety in schools. However, in many public secondary schools in Makueni County, it is quite different since the provision of a safe learning environment has been a challenge owing to many incidents of accidents, injuries, food poisoning and death still being reported. In the same token, cases of accidents in schools are on the increase and have become a great concern to education stakeholders. A report authored by the Joint Monitoring Project (2022) indicates that cases of unsafe schools have been on the rise, with 45.7% of injuries to students, 34.1% cases of food poisoning and 13.8% cases of attack from sanitation-related diseases. This paints a picture of the deteriorating state of students' safety in public secondary schools.

To mitigate these challenges, there have been several legal and policy interventions by the government to improve the situation. The Basic Education Act 2013, has addressed the issue of children's rights to free and compulsory education. The TSC Act 2012, in its third schedule, protects learners from sexual harassment and flirtation by their teachers and together with this, the government also banned corporal punishment through a circular (MoE, 2018).

Despite all these interventions and even with the publishing of the Safety and Standards Manual by the Ministry of Education in 2008, cases of insecurity and lack of safety are still rampant in schools. Thus, this study sought to investigate the extent to which governance practices influence the provision of a safe learning environment in public secondary schools.

2.1 Objective of the Study

The specific objective was to establish compliance with safety standards and guidelines on a safe learning environment in public secondary schools in Makueni County.

2.2 Significance of the Study

The study may benefit different individuals and authorities in different ways. For instance, school administrators, teaching and non-teaching staff and students may find the study useful in gaining an insight into the need to adhere to safety standards and guidelines in their respective schools in order to enhance school safety. Policymakers at the Ministry of Health may find the study useful in developing a policy framework on the provision of emergency facilities such as firefighting equipment, alarm systems, first aid facilities and training of staff in disaster management.

School administrators may be informed about how to deal with various safety issues in order to have a safer school and therefore better performance. Moreover, the results of the study may shed light on how to reduce instances of school fire, riots, strikes, suspensions, expulsions and other disruptive actions that cause suffering to both the students and the school's teaching and learning practices. Teachers may also benefit from this study since proper implementation of the recommendations is likely to create an

environment conducive to their teaching rather than having their attention divided due to a lack of school safety. Students who are the direct recipients of the output of this study may also benefit from the study since they may understand the importance of ensuring a safe social environment, which may probably lead to their safety and proper learning.

The Ministry of Education and the Ministry of Health may benefit from this research on matters pertaining to the workability of the policies formulated and their impact on academic performance. The Kenyan government may benefit from this research since it promotes a positive attitude towards health and environmental protection, as stipulated in Goal 8 of the national goals of education. The study may be used by other scholars as a guide and point of reference in school safety studies.

3. Literature Review

3.1 Compliance with Safety Standards/Guidelines and Safe Learning Environment

Safety Standards Manual is a document that the school should use to maintain a Safe, Secure and Caring environment that fosters teaching and learning. UNICEF (2009) proposes that schools should have resources and procedures in place to deal swiftly and decisively with specific dangers to children's health and safety, like warning systems, training teachers and students in simple first-aid skills, installing fire extinguishers and emergency lighting, scheduling evacuation drills and creating designated assembly points, safe areas and ways of calling for assistance. Ogunyemi (2019) assessed the enforcement of health and safety standards in primary and nursery schools in Nigeria.

The sample comprised 97 teachers. Data was collected using questionnaires and observation schedules. Findings showed that the classroom spaces and playground did not meet the specified minimum standards for a learning institution. Generally, the teachers perceived the governance practices as not efficient enough to enforce health and safety standards. Marowanidze (2016) examined the extent of fire hazards in secondary schools in Zimbabwe. This study adopted a case study research design. The sample was 53 respondents, which included 35 students, four head teachers, ten teachers, and four key informants. Data was collected using questionnaires, interviews, focused group discussions, observations and documentary analysis.

Findings showed that the secondary schools faced various fire-related hazards which were related to grass fires, poor waste management, poor housekeeping and electric faults. Wanderi (2018) sought to find out the status of school safety and how it influenced the teaching and learning process in public secondary schools in Nairobi and Nyeri counties, Kenya. The study adopted a descriptive survey design. The target population was 293 principals and deputy principals, 50155 students and two County Quality Assurance & Standards officers. Stratified and simple random sampling were used in sampling the study respondents. Data was collected using questionnaires and interview schedules.

Findings showed that the school's physical facilities were not safe, and the majority of schools' doors and windows were not as per the requirements of the safety standards

manual. Findings also revealed that school safety influenced teaching and learning processes in schools. Alunga and Maiyo (2019) examined the effect of crime prevention measures on students' safety in public boarding secondary schools in Trans-Nzoia County. The study adopted mixed research designs. The target was 20 principals, 143 teachers, 220 students, and 20 school security officers. Simple random and purposive sampling were used to sample the respondents. Data was collected using questionnaires, an interview schedule and focus groups.

Findings showed that the majority of the schools had not complied with the Ministry of Education safety standards, and the majority of the teachers, students, and non-teaching staff were not trained and aware of the safety measures. Mong'are (2015) studied the status of safety measures and how they affected performance in public primary schools in Kilifi Sub-County, Kenya. The study employed a descriptive survey research design. The study target was 4797 respondents, and simple random sampling was used to select 479 respondents.

Questionnaires and interview schedules were used for data collection. The study revealed that the schools were in a pathetic condition because they had not implemented basic safety measures.

4. Research Gaps

The majority of the schools, particularly in Kenya, have not complied with safety standards as stipulated by the Ministry of Education. Wanderi (2018) found that school physical facilities were not safe, and the majority of schools' doors and windows were not as per the requirements of the safety standards manual. Alunga and Maiyo (2019) found that the majority of the schools had not complied with the Ministry of Education safety standards, and the majority of the teachers, students, and non-teaching staff were not trained and aware of the safety measures. Mong'are (2015) revealed that the schools were in a pathetic condition because they had not implemented basic safety measures.

4.1 Research Methodology

The study adopted mixed methodology and applied both quantitative and qualitative approaches. In this study, the researcher used the strengths of both quantitative and qualitative approaches to reinforce each other. According to Creswell (2014), in the quantitative method, the researcher asks specific questions and collects quantifiable data from a large number of participants. In this case, data were collected using questionnaires. At the same time, qualitative data were collected by relying on the views of participants and collecting data consisting largely of words from the participants. In this case, data were collected using interviews.

4.2 Research Design

These included a descriptive survey design for the quantitative aspect using questionnaires and a qualitative exploratory design using interviews for in-depth

understanding of governance practices and their influence on safe learning environments. This is because, according to Creswell (2014), to address the quantitative aspect, descriptive survey research design uses a quantitative research method of collecting quantifiable information to be used for statistical analysis of the sample. In other words, descriptive research design aims at describing the current state of affairs (Render *et al.*, 2012). In the same token, Creswell (2017) asserts that descriptive research design is an established research method that is used extensively in a wide variety of disciplines, particularly in the social sciences, by either interviewing or administering a questionnaire to a sample of individuals when collecting information about people's attitudes, opinions, habits or a variety of education or social issues.

This design enabled a researcher to closely examine the data within a specific context to get the desired descriptive information. Besides, this design was suitable in this study since it resulted in well-validated and substantiated quantitative findings. In this case, data were collected using questionnaires. However, to implement the qualitative method, the phenomenological research design was applied, for this is an approach to qualitative research that focuses on the commonality of a lived experience within a particular group. According to Creswell (2014), the fundamental goal of the approach is to arrive at a description of the nature of the particular phenomenon.

In this study, this design was relevant in that respondents had the opportunity to express their views and lived experiences with regard to the influence of governance practices on the provision of a safe learning environment in public secondary schools. In this case, data were collected using interviews. The results of quantitative and qualitative methods were then merged and triangulated concurrently to provide adequate interpretations of the variables under investigation.

Table 3.1: Target Population of the Study

Respondents	Target Population
Principals	400
Teachers	3769
Members of the School Board of Management	5600
Total	9769

Source: Makueni County Education Office (2025).

4.3 Sampling and Sampling Techniques

In this section, the study highlighted the sampling techniques which were adopted and the procedures for the determination of the sample size. This was suitable since it yielded a precise and finite sample size, which was highly representative based on a finite target population at a high confidence level. The researcher used Yamane's Formula for sample size determination to calculate the sample size for this study. The procedure is shown below:

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

Where,

n = desired sample size at 95% confidence interval,

N = target population,

e = margin of error at 5% (decimal equivalent is 0.05).

Thus, the desired sample was:

$$n = 9769$$

$$1 + 9769(0.05)^2$$

$$n = 379 \text{ respondents}$$

Stratified sampling was used to create nine strata based on the number of sub-counties in Makueni County.

This sampling method ensured samples obtained were homogeneous, uniform and had a high degree of proportional representation from every stratum. From each sub-county, five (5) principals and 20 members of the school Board of Management (4 per sampled school) were selected using purposive sampling, considering schools which have had cases of lack of safety for the last five years. However, simple random sampling was applied to select 26 teachers to avoid bias, as shown in Table 3.2.

Table 3.2: Sampling Matrix

Respondents	Target Population	Sample Size	Sampling Method
Principals	400	45	Purposive sampling
Teachers	3769	234	Simple random sampling
Members of School BoM	5600	100	Purposive sampling
Total	9769	379	

Source: Researcher (2025).

4.4 Research Instruments

These are tools that were used to gather information about the specific set of themes based on the research objectives. These included questionnaires for teachers, interviews for principals and members of the school BoM and a document checklist analysis guide for the researcher.

4.5 Response Rate

In this study, 234 questionnaires were administered to teachers and, in return, 228 questionnaires were filled out and returned. The researcher interviewed 38 principals and 76 members of the school BoM. This yielded response rates shown in Table 4.1.

Table 4.1: Response Rates

Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)
Principals	45	38	84.4
Teachers	234	228	97.4
Members of School BoM	100	76	76.0
Total	379	342	90.2

Source: Field Data (2025).

Table 4.1 shows that principals registered a response rate of 84.4%, teachers registered 97.4% whereas the members of the school BoM registered a response rate of 76.0%. This yielded an average response rate of 90.2%, which is consistent with the assertions of Creswell (2018) that a response rate above 75.0% is adequate. This information was important since it allowed the researcher to generalize the study outcomes to the target population.

5. Research Findings

5.1 Provision of Safe Learning Environment in Public Secondary Schools

The study sought to assess the status of provision of a safe learning environment in public secondary schools in Makueni County. This was measured by assessing the number of accidents to learners and staff, as well as the number of school infrastructure destroyed. Teachers were given questionnaires to respond to on issues of the provision of a safe learning environment in public secondary schools, and the results are shown in Table 4.6.

Table 4.6: Provision of Safe Learning Environment in Public Secondary Schools

Indicators of Safe Learning Environment	Good	Fair	Below Average
Number of accidents experienced by learners and staff	50.0	36.8	13.2
Classes with adequate ventilation	34.2	18.4	47.4
Safe playgrounds for students	32.8	14.6	52.6
Toilets provided by the school	39.4	21.1	39.5
Disability-friendly classes provided by the school to encourage inclusivity	26.3	18.4	55.3

Source: Field Data (2025).

Table 4.6 shows that half of the public secondary schools (50.0%) have registered a good number of cases of accidents experienced by learners and staff, 34.9% have had a fair number of accidents, whereas 33.8% have had fewer cases. Slightly more than a third (34.2%) of the schools had good classes with ventilation, 18.4% had fairly good classes, whereas a fair majority (47.4%) were below average. Only 32.8% of sampled schools had a good status of safe playgrounds for students, 14.6% had fairly safe playgrounds, whereas more than half (52.6%) had playgrounds whose safety status was below average. This implied that the safety of learners in most schools was not guaranteed.

Table 4.6 further shows that 39.4% of public secondary schools had good toilets for staff and students, 21.1% had fairly good toilets, whereas 39.5% had toilets whose safety status was below average. The study also found that only 26.3% of the schools had a good status of disability-friendly classes to encourage inclusivity, 18.4% had fair status, while more than half (55.3%) exhibited below average status. On their part, 58.5% of the teachers also stated that the learning environment in many public secondary schools is not safe. This shows that urgent intervention is necessary.

The principals of schools were also interviewed to elicit more in-depth information about the safety of the learners in schools. During the interviews, principals and members of the school BoM responded on the contrary by stating that schools are striving to create a safe learning environment for staff and students. Principal, P1, noted:

In my secondary school, despite the challenges, I have ensured that the number of accidents experienced by staff and students has gone down, classes are well-ventilated, playgrounds are safe, toilets are clean and meet the student population and that most of the buildings and classes are disability-friendly to promote inclusivity.

Similarly, BoM member B2 remarked:

“As a board, we have ensured that we allocate funds to enhance the construction of enough toilets for students and staff in our school. We have also fenced the school, constructed safe walkways, and ensured regular inspections of school infrastructure.”

The assertions given here underscore the fact that the safety of the learning environment in schools is critical and thus concerns many education stakeholders. These findings corroborate the assertions of Mugendi (2019) that poorly maintained playgrounds and unsafe infrastructure are primary contributors to injuries among schoolchildren. According to Kioko and Mwanza (2020), most schools in Makueni County have insufficient and unhygienic toilet facilities, which lead to health risks for students.

The Ministry of Education’s guidelines recommend one toilet for every 25 students, a benchmark that remains unmet in many institutions. In the same token, these findings further support the findings of a study which was carried out by Musyoka (2021) and revealed that overcrowded and poorly ventilated classrooms are common in Makueni schools, significantly affecting students’ health and concentration. This problem is particularly grave during hot seasons when the region experiences high temperatures. These findings further lend credence to the findings of research carried out by Ndunda (2022), which indicated a lack of infrastructural adjustments to accommodate students with disabilities. Limited ramps, inaccessible toilets, and uneven terrains make it challenging for children with special needs to access education equitably.

These findings point to the fact that many public secondary schools in Makueni County are not safe for learning due to various challenges that put students and staff at risk. One major concern is the high number of accidents and injuries in schools. Poorly maintained buildings, overcrowded classrooms, and a lack of safety measures expose students to harm. Additionally, inadequate supervision in laboratories and playgrounds increases the risk of injuries during practical lessons and sports activities. Many schools face water shortages, leading to unhygienic sanitation facilities that pose health risks. Students, especially girls, suffer due to the absence of proper toilets, affecting their

concentration in class. Poorly ventilated classrooms further contribute to an unsafe learning environment.

Many schools have overcrowded classes with limited airflow, creating uncomfortable conditions for learning. During hot seasons, students struggle to concentrate, while in colder months, they are exposed to respiratory infections. Additionally, most schools lack disability-friendly infrastructure. Students with disabilities face difficulties accessing classrooms, toilets, and other facilities, limiting their participation in education.

From the observations highlighted in the findings, the safety standards by the Ministry of Education are far from being met, and therefore, the concerned stakeholders ought to go beyond inspection to supervise implementation.

5.2 Recommendations of the Study

Based on the findings, the study recommends that principals should ensure that their schools comply with safety standards and guidelines as stipulated in the Ministry of Education Manual. They should establish a structured safety audit and monitoring system to ensure continuous compliance with safety standards and guidelines. This includes conducting regular inspections, involving safety committees, and implementing corrective measures to address any identified risks.

5.3 Suggestions for Further Research

There is a need to conduct a study to examine the influence of principals' management strategies on the provision of a safe learning environment in public secondary schools. There is also a need to carry out research to ascertain the extent to which staff attitude contributes towards a safe learning environment in public secondary schools.

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Conflict of Interest Statement

The authors of this publication disclose no conflict of interest.

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