An Investigation into the State of Disaster and Safety Preparedness in Schools in Kenya

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Abstract: Disasters of various kinds have been witnessed in learning institutions in Kenya for many years. Indeed, disasters disrupt the education process and undermine quality of education. This paper looks at how prepared our learning institutions are in fighting instances of fire outbreaks. The question here is: Are learning institutions adequately prepared to cope with these disasters? The paper is based on a survey carried out in 12 Counties in Kenya. The purpose of the study was to investigate the state of disaster preparedness in learning institutions in Kenya with specific reference to fire disasters. Descriptive survey research design was used. The study targeted all learners in primary and secondary schools, teachers, school administrators, Boards of Management (BOM)/School Management Committees (SMCs), Chiefs, Sponsors and education officials. Cluster and simple random sampling was used. The research instruments used in collecting data were questionnaires and interview guides. Piloting of the instruments was carried out and validated for reliability. This initial exercise was carried out in three Counties that were randomly selected. The pilot Counties were not part of the main study. Means and standard deviations were used to describe the data gathered during the main study. Quantitative data were analyzed using SPSS while qualitative data were analyzed thematically. The main finding of the study was that learning institutions were not sufficiently prepared to handle disasters or emergency situations. Recommendations made include developing a coherent safety and disaster/emergency preparedness policy and carrying out sensitization for all directorates in the Ministry of Education and key education stakeholders on issues pertaining to Disaster and Emergency preparedness. It is expected that the findings of this study will provide insightful reference that education stakeholders can rely on in regard to disaster preparedness and management.

Keywords: Disaster, Safety, Emergency preparedness, Management, Unrest, Violence, Students, Learning institutions

1. Introduction

Disasters are a common occurrence in human life. When they happen, they affect various aspects of human life. Among other effects, they can influence the pattern of academic performance in learning institutions. As Rugumamu and Gabla note, when a disaster takes a violent dimension, it disrupts the fabric of society in political, economic and social areas (2003). Achoka (2007) defines a disaster as a state of incompatibility. Achoka further compares disaster to the traffic light that shines green to alert you to move on yet at the same time it shows red warning you to stop. Disasters lead to human anguish through loss of lives and property. In relation to schooling, disasters cause adverse effects on curriculum delivery and supervision in learning institutions leading to poor performance in examinations since learning and supervision can only be well achieved in a harmonious environment (Wekesa, 1993; Rue, 1982).

Disaster is looked at as a phenomenon of various kinds, form and types that destroy both human life and environment thereby bringing normal life a standstill or disrupts it. Disaster is also defined as a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. There are natural disasters like floods, earthquakes, tsunami or volcanic eruptions and man-made disasters like political upheavals, fires and school riots that lead to destruction of life and property. Therefore, a disaster can be generally understood as a natural or human-caused event, occurring with or without warning. It causes death, injury or disease, damage to property, infrastructure or the environment, which exceeds the ability of the affected society or group to cope using only its own resources. Henceforth, disaster is a phenomenon or an event of dangerous character that disrupts normal life leading man into a state of desperation for humanitarian assistance (e.g. the earthquake in Haiti in January 2010, Post-Election Violence in Kenya in 2007-2008).

Disaster preparedness encompasses the body of policy and administrative decisions and operational activities which pertain to the various stages of a disaster. Safety awareness and preparedness in schools are becoming major concerns. In the recent past, there have been perpetual reports on violence and fire outbreaks in schools across the country. These reports are evidence that schools are not immune to destructive violence. Apparently, there exists constant fear among leaders and a growing need to address the issue of safety in-depth. According to Indiana Education Policy Center (2000:2), school violence prevention demands that we be prepared for the eventuality of violence. Schools that are safe and responsive have plans and procedures in place to deal with violent and disruptive behaviors (including disasters) that may occur. According to Begun (2001), most violent situations can be avoided if training of social skills programmes that built into the school community skills and
knowledge on safety and disaster preparedness. Thus school policy takes an important role in safety procedures.

Day and Golench (1995) classified policies that would promote school safety into four types. The four types are response or dealing with misbehavior; expectations in form of a model for appropriate behavior which students should follow; preventive strategies and programs that inhibit misbehavior and lastly community focus where community groups are included in initiatives to address the problem of school violence (and disasters).

The question here is whether schools are adequately prepared to deal with issues of safety and disasters that include the evolving threats to school security, comprehensive school safety planning and leadership, school security assessments, school security strategies and issues including board meetings and administration office security. Other areas include athletics and large events security, bomb and grenade threats and suspicious devices, cell phones and text messaging, gangs, hot lines and anonymous reporting, private and independent schools, school police, school security staffing, student involvement in school safety planning, transportation security, uniforms and dress codes, managing bullying, preparing schools for terrorism, managing school safety on tight budgets, parents and school safety, early warning signs of violence, assessing and managing threats, lessons learned from school crisis incidents, emergency preparedness planning and preparation, emergency response and crisis management, managing media and parent communications on school safety and crisis issues.

2. Statement of the Problem

The issue of disasters and safety standards in schools or educational settings will continue being a major factor in the management of education the world-over. This is evident from the numerous scholarly works that attempt to address this issue. In Kenya, the issue of students’ safety and security has attained greater significance especially following the unprecedented levels of school fire breakouts and unrest witnessed in the country frequently. About forty-eight (48) cases of fire outbreaks in schools were reported in 2012 resulting in fourteen (14) students deaths and three (3) teachers, while in 2008 students unrest was reported in learning institutions, with about three cases resulting into deaths of students in that year. This was happening at a time when the country had just witnessed serious political violence in the name of post-election violence (PEV). Many schools have continued to suffer property destruction and loss of lives. In 2012, the following schools had incidences of fire disasters destroying school property and in some incidences causing death:

- Malindi High School in Malindi District, fire caught deputy principal’s house at night claiming his life, wife, and 6 children
- Emmanuel High School in Uasin Gishu County, the boys’ dormitory caught fire at night.
- Katheririri Girls Mixed Boarding School in Meru County, a dormitory caught fire which destroyed the whole dormitory and pupil’s property.
- Asumbi Boarding Primary School in Homa Bay County in August 2012, fire broke out in a dormitory burning to death eight. Only one pupil survived. The fire was suspected to have been caused by an electric upsurge.

In all these fire incidences, the probable cause of fire was attributed to electrical fault and other unknown reasons. It is against this backdrop that this study finds its basis. The study endeavored to establish the level of safety and disaster preparedness in learning institutions in Kenya.

3. Objectives

This study specifically proposed to:
1) Determine the nature and types of disasters encountered in schools
2) Establish whether training on safety and disaster preparedness is carried out in schools in Kenya
3) Establish measures employed by school head teachers/principals in ensuring safety and disaster preparedness in schools in Kenya.
4) Evaluate the effects of disasters on schools in Kenya
5) Find out the challenges facing schools in disaster management in Kenya.

4. Scope of the Study

The study was carried out in 30% of the 47 counties in Kenya that is 14 counties (sampled from the former Coast, Eastern and Nyanza Provinces). The counties were purposely sampled to take care of the different regional, geographical and cultural interests of the country. The counties were carefully selected representing the former provinces. Further still, twenty schools (both primary and secondary) were selected from each county. The target population comprised students/pupils, support staff, members of Boards of Governors, PTA members’ school principals/head teachers, Education Officers and provincial administration representatives. The sources of data in this study were eight hundred and forty three (843) comprising of four hundred and forty three (443) students, two hundred and forty (240) community members, eighty (80) principals/head teachers and eighty (80) focus group members comprising of DEOs, KESHA, KEPSHA, BOM, PTA, SMC, PA, Sponsors, Area Chief and an NGO operating in the area (thus 20 focus group members per specific area).

5. Methodology

A survey design was used to cover the largely spread sample for data collection. Data were collected using questionnaires and interview guides. Cluster and simple random sampling were used to sample a representative sample of schools from where the respondents were identified. According to Best and Khan (2003) cluster sampling design is appropriate when the geographic distribution of individuals is widely scattered. In this study to get a representative number of schools in each county, counties were first identified purposefully ensuring that each of the former provinces was represented in the sample. The sample of schools within selected counties was arrived at using the sample size.
calculator at 95% confidence level (creative research systems, 2007). In each sampled school, the board of governors’ chairman, Principal, PTA chairman, teachers, support staff, 30% of students comprised research respondents. Education officers and provincial administrators were also purposively sampled.

Primary data was collected by use of questionnaires, interviews and focus group discussion. Secondary data was collected by use of document analysis. Self-completion questionnaires were convenient since they enable data collection over a large sample in the shortest time possible and in the most convenient way (Bryman, 2001). The questionnaires comprised both structured and open ended type of items. Whereas the open ended items ensure that the respondents give answers on the type of items. Whereas the open ended items ensure that the respondents give answers on the type of items. Whereas the open ended items ensure that the respondents give answers on the type of items. Whereas the open ended items ensure that the respondents give answers on the type of items. Whereas the open ended items ensure that the respondents give answers on the type of items. Whereas the open ended items ensure that the respondents give answers on the type of items. Whereas the open ended items ensure that the respondents give answers on the type of items.

Interview schedules were used to collect data from informants. Both structured and unstructured interviews were used to get information concerning the disasters in schools, as well as efficiency and quality of the systems that had been put in place. The interview schedules are useful in probing for in-depth information. Board of Management chairpersons and principals/head teachers were subjected to interviews to get insights of the safety and disaster preparedness issues including knowledge and skills possessed, and training needs required.

Instruments validity (Frank, 1993; Sapsford, 1996) which is the quality attained to measure the degree to which they conform to knowledge or truth were ascertained through consultation with other researchers and experts in various departments in the Ministry of Education and university lecturers. Appropriate adjustments were made to achieve the expected results.

Reliability is the measure of the degree to which a research instrument yields same results after repeated trials (Cohen &Manion, 1994). Researchers used the Cronbach Alpha method in the SPSS computer programme to test the reliability of the instrument at 0.05 level of significance (Frankel and Wallen, 1993).

Data collected from the respondents was examined, edited, coded and fed into the computer Statistical Package for Social Scientists (SPSS). Data were analyzed qualitatively and quantitatively. Frequencies and percentages were computed and presented in tables, pie charts and bar charts. The findings of the study were presented using tables and charts whereas information from the interviews was reported using thematic approach.

The study ensured that participants’ right to privacy, protection from physical and psychological harm was maintained through the provision of clear and sufficient information about the study to the respondents to enable them make a decision on whether to participate in the study or not. Confidentiality of the information provided was assured. All protocol regarding permit acquisition and informing relevant authorities was done as required.

6. Findings

Majority of the surveyed schools were girls’ schools (38%) followed by boys’ schools (35%) and mixed schools (26%). Most of the schools sampled were noted to be having MoE Safety and Standard Manual for Schools (72.5%). Only about 27.5% of the schools did not have MoE Safety Standard Manual for Schools which were thought to be mandatory for all the schools in the country. Majority of the schools that lacked the safety manual were in the former Nyanza province (11) and Coast province (6). Western province had the most number of MoE Safety and Standard Manual for Schools (18) while Nyanza had the least (9).

It was noted that 92.4% of the surveyed schools did not possess Kenya Power and Lighting Company (KPLC) Certificate of completion as required by law. All schools in Western and Coast Provinces did not own KPLC certificates. This was noted to be dangerous to the learners owing to the dangers that electricity can pose in an institution. That could be the reason as to why fire breakout in schools was high in the country. Only a paltry of 7.6% had successfully fulfilled that requirement. This situation could easily compromise the safety of learners in the affected schools.

It was worrying to note that fire extinguishers in most of the schools that were surveyed had not been serviced since the time they were bought. Only 43% of the schools surveyed had their fire extinguishers serviced while 57% had not serviced them since they were installed. Majority of the schools that were noted not to comply with this requirement were located in the former Western (17) and Nyanza (12) provinces. Regarding the knowledge as to whether disasters happen in schools, majority of the respondents (96.2%) indicated that indeed disasters of various kinds happen in schools. Only a paltry 3.8% denied knowledge of disasters in schools. In the same vein, some respondents indicated that they did not know the causes of some disasters.

It was noted from the respondents that 23% of the surveyed schools were most severely affected by floods, 54% were most severely affected by fire and 17% were affected by famine and drought, 33% were mostly affected by strong wind, 9% were affected by inter-communal violence and 18% by school strikes. Lightning severely affected 25% of the schools. As such, fires ranked highest in terms of severity followed by strong wind.

Almost half of the respondents indicated that arson was the most common cause of fire followed by electric faults (38%). Most of the respondents, in particular, the community members said that arson was the main cause of fire in schools. They also pointed out clearly that electric fault was rampant in schools. Just like the community members involved in this research, students also saw electric fault and arson as major causes of fire in schools. However, it also came out clearly from students and the community
that the causes of fire were sometimes not known. To some extent, it was not very clear why the principals shied away from this response. They did not come out clearly to say what they knew about the causes of fire in their institutions.

When asked about the impact of disasters in schools, the respondents indicated that disasters mostly lead to:

i) Closure of school (10%)
ii) Injuries to individuals (43%)
iii) Death (66.6%)
iv) Sexual abuse and exploitation (33%)
v) Students transfers (55%)
vi) Disease outbreak (50%)
vii) Emotional trauma (31%),
viii) Infrastructure damage (38%) and
ix) Disruption of lessons (34%)

From this response it can be seen that the worst effect of disasters in schools is death.

In terms of safety and disaster preparedness, majority (91.7%) of the interviewed respondents indicated that they were aware of what to do in case a disaster strikes. Only a small fraction of (8.3%) was not aware of what to do in case of an emergency. Majority of the interviewed head teachers (72%) indicated that teachers knew what to do if a disaster occurred. However, it also came out clearly that quite a number (28%) were not aware of what to do in an event of a disaster striking their school. A half of the respondents thought that learners knew what to do while the remaining half answered to the contrary.

Majority (59%) of the community members were not aware of what to do in case of a disaster breakout in their midst. Only 41% were aware of what to do in case a disaster befell them.

Majority (56.9%) of the developed school strategic plans did not put into consideration issues related to safety and disaster preparedness. Only a small number (43%) of the surveyed schools indicated that they had incorporated safety and disaster preparedness into the school strategic plan.

The respondents were required to rate policies that their schools had put in place as a measure to prevent disaster in their schools. Of the Surveyed Schools, only 17% had excellent child protection policies, 6.2% had excellent safety policies, 22% had excellent health policies, while 17% had excellent sanitation and hygiene policies. Regarding training on safety and disaster prevention/handling, only slightly above a half (52.1%) of the surveyed respondents indicated that they had received training in disaster prevention/handling. It also came out that the kind of training was only basic fire-fighting skills.

It was noted with concern from the responses that majority (61%) of the respondents had not attended demonstrations on disaster management. Only a paltry 39% of the respondents had been exposed to demonstrations on disaster management.

Out of the respondents who indicated that they had received any training in disaster management, it came out that 72% had only attended demonstration sessions in disaster management, 16% had gone up to certificate level, 7% had attained diploma and only 2% had attained Bachelors and Masters degree in Disaster Management. Equally this trend was seen to be worrying owing to the frequency of disasters in schools and community as a whole. The most studied area in Disaster Management is Disaster Risk Reduction (80%), followed by Emergency and Disaster Response Evacuation (68%), while the least studied areas in Disaster management are Hazards, Vulnerability & Capacity Assessment (34%) and formulating School Community Preparedness plan (37%).

Even though drills are considered as key in disaster preparedness and management, only 18% of the respondents had attended drills in the last 12 months. None of the respondents in Western province had attended drills though it was still worrying that only 3 each from Eastern and Nyanza had participated in drills. For this category of fire drills, Coast province reported the highest attendance. Only 38.8% of the respondents reported to have attended any demonstration on Disaster Management. Again from the respondents' views, it was worrying to note that none of the respondents in Western Province had attended any demonstration in Disaster Management. Majority of the respondents who had attended demonstration on Disaster Management indicated that they had participated on how to deal with fire (11), 1 respondent participated in first aid, and 3 in prevention of disasters.

7. Conclusion

From the findings, it is clear that learning institutions were not sufficiently prepared to handle disasters or emergency situations as may occur from time to time. This premise is informed by the fact that the schools surveyed did not have contingency plans to mitigate disasters like floods, fire outbreak, and wind, among others. It is, therefore, incumbent upon the Central Government and County Governments throughout the forty seven (47) regions to urgently address disasters of various kinds in learning institutions throughout the country.

8. Recommendations

It is, therefore, recommended that a seven-pronged response plan which includes the following action points should be put in place by the Ministry of Education:

1) Policy
   Develop a coherent safety and disaster/emergency preparedness policy and implement it at national, county and sub-county levels. The policy should generate and encourage proactive leadership and prudent use of local resources in handling disaster related issues at grassroots levels.

2) Sensitization
   Carry out sensitization for all directorates in the Ministry and key education stakeholders on issues pertaining to Disaster and Emergency preparedness. This initiative will promote ownership of emergency programmes in both central and county governments.
3) Capacity building
Build the capacity of all levels of education sponsors, managers and administrators in all the 47 Counties. This initiative should be continuous and it should be able to empower all actors and facilitate rapid response to emergencies in rural areas.

4) Rapid Response Teams
Establish County-level rapid response teams/committees in all the 47 Counties to handle regional emergency situations.

5) Funding
Establish a County emergency fund to cater for disasters through rapid response teams mentioned in No. 4 above.

6) Networking
The Ministry and Schools should coordinate synergistic responses to emergency situations through coherent networking with international and national humanitarian organizations like UNOCHA, UNICEF, Save the Children, Red Cross, Fire Brigade Department, among others.

7) KPLC
The Kenya Power and Lighting Company should urgently survey the state of electrical wiring in schools and make appropriate recommendations. It should also ensure strict adherence to the law by all schools.

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