

Developing a Localised Approach to School Safety and Health Management: The Case of Mongu Schools of Western Zambia

by

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Abstract

This study proposes a localised approach to school safety and health management. The study proposes that individual schools be allowed to localise school safety and health management according to their local needs. To this effect, the study used comparative study research design which involved three (3) schools sampled from Mongu district of western Zambia. Using a qualitative approach, data was collected using interview schedules, focus group discussion and structured observation. Safety and health concerns for the three schools were identified and comparisons were done. Data collected was transcribed and analysed thematically as an on-going process as themes and sub themes emerged. The findings showed that the schools explored had a variety of safety and health concerns unique to those school environments. The study also deduced that safety and health concerns inherent at each of the schools needed local solutions if they were to be fully managed because some of them were influenced by socio-cultural aspects of the school environment. The study concluded that a localised approach to school safety and health was more responsive to the needs of an individual schools as opposed to a generic approach planned and prepared at national, provincial or district level. This is partly because a localised school safety approach deals with specific safety and health issues peculiar to a given particular school. To this effect, the study recommends that individual schools should be allowed to devise their own safety and health management to effectively respond to local needs.

Key words: Localisation, school, school safety and health

Background

Globally, the question of safety and health in schools and the child's right to receive quality education has been under the spotlight for some years. Thro (2006) and Mubita and Namafe (2016) contends that the opportunity to pursue formal education, particularly quality education, is meaningless unless the learner is able to pursue his or her educational rights in an environment that is both safe and secure. According to Christie, Butler and Potterton (2007:21) the purposes of schooling, which can be achieved only in a peaceful school environment, are: "to provide an environment where teaching and learning can take place; to prepare people for the world of work, nation-building and citizenship; to teach the values of society; and the development of the individual." Mubita (2021) also noted in his article on 'Understanding school safety and security: Conceptualisations and definitions' that even societal values may have influence on school safety and health.

School Safety and health is an integral and indispensable component of the teaching and learning process. The Kenyan Ministry of Education (2008) contends that no meaningful teaching and learning can take place in an environment that is unsafe and insecure to both learners and staff. It is, therefore, imperative that stakeholders in education foster safe and health school environments to facilitate increased learner enrolment, retention and completion in order to attain quality education.

As noted, safety and health play an important role in schools. Ensuring learner's safety and health has been part of the ethical framework for decades. Schools also have legal responsibilities for safety and it is an integral part of the educational framework in the Zambian Ministry of Education (Government of the Republic of Zambia, 1996).

School safety was given a major focus by the United Nations International Strategy on Disaster Reduction (UNISDR) when the 2006-2007 World Disaster Reduction Campaign was devoted to the theme '*Disaster Reduction Begins at School*'. This theme was chosen by UNISDR because (a) it was in line with priority 3 of the Hyogo Framework for Action 2005-2015: 'use knowledge, innovation and education to build a culture of safety and resilience at all levels and (b) schools are the best venues

for forging durable collective values; and therefore, suitable for building a culture of prevention and disaster resilience.'

The World Health Organisation (2002) and Mubita and Namafe (2016) explains that unsafe and unhealthy learning environments result into poor conditions of learning environments. WHO (2002) also notes that a safe and healthy learning physical environment is an essential component of a health promoting school. The Independent Project Trust (IPT, 1999) confirms this by stating that a secure school environment has a very low risk of physical, emotional and psychological injury to its occupants. IPT (1999) further argues that a safe school is therefore a healthy school.

The United States Department of Justice (2000) also notes that schools with serious security and health concerns are perceived as having compromised the learning environment and endanger learners and educators. Therefore, even a few incidences of insecurity in schools are unacceptable as they have the potential to negatively affect the learning atmosphere in schools (Mubita, 2021).

The Zambia Environmental Management Act (2011) also records that 'the right to clean, safe and healthy environment shall include the right of access to the various elements of the environment for recreational, educational, health, spiritual, cultural and economic purposes.' This statement also highlights the importance of a safe and a healthy environment for the betterment of education.

Meanwhile, schools have a primary duty to safeguard the staff and young people in their care while at the same time creating the 'risk aware, but not risk adverse' citizens of tomorrow. Pupils and staff are entitled to a safe and healthy school learning environment. If pupils and staff do not feel safe and health, they may not stay focused during classroom lessons and other school activities (Mubita, 2018).

In realising the importance of school safety and health, some governments in Africa and beyond have come up with intervention measures to the problem of safety and health in schools. Some governments have drawn guidelines for their schools to help manage safety and health issues. For example, the government of Kenya drew a safety manual for schools in Kenya through its Ministry of Education (Government of Kenya, 2008). A multi-hazard approach manual on School Safety in Bangladesh was also developed in 2010 under DIPECHO SOUTH ASIA-V agreement between Asian Disaster Preparedness Centre (ADPC) and Plan Bangladesh and Islamic Relief

Worldwide Bangladesh with technical inputs from Handicap International. In the United States of America (2008) a School Safety Manual was also developed by the Mississippi Department of Education's Division of School Safety as a guide for school resource officers, school safety officers, principals, superintendents and school board members on school safety management.

In Zambia, the Ministry of Education (Government of the Republic of Zambia, 1997) came up with guidelines for school buildings and infrastructure to help manage safety issues in schools with regard to infrastructure. The Ministry also initiated the School Health and Nutrition Programme (SHN) in 2003 to address the poor health and nutrition that was noticed among learners in Zambian schools. Moreover, the Ministry of Education's policy document, *Educating Our Future* (Government of the Republic of Zambia, 1996) endorses the role of the school as a health affirming and health promoting institution for all pupils, and through them, for the community from which the pupils come and for the families which they eventually establish. The Ministry also recognises that good pupil, community and societal health are dependent on a healthy and safe environment. However, it is not clearly stated how this individual schools could go about in managing safety and health in the local context.

Statement of the Problem

From the foregoing examples of school safety and health management initiatives done by governments and international agencies, it is clear that school safety and health planning was done at national, provincial and district levels, then handed over to individual schools to implement. Despite clear commitments by governments and international agencies to the management of safety and health in schools as noted above, safety and health planning for schools done at national, provincial and district levels is, arguably, proving to be elusive for many individual schools. This is because those safety and health initiatives handed down to schools from national, provincial or district levels tend to be too generalized and, therefore, not responsive to the local needs of individual schools. In view of this, this study proposes a localised approach to school safety and health management. To this effect, this study proposes a locally based, planned and practiced interventions to be used in school safety and health management. Such a localised approach to school safety and health management

responds to the Zambian Ministry of Education's agenda of school improvement through community participation (Government of Republic of Zambia, 1996).

Dimensions of the Problem

According to Mubita (2018), a situation where a school lacks a localised approach to safety and health management that speaks to its specific situation creates problems for the following reasons:

- the school may lack appropriate information, instruction, training and supervision to staff, pupils and other proximate stakeholders in relation to safety and health of the school.
- the school may lack ownership of safety and health management programmes because the planning was done 'somewhere'.
- the school may lack adequate resources, information, training and advice to enable administrators and other stakeholders of Health and Safety duties to fulfil their roles.
- local skills, beliefs and values in school safety and health management may not be reflected in a generalised manual. This may reduce relevance and acceptability of the approach

Aim

The study aimed at proposing a localised approach to school safety and health management.

Objectives

The sought to address the following objectives;

- (a) to compare and contrast safety and health hazards inherent in selected schools of Mongu district of western Zambia
- (b) to propose a procedure that schools could follow in managing localised approach to school safety and health management

Significance of the Study

This research could assist in defining local problems persistent in a particular school environment and what the most effective measures for securing a school and making it a safer learning environment might be. A safe and healthy school environment could

lead to a more conducive and positive learning environment for pupils overall and could indirectly assist in better education and pass rate for all learners.

This study could assist and provide the Ministry of Education, parents, teachers and various key school stakeholders with the relevant local information to make the school environment a safer and healthy place. This study may enable schools to:

- i. share local skills, values, beliefs and attitudes towards safety and health planning and management for the school
- ii. interpret the government's education policy on community participation in school activities.
- iii. share local knowledge in school safety and health planning and management
- iv. prepare stakeholders for and participate in local safety and health planning and management.
- v. improve the safety and health environment in school.
- vi. increase health and environmental awareness in school and local community.
- vii. detect areas that need improvement in the school's safety, health and environmental health programme, if any.

Description of the Study Area

The sampled schools were located in Mongu district of western Zambia. The area covering the schools is flat and sandy, with the dry land generally not more than 50 metres higher than the floodplain. The estimate terrain elevation above sea level is 1023 metres. By longitudinal and latitudinal extent, the study area is located on Latitude 15°22'59.99" and Longitude 23°10'59.99" (Mubita, 2018).

Three eco-regions are represented in the study area are: The floodplain which comprises Zambebian flooded grasslands; the higher dry ground around Sefula which is a mosaic of Central Zambebian Miombo woodlands; and *Cryptosepalum* dry forests. To the east, the soil is very sandy and there are many pans which dry out in the dry season (Mubita, 2018). Figure 1 shows a map of the study area.

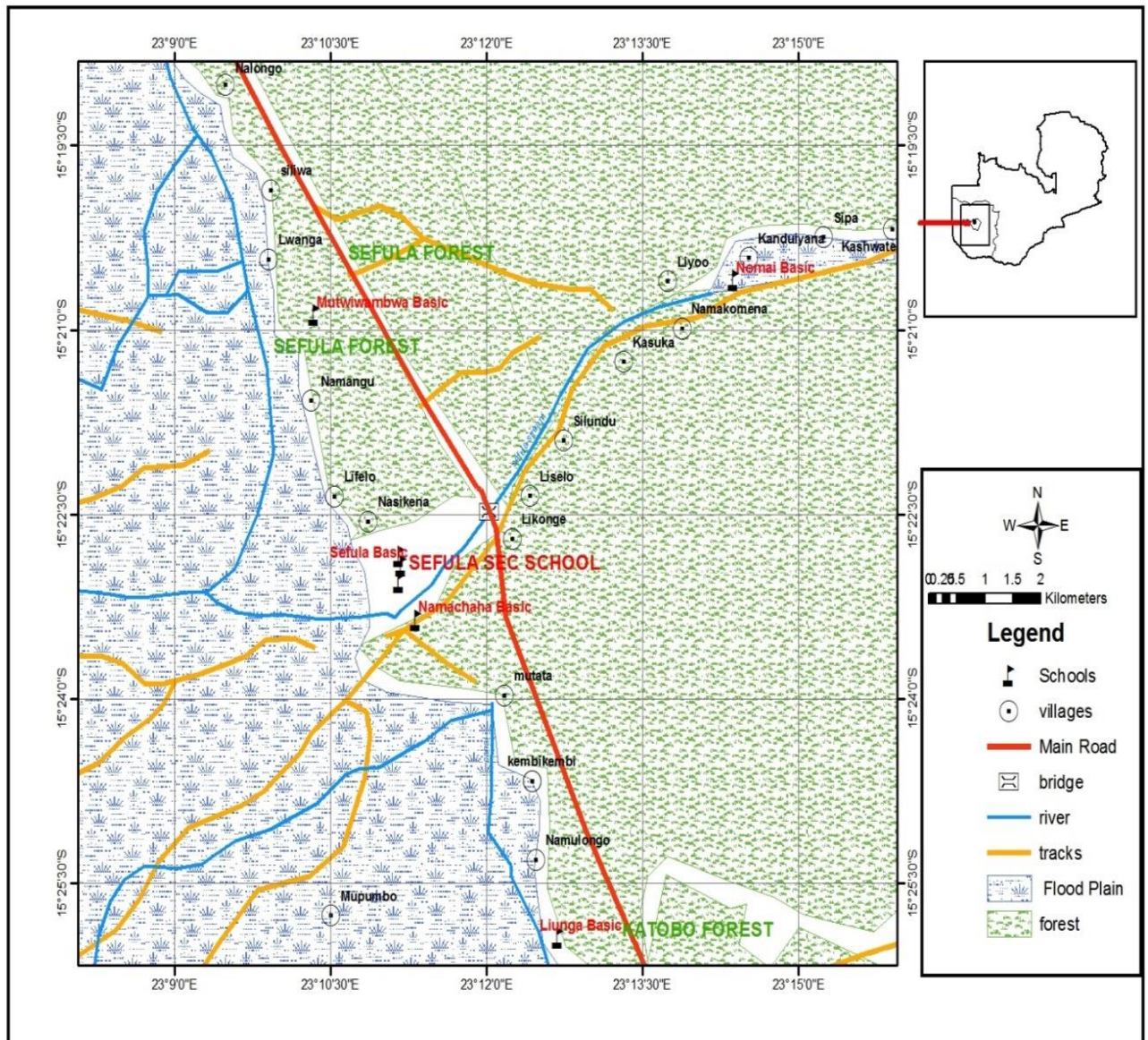


Figure 1: Map of study area

(Source: Digitised from Zambia source Map, Mubita, 2018)

(a) Climate

The study area has annual average rainfall of about 945mm falling in the rain season from late October to April (Zambia Meteorological Department, 2021). According to Zambia Meteorological Department (2019), it is hot from September to December, with a mean maximum temperature of about 35.4 degrees Celsius and mean minimum temperatures of about 10.3 to 29 degrees Celsius in the cool dry season. In short, being located in a Savannah region, it has hot wet summers and cool dry winters.

Moreover, temperatures around are regulated by seasonal flooding between January and April.

(i) Average Minimum and Maximum Temperature in year

The average temperatures are about 20 degrees Celsius. Average monthly temperatures seem to vary by 9.2 degrees Celsius. In winter, temperatures reach 23.4 degrees Celsius on average, falling to 10.5 degrees Celsius overnight. During summer, average high temperatures are around 26.1 degrees Celsius and average low temperatures are 17.1 degrees Celsius. In spring time, temperatures rise, reaching 29.3 degrees Celsius generally in the afternoon with overnight lows of 17.1 degrees Celsius (Zambia Meteorological Department, 2021).

(ii) Average Monthly rainfall in a Year

According to the Zambia Meteorological Department (2021) rainfall varies over a range of 500mm to 1400mm per year in Mongu area. The distinction between rainy and dry season is marked with no rain in June, July and August. Heavy rains are normally received in the months of December, January and February. This usually results in some floods in the nearby flood plain and water stagnation in nearby places. The rains are mainly convectional in nature. They occur in the afternoon, accompanied by thunder and lightning. The month of December receives the highest amount of rainfall in Sefula. This is about 800mm. The lowest amount of precipitation is received in the months of June and July (almost zero). The highest rainfall totals occur in summer where the strong heat from the Sun creates significant vertical uplift of air, and the formation of prolonged heavy showers and frequent thunderstorms.

(iii) Mean Monthly Relative Humidity

According to the Zambia Meteorological Department (2021), relative humidity typically varies from 28% (dry) to 100% (very humid) over the course of the year in Sefula. It rarely drops to below 19% (dry) and reaches as high as high as 100% (very humid). The air is driest around September at which time the relative humidity drops 35% (comfortable). It is most humid around the months of January and February, reaching 80% (very humid). The big differences in relative humidity are notable in September and January above because relative humidity depends upon the air temperature and the amount of water vapour actually present in the air. As cold air cannot hold as much water vapour as warm air, the cold air gets easily saturated than warm air. That is why

relative humidity is found to be more in the month of December. Similarly, if the air temperature increases, relative humidity decreases (for the same amount of moisture content) as the air becomes more unsaturated. That is why the month of September, where the temperature is high, has a low relative humidity.

(iv) Average Wind Speed in a Year

According to the Zambia Meteorological Department (2021) over the course of the year, typical wind speed varies from 0 metres per second to 7 metres per second (calm to moderate breeze), rarely exceeding 9 metres per second (fresh breeze). The highest average wind speed of 3 metres per second (light breeze) occurs around October, at which time the average daily maximum wind speed is 7 metres per second (moderate breeze). Prevailing winds in the dry season are generally moderate but occasionally more severe and may bring cool dust-laden air. Whirlwinds are very common but not usually destructive. In the rain season, winds are localised with thunderstorms and may be destructive but usually confined to small areas causing damage such as blowing roofs off buildings.

Literature Review

The Concept of Localization

According to Cheng (2003:3) localization refers to ‘the transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts’. Some characteristics and examples of localization as noted by Cheng (2003) include factors like local networking; adaptation of external technological, economic, social, political, cultural, and learning initiatives to local communities. Localization also includes decentralization to the community or site level; development of indigenous culture; meeting community needs and expectations; local involvement, and community support; local relevance and legitimacy; and concern for community based needs and characteristics and social norms and ethos. Localization has also been defined by Taylor as “...freedom for schools or local education authorities to adapt to local conditions,” (2004; 2), and “...relating the content of the curriculum and the processes of teaching and learning to the local environment” (2004; 3). This flexibility in adapting the program of education for students to local conditions,

often away from the capital city and urban population centres is a direct response to traditional curriculum design (Taylor, 2004). The idea of relevance is critical to the understanding of localization and the policy planners who have been active promoters. Taking into account the “...cultural and socio-economic realities” (United Nations Educational, Scientific and Cultural Organization, 2002; 31) of local populations when designing educational content is critical in engaging students in the learning process. A crucial failing of educational systems, worldwide has been their lack of relevance to the lives of learners. This lack of relevance weakens the mentioned connection and bond between communities, learners, and schools; and thus damages educational outcomes through decreased student, community, and teacher engagement in the learning process. In the context of this study, principles of localisation are used in developing a school safety and health manual, a factor that is lacking most school manuals developed at national, provincial or district levels.

Localisation in Education

The concept of localization in education is meant to maximize the education relevance to local development and bring in community support and resources, local partnership and collaboration in learning, teaching and research (Cheng, 2003). Some examples for practice of localization include school-based management, community involvement in education; privatization in education; public-institutional collaboration; assurance of institutional accountability; implementation of institutional autonomy, school-based management and community-based curriculum (Wang, 2000; Altbach, 1999; James, 1994).

In the context of this study, localization of school safety and health management maximizes relevance of planned activities at school level through proximate stakeholder involvement in planning and management. This is also noted by Mubita (2018) who stated school safety and health management plan developed collaboratively with proximate school stakeholders for an individual school is more responsive to the local safety and health needs of that school than a generic manual planned at national, provincial or district level and merely handed over to schools for implementation. This is because schools are different settings and therefore have different environmental challenges.

Methodology

This study used comparative research design. Comparative research essentially compares groups in an attempt to draw a conclusion about them. A comparative study is a kind of method that analyses phenomena and then put them together to find the points of differentiation and similarity (Shahrokh and Miri, 2019). Researchers attempt to identify and analyse similarities and differences between groups, and these studies are most often cross-national, comparing two separate people groups. The study used comparative design because there was need to establish differences and similarities in safety and health hazards inherent in three different schools A, B and C sampled from Mongu district of western Zambia.

Convenient sampling was used to sample schools and participants were selected using homogeneous purposive sampling procedures. Using a qualitative approach, data was collected using interview schedules, focus group discussion and structured observation. Data collected was transcribed and analysed thematically as an on-going process as themes and sub themes emerged.

Results and Discussion

(a) Safety and health hazards identified in schools

Safety and health hazards were identified in three different schools sampled in this study. This was meant to identify similarities and differences in hazards inherent in schools. Table 1 presents hazards identified in sampled schools.

Table 1: Safety and health hazards identified in schools

	School A Hazards	School B Hazards	School C Hazards
Stream X	<ul style="list-style-type: none"> ✓ floods ✓ high temperatures ✓ mosquito bites ✓ community hostility ✓ theft 	<ul style="list-style-type: none"> ✓ low temperatures ✓ drought ✓ strong winds 	<ul style="list-style-type: none"> ✓ air pollution ✓ waste ✓ pollution ✓ automobiles

Stream Y	✓ theft	✓ theft	✓ theft
	✓ bullying	✓ bullying	✓ bullying
	✓ violence	✓ violence	✓ violence
	✓ poor sanitation	✓ poor	✓ poor
	✓ fire	sanitation, ✓ fire	sanitation ✓ fire

From the table, it is evident that schools have different types of safety and health hazards. However, some health and safety hazards found in one school may not be the same as those found in another school. More so, even if the hazards identified in schools may be similar, the extent of exposure and risk levels may differ. For example, stream Y in table 1 shows that the three schools had similar hazards. Even so, this study found out that the extent of risk levels may differ from one school to the other even if the hazards are similar.

As presented by table 1, different schools had different safety and health concerns. This is because they had unique local geographical features that could affect their approach to workplace safety and health, and these features should be taken into account by safety and health professionals and policy makers when designing safety and health programmes and services.

Therefore, this study proposes a localised approach to school safety and health management as a tailored intervention guide or toolkit to help mitigate safety and health challenges faced at a specific school. This in tandem with Mubita (2018) in the article titled, ‘Safety and Health Issues at Sefula Secondary School of Western Zambia,’ who stated that school health and safety interventions should be tailored to a specific school environment. This entails that no generalisations are required for different workplaces. This means that each of the schools A, B and C should plan and manage their safety and health concerns from the local context, using local materials and involving internal stakeholders. This is in tandem with Mubita’s (2021) argument in his article titled, ‘Understanding School Safety and Security: Conceptualization and Definitions’ where he noted that depending on social settings, different schools face

different environmental challenges and hence, different safety and health concerns. This assertion is supported by Cheng (2003) who argue that, to different local communities, the existing social context, cultural assets and historical backgrounds may be completely different and therefore the knowledge and wisdom they have found useful and valid and accumulated in the past years may be different. Therefore, it is not a surprise that the knowledge systems of local communities are different from each other. This is in correlation with the U.S Department of Health and Human Services (2010: 2) which states that:

Work place settings vary according to size, sector, design, location, work processes, workplace culture and resources. In addition, workers or people found in the workplace differ in terms of age, gender, training, education, cultural background, health and safety practices and access to preventive health care. This translates to great diversity in the safety and health risks for each workplace and therefore need for tailored interventions

The foregoing argument is also supported by MacEachen and Breslin of the Institute for Work and Health (2013) who argue that occupational safety and health programmes differ from one workplace to the other. Mubita (2021) also supported this assertion in his article on 'Understanding School Safety and Security: Conceptualisation and definitions'. In this article, it was noted that differences in the geographical settings for schools meant that schools had different environmental challenges and therefore needed a localised approach to planning. Furlong *et. al.* (2016) also supported this assertion as follows:

I have always suggested that each school should develop its own safety and health manual that reflects school and community interests, values, and needs. This means basing the school safety plan on actual data for the school, not state, regional or national trends

(b) Proposed localised approach for school safety and health

As opposed to centralised approach to school safety and health management, the localised approach for schools was developed from the safety and health concerns identified by the researcher and participants in this study. This approach proposed a procedure to follow when applying a localised approach to school safety and

management. This author followed the following process when developing a localised school safety and health management approach:

- Firstly, the school profile was developed which included a description of the school and the community's historical and geographical accounts
- Secondly, hazards were identified by the researcher and the participants from the biophysical, social, economic as well the political environment of the school.
- Thirdly, participants and the researcher assessed risks or threats for hazards identified. Participants also suggested solutions to help in management of hazards identified in the school environment.
- Finally, a localised approach was devised arising from hazards identified in the school environment and solutions suggested by participants, of course with the researcher's input. The proposed localised approach was subjected to critical evaluation by a sampled group of participants. Figure 1 summarises the steps for the proposed school safety and health management approach followed in this study.

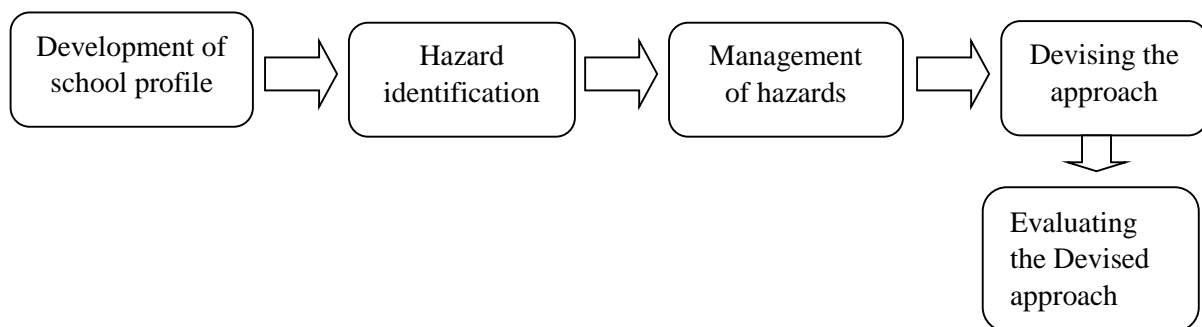


Figure 1: Proposed School Safety and Health Management Process

(Source: Adapted from Mubita, 2018)

Conclusion

The study concluded that different schools have different safety and health concerns. This is due to differences in geographical settings. Therefore, when managing school health and safety, schools could benefit more from a localised approach because it is more responsive to the needs of that individual school as opposed to a generic planning trickling from national, provincial or district level. This is because a localised

school safety approach deals with specific safety and health issues inherent in a given school.

Recommendations

This study recommends that school safety and health planning and management should be done by proximate stakeholders of individual schools by as opposed to receiving a plan from national, provincial or district levels. School safety and health should be locally planned by such stakeholders and locally practised by them in order to respond adequately to local school needs. This recommendation is based on the research finding that localised safety and health planning and management proves to be more responsive to the local needs of an individual school. This study recommends the following learnable principles or steps to follow to achieve a localised approach to school safety and health management:

(a) develop a school profile: schools need to develop a school profile which should include a description of the school and the community covering the biophysical, social, economic as well as the political environment. All these dimensions of the environment need to be used in hazard identification.

(b) identify hazards: After developing and analysing the school profile, hazard identification is carried out in the school environment. The process of hazard identification should involve the proximate stakeholders of the school as opposed to outlying stakeholders located far from the school (e.g. those at district, provincial or national levels). Outlying stakeholders may, however, be consulted for ideas and input. These may include pupils, teachers, auxiliary staff, parents, education standard officers and health personnel. Depending on the location of the school, other stakeholders can be also involved. The process of hazard identification could be led by the school administration or any person appointed by the school. Identification of hazards should involve the following steps:

- Walk around the school to take note of hazards observable
- Find out from pupils, teachers, auxiliary staff, parents, Education Standard Officers and health personnel about potential sources of danger in the school environment.

- Read through school documents such as disciplinary minute book, log book, school rules and regulations and any other documents that can help in identifying potential sources of danger in school environment.

(c) manage the identified hazards: After identifying hazards in school environment, the proximate stakeholders can assess the risks or threats for each of the hazards identified. This can be done in a reflective sessions or focus group discussion. This process should also involve identification of people in school environment that may be at risk or threat due to safety and health concerns identified. The proximate stakeholders can come up with solutions to safety and health concerns (hazards) identified in their school environment.

(d) develop a school safety and health planning document: The school safety and health planning document is then devised. This safety and health document may include the following components as shown:

- Safety and health concerns (hazards) raised by stakeholders
- Risks or threats that could be caused by safety and health concerns raised by stakeholders
- Stakeholders at risk of the safety and health concerns identified in school environment
- Proposed solutions to safety and health concerns in school environment
- The stakeholders could also propose some roles or duties that each one could perform in order to keep their school safe and health.

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