AN INVESTIGATION OF SCHOOL PHYSICAL ENVIRONMENT SAFETY IN THE GREATER TAUNG AREA

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Declaration

I hereby declare that:

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is my own work, that all the resources used or quoted have been indicated and acknowledged by means of complete references, and that this dissertation was not previously submitted by me for a degree at any other University.

T. S. Morebodi
Author
2006

DEDICATION

This research has been conducted in memory of my late brothers, Sekgabo and Sethibe Morebodi, and a special dedication to my wife Pulane Morebodi and our two children, Sekao and Gofaone. To my parents and siblings with profound love.

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SUMMARY

This research aimed to investigate the safety of school physical environments in the Greater Taung Project Area Office of the North West Province. The concept of school physical environment safety was approached from an ecological perspective of the school as a social environment. Therefore school safety was determined as function of the school community's interaction with the school environment, which comprises the physical environment and the psychosocial environment.

The school's physical environment comprises buildings and school grounds and its safety status is made up of the following elements school buildings – grounds and safety systems and procedures.

Creating a safe and secure school physical environment was found to necessitate maintenance, which should allow for emergencies, prevention, routine and prediction maintenance as well as surveillance which entails monitoring the school's environment closely and is made up of natural surveillance, access control and territoriality. Creating a safe and secure school physical environment necessitates forming engaging on a strategic safety planning process wherein school stakeholders jointly determine the safety vision of the school.

The empirical study found that schools' physical environments needed more attention that they were receiving currently. There was a need for formalised safety planning and implementation processes. For instance, a need was found for functional school safety committees and school safety policies which would entail such aspects as safety systems and procedures in terms of maintenance and surveillance procedures and plans.

There was also a dire need for the application of equity and redress process with regard to rural school, which were found to be mostly derelict and in need of resources to ensure their physical environment safety.

OPSOMMING

Die doel van die navorsing was om die veiligheid van skole se fisiese omgewings binne die grense van die Groter Taung Projekareakantoor in die Noordwes Provinsie te ondersoek. Die konsep van 'n skool se fisiese omgewingsveiligheid is vanuit 'n ekologiese perspektief met die skool as sosiale omgewing benader. 'n Skool se veiligheidsituasie is omskryf as die resultaat van die skoolgemeenskap se interaksie met die skoolomgewing wat beide die fisiese omgewing en die psigososiale omgewing behels.

Die skool se fisiese omgewing behels die skoolgeboue en skoolterrein en die veiligheidstatus word bepaal deur die toestand van die gebou en skoolterrein en die bestaande veiligheidsstelsels en prosedures.

Om 'n veilige fisiese skoolomgewing te skep, vereis 'n deeglike onderhoudsplan wat voorsiening maak vir noodgevalle, voorkoming, roetinetake en voorspellende onderhoud. Die onderhoudsplan sluit ook in voortdurende toesighouding waardeur die skoolterrein en -omgewing gemonitor en ook toegangsbeheer toegepas word. Om 'n veilige fisiese skoolomgewing te skep, vereis 'n strategiese beplanningsproses waartydens die skool se aandeelhouers gesamentlik oor 'n veiligheidsvisie vir die skool moet besluit.

Met die empiriese ondersoek is daar bevind dat skole se fisiese omgewings tans afgeskeep word en dat dit meer aandag moet geniet. Daar is ook 'n behoefte aan 'n formele veiligheidsplan en effektiewe implementeringsprosesse. So is byvoorbeeld 'n behoefte aan 'n skoolveiligheidsbeleid en funksionele skoolveiligheidskomitees geïdentifiseer wat aandag aan aspekte soos veiligheidsisteme en -prosedures in terme van onderhoud en toesighouding moet gee.

Daar is ook 'n dringende behoefte vir die toepassing van die gelykstelling- en regstellende aksie prosesse omdat daar gevind is dat die landelike skole meestal vervalle is en nie oor die nodige geriewe beskik om 'n veilige fisiese omgewing te skep nie.

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

ANNEXURES

CHAPTER 1

ORIENTATION

1.1 INTRODUCTION

Effective education delivery necessitates schools to have healthy environments. McKenzie and Richmond (1998:4) define a healthy school environment as the physical, emotional and social climate of the school and is designed to provide a safe physical plant as well as a healthy and supportive environment that fosters learning. In this regard, Henderson and Rowe (1998:73) asserts that a healthy school environment supports learning and contributes to learners' health and learning by:

- minimising distractions;
- minimising physical, psychological and social hazards;
- creating a climate in which learners and staff can do their best work;
- expecting that all learners can succeed; and lastly,
- implementing supportive policies.

Clearly, effective teaching and learning can only take place in a safe and secure environment, which is a component of a healthy school environment. A safe school is therefore a healthy school in that it is physically and psychologically safe. Squelch (2001:138) defines a safe school as one that is free from danger and possible harm, where non-teaching staff, educators and learners can work, teach and learn without fear, intimidation, harassment, humiliation and violence.

This exposition highlights the fact that a safe school promotes school health. The focus of this research is on the school physical environment as a component of school safety.

According to Henderson and Rowe (1998:99) school environments consist of physical aspects such as:

- school grounds, consisting of shrubs, trees and grounds, drainage, fencing and gates and access to the school for transportation and emergency purposes;

- buildings, which include stairwells, elevators and hallways, bathrooms, closets, offices, health and guidance space, water supply, auditorium and theatre, gymnasium and locker rooms, cafeteria, library and classrooms, laboratories and shops; and

- other aspects like materials used in floors, walls and ceilings, equipment, signage, safety provisions, handicapped access, maintenance, acoustics, waste disposal and heating, ventilation and air conditioning.

It is clear that promoting school safety is a function of two factors namely, the safety of the physical school environment, including school grounds and buildings as well as measures taken to promote safety. The safety of the school environment according to Schiffbauer (2000:73) includes making sure that buildings are safe for use. Attention is endowed to hallways and stairways, stoeps and verandas where learners walk to and from classes and other areas at the school, unused classrooms and outbuildings used for storage, electrical fittings and other service amenities, like plumbing pipes, fencing, lighting at night, and sports fields (Stephens, 1995; Vienings, Commys & Geyer, 2001; Squelch, 2001; WCED, 2003).

Actions promoting school safety include establishing the School Safety Committee (SSC), designing and producing the School Safety Policy (SSP), implementing the SSP and monitoring the implementation thereof (Stephens, 1995:17; Vienings *et al.*, 2001; IPT, 1999). This entails conducting a school safety assessment by giving among others, attention to security and safety-related policies, school crime reports for the previous year(s), known safety and security concerns and disciplinary files.

The exposition above raises the question of how safe schools are in the Greater Taung Project Area Office of the North West Province. The following questions are thus the focus of this research:

- What is the essence of physical school environment safety?
- How safe are schools' physical environments in the Greater Taung Area Project Office of the North West Province?
- How can safe school physical environments be promoted at schools?

1.2 RESEARCH AIMS

This research aims, on the basis of the problem statement to:

- examine the essence of school physical environment safety;
- investigate how safe schools' physical environments in the Greater Taung Area Project Office of the North West Province; and
- determine how safe school physical environments can be promoted at schools.

1.3 RESEARCH METHOD

1.3.1 Literature study

A literature study of school physical environment safety was conducted so as to establish its essence. A study of school safety measures were undertaken to determine how schools can ensure the safety of their physical environments. The following key words were used to conduct an electronic search (DIALOG-search) for relevant literature data:

safe schools; safety policies; school safety committees; school safety planning, crime and violence prevention in schools; health promotion in schools; school safety and security, school physical environment.

1.3.2 Empirical research

1.3.2.1 *Aim*

The empirical study was conducted to investigate how safe schools' physical environments are in the Greater Taung Area Project Office in the North West Province. This was done by examining school safety features as well as getting opinions of school safety officers regarding physical environment safety promotion in their schools.

1.3.2.2 *Research instrument*

A two-aspect qualitative research strategy was used to investigate how safe school physical environments are in the Greater Taung Area Project Office. The purpose of using qualitative research is to gather information so as to explore, describe, explain, and interpret data about the phenomenon to be studied (Leedy & Ormord, 2005:96). The first aspect of the research consisted of school environments' *in loco* observations and photography as a technique of data collection. Hancock, (2002) asserts in this regard that photographs are a good way of collecting observable data of phenomena which can be captured in a single or series of shots (Hancock, 2002). For this purpose, physical environment safety features were identified beforehand so as to ensure that focus was on relevant aspects of school's physical environment safety.

The second aspect of the research comprised informal conversational interviews (annexure B) with school safety coordinators to determine their school physical environment safety measures. This assisted in understanding and explaining by triangulation the data collected.

1.3.2.3 *Population and sampling*

The population for this research comprised schools and school safety coordinators in the Greater Taung Area Project Office in the North West Province. A convenient sample of schools (n=20) and school safety coordinators (SSCs) (n=20) was initially decided upon for data collection. Focus

was on the schools' physical environments and the safety measures employed at these schools. However, due to data saturation and informational considerations (Greef, 2002:305; Merriam, 1998:65). at 12 schools, it was decided that enough information had been collected and no new and different data would be forthcoming. Therefore the final sample comprise schools (n = 12) and school safety coordinator (n = 12).

1.3.2.4 *Pilot study*

Observations using photographs were piloted in one school to determine suitability of the approach and establish validity of the approach. The outcomes thereof served as an indicator of the reliability and validity of the empirical research instruments. Peer and content discussion of the instrument further served to validate the instruments used.

1.3.2.5 *Ethical and procedural aspects*

Firstly, a digital camera was used to take photographs of school environmental features related to safety. The photographs were analysed and sorted in terms of relevant categories that had been identified from the literature study.

Secondly, a schedule of discussion points was compiled for the informal conversational interviews. The focus was related to school physical environment safety dimensions identified through the literature study.

The whole process was completed over a period of three months. The goodwill of school safety coordinators was sought so as to establish a rapport for purpose of informal interviews. They were assured of the purpose of the research and the anonymity of their participation was guaranteed.

Content analysis was used to analyse data collected. This data was compiled into broad categories relating to school physical environment safety so that similar and recurrent patterns could be identified for analysis and interpretation purposes (Leedy & Ormrod, 2005:142).

1.4. CHAPTER DIVISION

Chapter 1: Orientation presents the overall study direction in terms of the research problem and research design.

Chapter 2: The essence of school physical environment safety presents the literature study in terms of what school physical environment safety entails.

Chapter 3: Empirical research design outlines a detailed exposition of the empirical research in terms of method and procedure.

Chapter 4: Data analysis and interpretation present the analysis of data collected through the research method as well as the interpretation thereof.

Chapter 5: Summary, conclusions and recommendations outlines the entire study summary in terms of findings and presents the recommendations, limitations and recommendations for further research.

1.5 STUDY FEASIBILITY

School safety studies are normally focused on issues around crime and violence. While these are important and critical issues, this study focuses on the physical environment of schools on the premise, as alluded to earlier, that this is the starting point for creating a school environment that provides overall safety. Put differently, ensuring the physical environment safety will facilitate the promotion of the psychosocial safety of the school.

From the literature search conducted, it is clear that there is very little literature on the school's physical environment safety. Consequently, it was expected that there would be more foreign literature than South African. This would affect the volume of the text and contextual relevance to a degree. The research therefore

expected to establish variables relating to the study of the school's physical environment mostly from foreign literature and relate it to local circumstances.

1.6 SUMMARY

This chapter outlined the general orientation of the study. The problem statement, research aim, objectives and research design were presented. The next chapter presents the literature study.

CHAPTER 2

THE ESSENCE OF SCHOOL PHYSICAL ENVIRONMENT SAFETY

2.1 INTRODUCTION

Safety in schools should be a priority so that effective teaching and learning can take place. For educators to teach and children to learn, there must be a safe and inviting educational environment (Riley, undated). It is important to study the extent to which schools are safe and also to ensure that safety is well managed. Schools are supposed to become educational environments that are closed to intruders, kidnappings and other threats which involve any kind of danger to staff and learners.

This chapter explores the phenomenon of school safety by looking broadly at the meaning of school safety in terms of the school's physical environment and how the safety thereof can be managed. The essence of the school's physical environment presents the theoretical orientation for the concept of the school physical environment safety.

2.2 THE RATIONALE FOR A FOCUS ON SCHOOL PHYSICAL ENVIRONMENT SAFETY

As highlighted in the previous chapter, effective education delivery necessitates schools to have healthy environments. A healthy school environment comprises both the physical and social climate of the school (McKenzie & Richmond, 1998:4). Henderson and Howe (1998:73) describes a healthy school environment as one that supports learning and contributes to learners' health by minimising distractions, minimising physical, psychological and social hazards, creating a climate in which learners and staff can do their best work expecting that all learners can succeed and lastly, implementing supportive policies.

Clearly from this exposition, a healthy school environment presents safety in a holistic manner. This means in a manner that ensures the safety of persons as

well as the safety of the school's functional resources like buildings and grounds.

Although much of the reported safety threatening incidents at schools relate to dangers and threats to staff and learners posed by outsiders who intrude schools, it is equally crucial to consider the safety of schools as presented by their physical environments. For instance, in their research, Donson and Wyngaard (2003) reported 493 injuries at primary schools in Atlantis, Bishop Lavis, Khayelitsha and Strand. This is a very serious situation since, of these injuries, 50.8% were intentional, with the highest number of injured learners (35.6%) being between 11 and 13 years and most injuries occurring at playgrounds during break time. In one incident, an 11-year old learner died when a wall of a prefabricated classroom under construction collapsed, pinning him underneath and also injuring four girls (News24.com, 2004).

Eliasov and Frank (2002) report that among other incidents, theft of property, fighting, physical violence and vandalism, bullying and intimidation, gangsterism and rape were a major problem in schools they surveyed. A survey of 240 responses conducted by Swart and Stevens (2002:5) reveals incidents of injuries which are mostly associated with physical fighting or assault, with 19% involving the use of an instrument or weapon. Statistics show that from the injuries reported, most of them were head, face and ear/eyes/nose injuries.

What is common about the incidents related above is that they all occurred at schools, that is, inside the school environment. This research argues that most of these incidents could have been avoided if the safety of the school's physical environment received priority. This is because, as the Children's Safety Network (1997:5) remarks:

> ... patterns and causes of school injuries are poorly understood, and resources to help public health and education professionals address injuries are scarce. Schools usually respond to injuries on an *ad hoc* basis, that is, after the damage is done. Injury events are not

> consistently tracked, and it is often difficult to identify who has responsibility for preventing a recurrence.
>
> ... no comprehensive guidelines are available for school administrators and other health and education professionals interested in addressing the problem of injuries in the school environment. Thus, schools need to begin by assessing the causes of injuries within individual schools in order to target the leading causes of injury and to prevent them. A multifaceted intervention, including modifications to school equipment and facilities, development of supervision and safety policies, and education of learners, educator, parents, and administrators about injury prevention at school, provides the most comprehensive approach. State maternal and child health practitioners and other injury control experts can provide information and technical assistance to schools interested in developing and evaluating the impact of school-based injury prevention activities.

In research on the safety of schools' physical environments, Xaba (2006) presents evidence of some safety threatening features of schools' environments. As can be seen from the top photo, the school gate is unlocked, rests on rocks and looks rickety. The bottom photo indicates long unkempt grass, a dilapidated tennis court overgrowm with weeds. This is a possible hiding place for learners who bunk classes and is also a possible bullying areas as it is not under any surveillance.

(Xaba, 2006)

This research therefore takes a position that asserts that the school's physical environment is one critical aspect of school safety and presents a basis for programmes dealing with, firstly, the school's psychosocial safety and lastly, safety of the whole school. This stance is premised on the essence of the school physical environment safety as derived from the theoretical orientation of school safety.

2.3 THE ESSENCE OF SCHOOL PHYSICAL ENVIRONMENT SAFETY

2.3.1 Theoretical orientation

The school physical environment safety in this research is presented within the context of the safety of the whole school. In this sense, school safety is therefore the sum collection of the school's physical and psychosocial environment.

In essence, this means all aspects of the school climate. The school climate is described as an environment that is orderly and purposeful, that displays a business-like atmosphere and which is free from the threat of physical (and psychosocial) harm and that is not oppressive and is conducive to teaching and learning (cf. Kirk & Jones, 2004:5).

The school climate is thus a crucial aspect of school safety. Kirk and Ward (1998:2) espouse the following variables as positively correlated to the school climate:

- *The school ecology*

  The school ecology relates to the physical environment, including building condition and cleanliness. It can be averred that the school's ecology focuses on understanding people in the context of their social environment (Monroe, 2004:145). In this regard, Monroe (2004:145) posits that the ecological perspective focuses on how people interact with one another and their environment. To this end, Hanson, Vardon and Lloyd (undated:18) argue that safety is a psychological,

environmental and sociological phenomenon and that safety is an ecological concept determined by the relationship between individuals and their physical and social environment.

- *School milieu*

  The school milieu relates to educators' education and morale, staff stability and learners' morale and academic optimism.

- *The social system*

  The social system relates to the instructional programme, including high allocated and engaged time and availability of advanced courses, principal-educator rapport and communication, participation of staff in decision-making, the principal's activity level as instructional leader, positive educator-learner relationships, learner involvement in decision-making, positive educator-educator relationships, collegiality, learner involvement in school activities, positive parent/community-school relationships and parent involvement, especially parent-initiated involvement.

- *School culture*

  The school culture relates to educator commitment to improve learner achievement, learner perceptions that educators care about them, learner-peer group values, emphasis on cooperation, competition between groups and not individuals, academic emphasis throughout the school, expect academic success from all in the school, recognition of learner achievement, orderly and well disciplined environment and emphasis on reinforcement of what is right.

Kirk and Ward (1998:3) argue that while the foregoing seems to insinuate a proportionately smaller role for facilities as compared to programmes in the creation of a positive school climate, the value of among other aspects, facility

design, construction and maintenance to the overall process of education should not be underestimated. To this end, although facilities in and of themselves, clearly fall under ecology, they cannot legitimately be excluded from any of the other categories. For example, under milieu, both educators' education and learner morale might be related to the quality, appropriateness, and condition of facilities. Within the social system, the instructional programme, learner involvement in school activities, and parent/community-school relationships can be related to the designation, quality and availability of facilities. Clearly under school culture, facilities design can contribute to an orderly and well-disciplined environment.

This in essence describes what school safety is. Various authors present various emphases on what school safety entails. Lundberg (1994) contends that school safety entails the total learning environment including learners, classrooms, the school campus, educators, parents and the community, whereas Squelch (2001: 138) defines school safety as the one that is free from danger and possible harm, where non-educators and learners can work, teach and learn without fear or ridicule, intimidation, harassment, humiliation and violence. Stephens (1995:15) propounds that school safety entails creating and maintaining a positive and welcoming school climate that is free of drugs, violence, victimisation and fear, where educators and learners can learn in a climate which promotes the success and development of all learners and professionals who serve them.

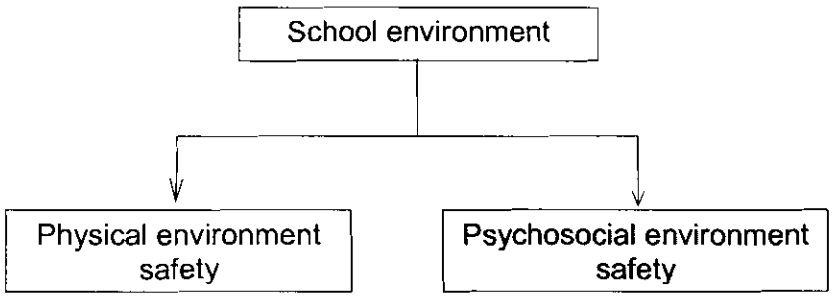
From this exposition, it is clear that the school safety phenomenon is situated within the school environment as a whole. Clearly school safety does not occur naturally. It is created or fostered with focus on different elements of the whole school environment. This translates into an explication of the essence of the school physical environment safety.

2.3.2 **The essence of school physical environment safety**

The nature of school safety requires an understanding of what a safe school is. As alluded to in the foregoing section, a safe school is seen from a perspective

of elements of the whole school's environment, which, according to Nhlapo (2006:12) is a manifestation of the school's physical and psychosocial environments. The school environment thus presents a holistic picture of school safety elements. Figure 2.1 illustrates the school environment in this context.

Figure 2.1 The school environment



(Adapted from Nhlapo, 2006:12)

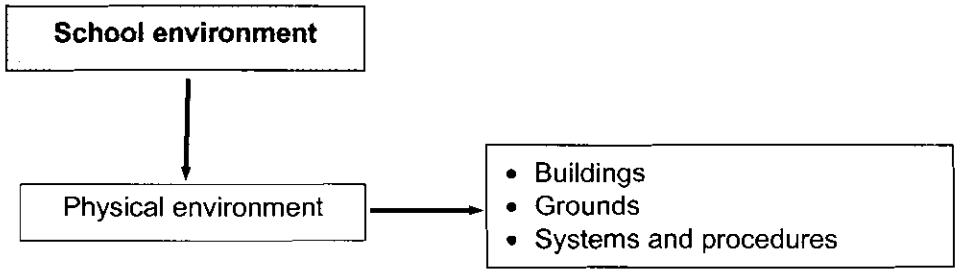
While school safety should be approached from a whole school perspective, this research without overemphasising one over the other, takes the view that the physical environment safety presents most of a safe school environment's tangible aspects and thus focuses on it as a starting point for creating and managing whole school safety.

Wargo (2004:1) describes the school physical environment as encompassing the school building and all its contents including physical structures, infrastructure, furniture and the use and presence of chemicals and biological agents, the site on which a school is located and the surrounding environment including the air, water, and materials with which children may come into contact, as well as nearby land uses, roadways and other hazards (see Henderson & Rowe, 1998:97).

It can be surmised therefore that the school physical environment can be seen as encompassing those physical aspects of the school which are physical, concrete, observable and visible and presents interactive opportunities for the school's broader community to create, in terms of the ecological perspective

mentioned above, a secure and safe physical environment. The main elements are thus the school buildings, playgrounds and safety systems and procedures. The elements of the school's physical environment and their interactive features are represented in figure 2.2.

Figure 2.2 Aspects of the school's physical environment



(Adapted from Nhlapo, 2006:13)

As illustrated in figure 2.2, it can be seen that the school environment comprises school buildings, grounds and systems and procedures. The next section presents an exposition of these elements.

2.3.2.1 ***Buildings***

School building include classrooms, stairwell and passages, offices, libraries, laboratories, tuck shops, toilets, gymnasia and locker rooms, cafeterias and store rooms (Henderson & Rowe, 1998; Garret, 2005). Other aspects of structure are building exterior, building interior plumbing, roofing and electrical (Bastidas, 1998). According to Henderson and Rowe (1998:98), the school buildings include ceilings, signage, safety provisions and access for disabled persons.

According to Bastidas (1998), the structure of a school building is the group of columns, beams, structural walls, floors and roof structure and is its stability and while many school buildings have small cracks in concrete columns, beams, structural walls and floors in some cases, they are no cause for concern. He asserts however that there are cases where other factors are at work and the

cracks are cause for concern and action and advices that for safety maintenance, special attention should be paid to warping in columns, beams, structural walls, floors, and roof structure, rotting in wood structural components and rusting of metal structural components. In this regard it can be added that broken windows, dilapidated stoeps, exposed walls and missing stair rails present obvious hazards and increase the risk of injuries (Wargo, 2004).

Another aspect of the school building structure is the roof. Bastidas (1998) postulates that the roof's job is to protect the school building from rain, sun and wind and to keep water from getting into the school building. Thus the roof is a key part of the school building's waterproofing system, and should therefore, be kept in good shape. This includes keeping gutters clean in order to function properly and regularly cleaning out leaves, debris and plant or tree droppings.

The exterior of buildings should be clean and well-maintained. To this end, Bastidas (1998) advocates an inspection of the paintwork, the functioning of windows and doors, repair of cracks on walls and raking away of leaves, plant materials and debris. This goes equally for the interior of buildings. In this regard, Bastidas (1998) mentions ensuring proper functioning of interior doors and windows, proper floor coverings and ceilings and ensuring that there is general cleanliness of building interiors.

Carter and Carter (2001) add a dimension that creates fear and apprehension in the school building, namely isolation, dim or dark areas, deserted or seldom used buildings, unsecured exit or entrances and areas hidden from view. In this regard, the solution lies in good lighting and eliminating or securing unused buildings, security entrances and exits.

It can be deduced that the safety of school buildings relates to their condition as well as the manner in which they are used. In this regard, Reid (2000) asserts that the general appearance of buildings is an indicator of the school's tolerance for misbehaviour, and by implication, safety-threatening situations and argues that school buildings must be clean, comfortable and devoid of signs of vandalism, damage and graffiti. This implies that school buildings need to be in

a clean condition and that damage and graffiti need to be repaired as soon as possible so as to prevent further damage through appearances portraying a non-caring attitude. In other words, the use of school buildings involves ensuring that building facilities are used for the purpose for which they are meant and used correctly and safety. This means restricting access to building during teaching hours, preventing congestion in classrooms and passages or stoeps and establishing safe movement routes to areas like classrooms, tuck-shops, offices and toilets and limiting the number of learners at a particular site at various times (cf. Mackin, 1997; Reid, 2000; Kromkowski, 2003).

It is clear that creating and ensuring school building safety revolves around the physical maintenance of buildings, that is, the repair, replacement and general upkeep of buildings which allows for the continued use of space for its intended purpose and serves as an additional manifestation of governorship (Carter & Carter, 2001).

Safe and secure buildings are but one aspect of the physical environment. Safe and secure buildings are complemented by safe and secure school grounds.

2.3.2.2 ***Grounds***

School grounds entail shrubs, trees and grass, drainage, sidewalk, fencing and gates and access to school for transportation and emergency procedure (Henderson & Rowe, 1998:98). In actual fact, school grounds should be designed in such a way that they provide a variety of types of surface and equipment to ensure that there are no unintentional injuries and ensure that safety and violence prevention programmes became a priority. Securing the school grounds implies making the campus welcoming, which implies a healthy and friendly school climate that makes everybody feel safe and part of the school (*Curriculum Review*, 1999). This means ensuring that the campus is clean and ensuring that there is an establishment of a regular maintenance system, including removal of such eyesores as graffiti, repairing broken facilities like broken doors and windows (Mackin, 1997). The school ground can be categorised into the following:

2.3.2.3 ***Surroundings***

School surroundings relate to the status of the school campus and the immediate surrounding neighbourhood. According to Kimbrough and Burkett (1990: 295), school surroundings must be properly maintained and physically attractive. This is because school surroundings denote the school community's tolerance for untoward conditions and behaviour and can instil a sense of pride and convey the impression that adult authority prevails (Reid, 2000). Consequently, UNESCO (2004:1) encourages surroundings that are comfortable and conducive to learning, healthy interaction and play and that reduce harassment and anti-social behaviour.

Among others things, there must always be vigilance against any conditions that might be hazardous to the safety of the learners. For instance, the school should be clean and free of graffiti, thus when vandalism occurs it must be fixed or covered within 24 hours and learners must also be encouraged to help keep the school surroundings clean and free of graffiti and litter (Office of the Attorney General of Washington, undated: 3).

Dhollander (2005) espouses among other issues, continuous monitoring of traffic behaviour in school zones, making school surroundings more visible and child friendly and imposing low vehicular speed limits. In this regard, Atlas (2002) argues that the school's relationship with its immediate surroundings is communicated through the edge connections, like landscaping barriers such as gates and fencing which restrict unwanted entrance and access into the school. The aim for using such barriers is to permit observation of surrounding areas while using landscaping trees, shrubs and flowers to enhance the aesthetic appearance of such barriers.

- *The perimeter fencing and gates*

Fencing is a critical factor in making schools safe places. The San Diego Country Office of Education (2003) advocates that fencing need to provide security for learners and staff. It is also a great way to create territoriality.

Wrought-iron fencing is reported as a solution that might work for a school campus because it enhances locking gates, enhances policies that have been made as well as procedures and strategies for issues such as routine locker searches, visitor check-in and closed campus policies (Goldstein & Close-Conoley, 1997:79). The pictures below illustrate examples of secure perimeter fencing and gates.

(Xaba, 2006)

A tight boundary carries many safety and security benefits for learners and educators. For instance, secure fencing reduces the rate of trespassing. The San Diego Country Office of Education (2003) recommends ways and means in which trespassing can be reduced and these are:

- ensuring that entrances and exits are tightly locked;
- installing motion sensor lights; and
- having law enforcement visit the school campus during off-peak periods.

Securing the perimeter fencing and gates can also be enhanced by installing high fencing and gates, having heavily-padlocked gates and where possible, establishing a regular patrol system of the whole school perimeter to detect potential damages and fixing whatever damages might have occurred. In this regard, Dorset Police (2004) confirming that perimeter protection is most important in ensuring physical security of the school, points out that 1.8m high metal palisade fencing and gates are most often recommended as a cost effective and proven means of securing the school. State Department of Education (2005) adds that the perimeter fence must also be vandal resistant, robust and should have an anti-climb topping and should allow for clear natural surveillance. The main aim of such security fencing is to ensure that unauthorised access and exit are limited, especially where natural surveillance is difficult to achieve.

- *Playgrounds*

Play areas should be designed to be more than "play", that is, playgrounds that are free from any threats to safety, both property and people in the school (Wargo, 2004). This is because playgrounds play a pivotal role in learner's safety. They are areas where learners are actively engaged in activities of their own choice and ways (Nhlapo, 2006:18). It is therefore an area which is very critical for learner safety.

It is important to ensure that playground equipment is in good working order, durable and should be located to afford good visual surveillance by staff, neighbours and police patrols. It is important to ensure that all learners are effectively supervised on all activities that they are engaged in to promote safety and unintentional injuries and violence. Educators must ensure that weapons and drugs are not brought to the grounds.

Children need to be protected from injuries that could occur inside and outside the school buildings, thus areas where children play or exercise should be free from hazards like rockslides, waste sites and ravines. Play area should not be located near these areas. Schools must also keep the grass and shrubs cut and refuse-free to reduce the danger from snakes, rats and insects.

Wargo (2004) propounds that when selecting wood for playgrounds or outdoor furniture that children and staff will use, lumber treated with chromate copper arsenic, creosote and pentachlorophenol should be avoided. Potentially toxic levels of arsenic can leach from the wood to the hands of children and contaminate the soil below where children play.

To provide an environment that encourages and enables children to engage in regular and appropriate physical activity, schools should:

- provide play areas that are safe and have facilities for physical activity.
- establish and enforce policies and standards for the use of equipment and grounds to prevent physical activity-related injuries.
- provide time during the day for children to have access to play for unstructured physical activity.

According to California Department of Education's School Safety and Violence Prevention Office (undated), vehicular access to these areas should be planned with separate areas of activity to keep vehicles out of play areas,

restrict entry to other unauthorised areas with, inter alia, retaining walls, landscaping and steep slopes or usage of the common and practical method of achieving separation with chain-link fencing.

According to Wargo (cited by Nhlapo, 2006:18), playgrounds should be fenced off from the main school building so the school building areas are off-limits during all non-school hours. He furthermore insists that consideration should also be given to eliminating "learner hangout" areas. These areas are often cluttered with litter, are subject to wear and provide opportunities for graffiti application and harbour smoking, drinking and drug abuse and can provide a setting for conflicts or assaults.

- *The school landscaping*

Landscaping refers to the horticultural design of the school surrounding. This means the school garden should be properly designed and planted to enhance educator and learner safety. Bastidas (1998) points out that gardens should be watered and fertilized frequently to cultivate a lovely landscape and that flowers and plant beds should be cleaned and remade, plants pruned, hedges trimmed and grass cut on a regular basis, leaves, limbs or any other plant materials which may have accumulated should be raked (Dorset Police, 2004). Wargo (2004) adds that trees should be kept at least a distance from buildings to prevent windows and roof access and should be trimmed to permit cross-campus visibility and be steady enough to withstand being climbed about above the ground.

It is recommended that the school's surroundings should be paved as it enhances neatness and attractiveness. The California Department of Education's School Safety and violence Prevention Office (undated) advocates that paving the entire school yard and prickly planting can be placed next to walks and buildings to channel pedestrian traffic. Added to this, State Department of Education (2005) advices the planting of defensible spiny or thorny plants so as to help prevent graffiti and loitering and enhance security and keep the public to designated pedestrian routes. However, State

Department of Education (2005) cautions that landscaping should not impede the opportunity for natural surveillance and must avoid the creation of potential hiding places.

- *Walkways*

According to Bastidas (1998), sidewalks are the paved walking areas that run parallel to the street and walkways leading from the street, driveway or courtyard to the school building. Sideways are typically concrete but a walkway may be concrete, brick, stone or even wood. But Florida Department of Education (as cited by Nhlapo, 2006:18) adds that walkways should be designed to accommodate occupant loads. The main walkway may need to be wider for overall safety and security and may mean that learners should be taught to walk on the left hand side of the walkway to reduce accidents and stampedes. An orderly use of walkways is important for all learners. It can be asserted that orderly use of walkways is critical especially for learners because they are easily excitable and are likely to stampede as they rush to any place of interest, including their urge for competition, for instance, to outrun others. In this case, Nhlapo (2006:18) asserts that supervision and adherence to rules are of utmost importance (cf. Brunner & Lewis, 2005:24; MMWR, 2001:24). This includes providing adequate lighting and providing facilities for learners with disabilities (MMWR, 2001:22).

- *Signage*

Signage is another area which is very critical for learner safety. It refers to different signs displayed with the main aim of providing guidance and welcoming visitors and other stakeholders into the school's campus. Florida Department of Education (1993) points out that it is important to display signage in a strategic area that will not serve as a place where a person can hide, but in an area that is clearly visible where unnecessary side shadows are eliminated. Signs need to be well lit in front with care taken to eliminate unnecessary side shadows (Florida Department of Education, 1993).

State Department of Education (2005) emphasises that a prominent display of directional signs indicating the location of routes for visitors to the reception point and appropriately worded warning signs regarding the presence of an alarm system and monitored close circuit TV can enhance the effectiveness of the school's safety and security strategy. It can be added that such signage should be phrased in the language(s) that the school community understands and uses.

- *Vehicular routes and parking areas*

It is highly recommended that the principal and the safety committee of the school should ensure that a distinctive separation is made for pedestrians and vehicles. Parking lots should be clearly marked. According to Florida Department of Education (1993), it is important that vehicles are kept separate because it reduces accidents. She further emphasises that remote parking lots are made safe by putting in sidewalks, shuttles, lighting, blue emergency telephones and security building, even if they are not manned full time. The California Department of Education's School Safety and Violence Prevention Office (undated) postulates that gates and removable ballads can be used to restrict unwanted traffic from walkways and driveways and location of parking areas should allow easy, direct visual observation. Florida Department of Education (1993) also adds that plant materials and large hedges where people can hide or stand behind must be avoided.

There should also be boards which indicate the direction of flow of vehicles. For instance, there should be areas for drop-off, deliveries, pick-up points as well as entrance and exit points. According to Bastidas (1998), driveways and parking lots are typically built of either concrete or gravel and all require some form of maintenance because gravel driveways often develop ruts, and if severe enough, additional gravel may be needed and the driveway elevation should be below the school building floor so that rain will drain away from the school building and not into it.

Particular attention should be paid to the direction of the water flow in heavy rain. If a sidewalk, walkway, courtyard, driveway or parking lot is tilted towards the school building, forcing water towards it, then a flood proofing technique is in order before water ends up in the school building (Bastidas, 1998).

The safety and security of school buildings and grounds is complimented by systems and procedures that ensure the facilitation of safety in the school environment.

2.3.2.4 ***Systems and procedures***

Systems in this research refer to those aspects that relate to service systems, *inter alia*, systems for drainage and sanitation, waste management, electricity, alarm and fire. Procedures relate to ways in which things are done like procedures for communications, emergencies, evacuations, visitations and leaving school campuses during teaching and learning hours. Some of the systems and procedures will be discussed in the subsequent paragraphs.

- *Systems*

  - *Fire control*

    Fire control equipment includes such items as fire extinguishers, standpipe cabinets, sprinklers and fire hoses (Florida Department of Education, 1993: 1). Accordingly, the fire control equipment should be flush mounted in walls adjacent to classrooms because isolated equipment is more susceptible to damage.

    In terms of safety regarding fire at schools, Scottish Executive (2003:16) advocates the most important feature as identifying and managing fire risks. Identifying risks relates to assessing the risk to the health and safety of employees while at work, the health and safety of other persons, in this case, learners, parents and other

visitors to the school and recording significant findings of the assessment.

Managing risks relates to:

- making hazard and risk assessments.
- being responsible for fire safety training.
- producing emergency plans and putting fire notices up.
- conducting fire drills.
- checking the adequacy of fire fighting apparatus and its maintenance.
- consulting with local fire service and implementing recommendations thereof.
- conducting fire safety inspections, preferably every term.
- making frequent informal checks to confirm that fire safety rules are being followed.
- ensuring that fire escape routes and fire exit doors are unobstructed and doors open correctly.
- checking that fire detection and protection equipment are maintained and tested and records kept.
- including fire safety in the school health and safety reports.

According to Scottish Executive (2003:18), the above stated management actions involve a thorough fire risk assessment entailing the following steps:

- Identifying all likely fire hazards;

- Deciding who might be in danger and noting potential danger locations;
- Evaluating the risks and carrying out the necessary training to minimise the risks;
- Recording findings and taking action, including preparing an emergency plan and informing, instructing and training employees in fire precautions; and
- Keeping fire risk assessment under review so as to update and revise it if necessary.

Drainage, sanitation and waste management

Good organisation of cleaning and maintenance of the water and sanitation facilities at schools is of the utmost importance mainly because badly maintained sanitation facilities often cause a health risk (UNICEF, 1998:52). In this regard, Nhlapo (2006:22) makes the point that in this regard, stagnant water around tapstands and in blocked drainage channels attracts rodents and forms a breeding place for mosquitoes. Therefore a good cleaning and maintenance system requires funds, spare parts, people and equipment and a clear division of roles and responsibilities among the actors involved (UNICEF, 1998:64).

Baghri and Wilson (2004:7) postulate that safe water and environmental sanitation services, that is, waste facilities are vital for people's dignity and health, and are especially important in ensuring the healthy development of children.

Nhlapo (2006:22) cites the UNICEF which advocates that for safe drainage and sanitation the following need attention:

- presence of latrines and ratio of latrines for boys to girls;

- cleanliness of the latrines and presence of cleaning materials;
- drainage of wastewater;
- garbage disposal;
- accessibility of the latrines for the entire school population; and
- appropriateness of the design.

Clearly from this exposition, safety regarding sanitation and drainage requires taking all steps necessary to ensure that the water supply and utility systems are well provided and maintained. This requires as Nhlapo (2006:23) posits, a proper water supply and usage, proper waste and garbage disposal and proper practice of hygiene in so far as the sanitation and drainage environment is concerned.

Safe water and environmental sanitation services, that is, waste facilities are vital for people's dignity and health and are important in ensuring the healthy development of children (Baghri & Wilson (2004:7). Good organisation of cleaning and maintenance of the water and sanitation facilities at schools is of the utmost importance mainly because badly maintained sanitation facilities often cause a health risk and in this regard, stagnant water around tapstands and in blocked drainage channels attracts rodents and forms a breeding place for mosquitoes.

Situations depicted in the pictures below (Xaba, 2006), apart from being an eyesore, present health and physical risks to learners and educators and should accordingly be eradicated. Clearly, these pictures illustrate uncared for waste disposal. There is a glaring danger of fire as waste is burnt in an unguarded part of the school yard and, which also poses a pollution risk and an environmental health hazard. Schools need well-planned and functional waste

disposal systems. Examples illustrated by the pictures below are obvious poor waste management and disposal systems and are a health and safety hazard.

(Xaba, 2006)

- *Electrical system*

The functionality of the electrical system is of utmost importance and thus its safety is paramount. Extra care should be taken for the handling of electric equipment and the maintenance of electricity as a commodity. According to California Department of Education's School Safety and Violence Prevention Office (undated), the school should ensure that there are sufficient numbers of outlets and that these outlets are in a good working condition. There should be no ground fault interruption in wet areas.

The school principal and the maintenance committee must ensure that all light switches are working, properly grounded and wired. Only approved extension cords should be used in schools and it must be ensured that the circuits are not overloaded and all wiring is properly enclosed. It can also be added that the safety of use of electricity and electrical equipment necessitates a system that ensures that everybody knows the proper manner of use regarding electrical appliances. Supervision of learners and strict adherence to rules of use becomes a critical aspect in this regard.

- *Alarm system*

The alarm system is a critical part of the school's security system. The alarm system has two principal functions namely, to detect intruders after hours or in controlled areas, and to signal emergency personnel when immediate help is needed (Schneider, 2001). Consequently, the alarm system must be regularly maintained and upgraded as usage of facilities changes (FARA, Undated).

A number of issues require attention, *inter alia*, such issues as, when were the systems last inspected and when last alarm system training was held and if educators and other adults at school know how to operate the alarm systems.

Schools must therefore consider that (cf. Bransby & Jenkinson, 1997):

- it is a vital part of school security to know who holds school keys.
- it is also important to be aware of which staff members hold keys to buildings or part of buildings.
- it is important to know who outside school staff holds keys or have access to buildings.
- everyone who holds school keys must be accountable for them.
- principals and SGBs should review who holds keys on an annual basis.

- *Communication system*

Schools need to have effective communication systems to deal with issues ranging from among others, vandalism to falls, illnesses and other health-related incidents. Therefore schools must equip educators and staff with the fastest and simplest devices to manage and contain emergencies (Guderian, 2003). Communication devices are important in this regard.

Among other devices, the school should have a functional telephone system which can operate even when electricity is off. There should also be an intercom system that links various parts of the school to the main office building and the school security system and the school should equip classrooms with two-way radios, cell phones, and telephones with callback features to enable swift communication within the school building (Loupe, 2006).

This also implies that the school should have a communication policy regarding emergencies and how notification of such is done. This

should be complimented by ensuring that all stakeholders have the knowledge of the policy and that everyone knows how it works. This includes methods and procedures for reporting emergencies, crises, damages to systems like drainage and sanitation as well as any other matter that threatens school safety and demands immediate attention.

- *Procedures*

Emergency procedures include, *inter alia*, emergency procedures and emergency drills.

- *Emergency procedures*

Emergency procedures relate to procedures for dealing with unexpected crises situations. The United States Department of Education Office of Safe and Drug-Free Schools (2003) lists among other crises situations, natural disasters, severe weather, fires, chemical or hazardous material spills, bus crashes, school shootings, bomb threats, medical emergencies and learner or staff deaths including suicide or homicide, both intentional or natural. In terms of the school physical environment safety, emergency procedures require that there be plans and known procedures for evacuations and response to such crises, taking into account the school's physical environmental features like building evacuation routes.

In this regard, it is important to determine how to convey information to staff and learners by using codes for evacuation and lockdown, or simply by stating the facts and by simply using plain language rather than codes (The United States Department of Education Office of Safe and Drug-Free Schools, 2003). For instance, the following should be considered: if learners are evacuated from the school building, will staff use cell phones, radios, intercoms, or runners to get information to the staff supervising them?

According to The United States Department of Education Office of Safe and Drug-Free Schools (2003), a common vocabulary is necessary. This is with regard to words used to give directions for evacuation, lockdown, and other actions which should be clear and not hazard-specific. This should be able to address issues pertaining to children or staff with physical, sensory, motor, developmental, or mental challenges.

Knowing the school building is also essential in terms of emergency procedures. There should be an assessment of potential hazards on campus and regular safety audits of the physical environment should be conducted, including audits of driveways, parking lots, playgrounds, outside structures and fencing (The United States Department of Education Office of Safe and Drug-Free Schools, 2003),

The United States Department of Education Office of Safe and Drug-Free Schools (2003) advices that site maps that include information about classrooms, hallways, and stairwells, the location of utility shut-offs, and potential staging sites should be created and copies of this information be made available in advance. This is so that during a crisis, locations or staging sites for responders to the crises are established without much fuss and organised so that for instance, medical personnel can be able to treat the injured, for the public information officer to brief the media or the outside environment and for families to be reunited with their children.

- *Emergency drills*

Nhlapo (2006:25) postulates that emergency drills are meant to test how effective and how well-known the procedures for various emergencies are by both staff and learners and that emergency drills may be enacted as well as simulated. Therefore, in case of an emergency during school hours, it is imperative that staff and learners

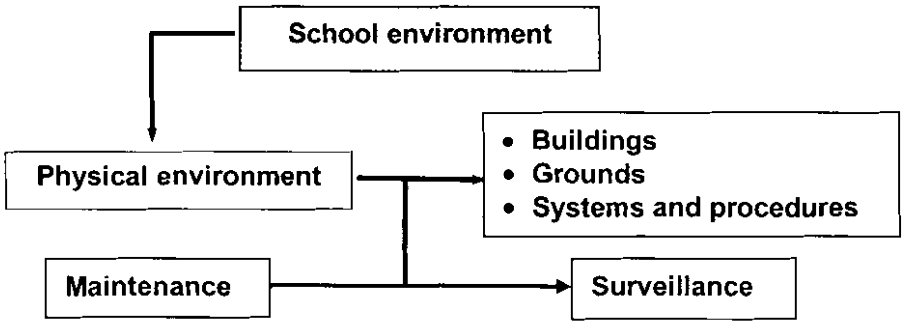
know how to respond. This is referred to as emergency preparedness and this includes emergency drills and crisis exercises for staff, learners and emergency personnel. (The United States Department of Education Office of Safe and Drug-Free Schools, 2003). Educators also need training in how to manage learners during a crisis, especially those experiencing panic reactions. Therefore to ensure a state of emergency preparedness, practice drills are held throughout the year in compliance with state and applicable laws and guidelines.

The foregoing section has exposed the essence of the school physical environment. It is clear that with regard to safety, the physical environment is clearly a function of well maintained school buildings and grounds and functional safety surveillance systems and procedures. It is also clear that the overall safety of the school's physical environment depends largely on the interaction of people in the school with this environment. This calls for the creation and sustenance of a safe school physical environment.

2.3.2.4 *Creating school physical environment safety*

The safety of the school physical environment is a function of the *maintenance* of buildings and equipment and *surveillance* of the school environment. Figure 2.3 conceptualises the school physical environment safety.

Figure 2.3 Safety of the school's physical environment



(Adapted from Nhlapo, 2006:13)

It can be seen from figure 2.3 that the safety of the school physical environment calls for a programme of maintenance and a system of surveillance of the entire school environment.

- *Maintenance as an aspect of the school physical environment*

  Maintenance of the school's physical environment involves the repair, replacement and general upkeep of physical features as found in the school's buildings, grounds and safety systems. The Organization of American States General Secretariat (1998:1) depicts school maintenance as an organisational activity carried out by the school community in order to prolong the life expectancy of school buildings, its furniture and equipment. An important consideration of maintenance is that portrayed by Szuba and Young (2003:43) who posit that maintenance is concerned with ensuring safe conditions for facility users, be they learners, educators, staff, parents or guests.

  The California Department of Education's School Safety and Violence Prevention Office (undated) asserts that a good maintenance programme and a clean campus have an implication for improved public relations and for fiscal management. According to the California Department of Education's School Safety and Violence Prevention Office (undated), maintenance of systems and equipment involves formulation of policies that clarify the standard necessary to design, constitute, equip, maintain and operate the physical plant and financing these systems and ensuring that these policies are implemented.

  There are four categories of maintenance namely, *emergency* maintenance, *routine* maintenance, *preventive* maintenance and *predictive* maintenance (Szuba & Young, 2003:74).

  - *Emergency maintenance*

The UCSC Physical Plant (2004) describes emergency maintenance as concerned with the repair or replacement of facility components or equipment requiring immediate attention because the functioning of a critical system is impaired or because health, safety, or security of life is endangered. Accordingly then, AITS (2004) propounds that emergency maintenance may become necessary with little or no advance scheduling when there is a failure of a significant component that either makes the system unusable, or carries significant risk for continued system usability and at times, a component that may increase the likelihood of a more widespread failure.

It is clear therefore that emergency maintenance requires that there be constant vigilance of school facilities and that these should be inspected regularly for any signs of defects. It is also imperative that schools should have plans for dealing with emergency maintenance. For instance, in the school's maintenance budget, there should be an allowance for any emergencies that may occur (Nhlapo, 2006:27). The school's incident register and monitoring of previous emergency maintenance needs would be a critical indicator for future unexpected emergencies, which can range from damaged buildings and equipment to safety systems and equipment.

- *Routine maintenance*

Routine maintenance refers to the repair, replacement and general upkeep of the grounds and buildings. According to Carter and Carter (2001:3), routine maintenance allows for the continued use of space for its intended purpose and serves as an additional manifestation of ownership and caring. In conversations with learners, Carter and Carter (2001:3) found that learners expressed disdain for broken windows and doors, stained ceilings and other

signs of physical decay, which implies that unkempt school features heavily influence their perceptions of their schools and their sense of importance to the school and community. Therefore routine maintenance is not only an obligation of the school's management and governance, but it is also desirable from a point of view of general school appearance, safety and reputation.

- *Preventive maintenance*

According to Szuba and Young (2003:74), preventive maintenance is the scheduled maintenance of equipment, such as the replacement of air conditioner filters every ten weeks or the semi-annual inspection of water fountains. Preventive maintenance ensures that equipment is always in good working order and provides safety for all its users including learners. An example of preventive maintenance could be the maintenance of electric systems so as so avoid and pre-empt unintended injuries that may result from electrocution as well as prevent malfunctions. The same could be said for playground equipment, where learners spend time expending their energies in a way that is not prescribed, for example, games that could lead to injuries because they are not refereed by adults (Nhlapo, 2006:28).

- *Predictive maintenance*

Predictive maintenance forecasts the failure of equipment based on age, user demand and performance measures (Szuba & Young, 2003:74) and is a function of a proper execution of a facilities audit (Gaither *in* Nhlapo, 2006:28). This will assist schools to avoid emergencies and reduce damage. As such, every piece of equipment and related system should be inspected in detail to evaluate its condition and in addition, repair records should be examined to identify recurring problems.

It seems that maintenance of the school's physical environment relates mainly to maintenance of buildings, grounds, systems and equipment. Maintenance of school buildings and other physical infrastructure involves promoting school and community pride in school facilities through a programme of cleanliness and maintenance which has far greater significance than just pleasing the public.

Maintenance of grounds involves, on the other hand, a clean, well-maintained campus that can create an atmosphere in which learners and other staff members as well as other stakeholders and the school governing body can take pride in.

Effecting a programme that fosters these conditions requires an established school policy that ensures that the desired systems and equipment leading to clean, well-maintained campus will be functional. Maintenance of systems and equipment involves formulation of policies that clarify the standards necessary to design, construct, equip, maintain and operate the physical plant; financing these systems and ensuring that these policies are implemented (California Department of Education's School Safety and Violence Prevention Office, undated). According to Wargo (as cited by Nhlapo, 2006:29)) standards for the appearance and function of the school facilities reflect the School Governing Body's interpretation of the wishes of the taxpaying community regarding the school.

When dealing with school environment safety, maintenance and surveillance are inalienable for dealing with injuries and threats which are visible and unforeseen.

- *Surveillance as an aspect of the school physical environment*

  Surveillance is the process of monitoring the behaviour of people, objects or processes within the systems of conformity to expected or desired norms in trusted systems for security or social control. Therefore

surveillance entails, in the context of school safety, monitoring or watching the whole school environment closely for safety threats of any kind, both tangible and intangible. Surveillance is categorised into *natural surveillance, access control and territoriality*.

- *Natural surveillance*

  According to Simpers (2004), natural surveillance is the placement of physical features to reduce the amount of secluded space, and increase visibility throughout a building and on campus grounds and includes landscaping, placement of windows as they relate to doors and people and lighting of hallways, walkways, entrances and exits. Kirk and Ward (1998:6) state that natural surveillance enhances supervision by eliminating architectural barriers, that is, ensuring that open sight lines exist through the design and placement of buildings, landscaping components, lighting and access control. Carter and Carter (2001:2) submit that the objective of natural surveillance is to provide an environment in which one can see and be seen, to eliminate hiding or hard-to-see places and thereby increase the perception of a human presence.

  The safety of the school physical environment regarding natural surveillance projects the need for maintenance. Simpers (2004:2) explains that if a school does not maintain its natural surveillance, the surveillance efforts will be useless.

  Kirk and Ward (1998:6) argue that surveillance in terms of high risk areas should be designed to accommodate natural surveillance and to facilitate formal supervision where required. Such areas may include the main entrance or campus perimeter, especially where problems with intruders are typical, like toilets corridors, stairways and remote areas like parking areas. These areas may generate a need for more formal surveillance options like surveillance equipment.

- *Access control*

Access control involves a way for learners, educators and visitors to get from one place to another (Simpers, 2004:2). It also controls who is allowed into certain areas. Access control also relates to the control of access to such physical conditions as dim, dark or isolated areas, deserted, vacant and seldom-used areas and buildings, and the control of vandalism, unsecured entrances, congestion throughout hallways, and lack of alternate routes. Simpers (2004:2) includes signage, fencing, landscaping and lighting in access control measures.

According to Kennedy (2004:2), access control also means that visitors arriving at the school must go directly to the administration office before doing anything on the school campus. Therefore access control aims to keep people on safe routes, enhance emergency response, decrease the sense of being lost, avoid conflicts and prevent trespassing (Carter and Carter, 2001:2). According to Kirk and Ward (cited by Nhlapo, 2006:31), access control relates to the:

- *campus perimeter*, which seeks to ensure that visitors and guests pass through a particular point or entrance and have a designated protocol of interacting with the school community;

- *entrances and exits*, which relate to minimising the number of entrances and exits to the school campus and direct traffic flow, both vehicular and pedestrian, to eliminate confusion and congestion and to provide ease of observation. This includes designing parking areas to limit and control access;

- *visitor parking*, which seeks to identify visitor parking with proper signage and control visitor traffic, in a way that it can be easily supervised from the main office by assigned personnel;

- *visitor screening*, which relates to clearly worded and placed signage so as to direct visitors to the main office or designated visitor reception areas where they can be screened, using uniform visitor screening procedures, to ensure that they have legitimate business on the school campus;

Schneider (2001) posits that buildings should ideally be enclosed so as to force visitors to enter through controlled entry points where access can be denied if necessary or alternatively, each building at the school should have its own screening and control measures.

Clearly for access control to be effective and in terms of the physical environment, schools should strive for safe and clearly marked entry and exit routes and ensure that there is overall proper surveillance of these.

Territoriality

Territoriality entails the use of physical elements to create a sense of ownership among learners and educators. Schneider (2001) states that territoriality implies establishing recognised authority and control over the environment, along with cultivating a sense of belonging and argues that poor border definition can impede territoriality. According to Carter and Carter (2001:3), territoriality means the use of physical attributes that delineate space and express ownership. Simpers (2004:2) asserts that landscaping, fencing, artwork, signs and even school uniforms are a few examples of how this can be achieved. Defining the purpose of each area on the school grounds also adds to this sense of ownership, which ultimately breeds in a kind of a school climate that is conducive for teaching and learning (Nhlapo, 2006:32).

Carter and Carter (2001:3) point out that the objectives of territoriality are mainly to increase a sense of pride and ownership

felt by learners, educators and other school personnel and put others on alert that they are coming into territory that is owned and cared for. This gives the message that unacceptable behaviour will not be tolerated.

Creating safe and secure school physical environments implies establishing proper maintenance and surveillance of the school physical environment. However, to do this effectively, means that there should a management approach to facilitate the establishment of systems and procedures and facilitate the implementation of interactive activities between people and the school physical environment.

2.3.3 **Managing the school physical environment safety**

As asserted elsewhere in this chapter (cf. 2.2), a safe school physical environment is a function of safe and secure physical environment features namely, buildings, ground and safety systems and equipment. In this case, school safety is viewed as a responsibility of the school community and its interaction with the school physical environment, which hinges on proper maintenance and surveillance systems. While it is the SGBs function to ensure that policies regarding the safe use of the school's physical facilities, the school principal is responsible for managing safety in the school. This is through the establishment of the necessary management systems for the creation of safe school conditions.

In this regard, the National Crime Prevention Council (2003:25) proposes seven steps that can be engaged to establish and create a safe and secure school physical environment, namely that school should:

2.3.4.1 ***Form an action team***

This step involves finding partners who are equally concerned about school safety and security and forming an action team or committee that will include educators, learners, parents and other community members. This in essence

invokes the organising and leading tasks of the school principal which entail gathering commitment and support from a wide spectrum of stakeholders (*Voices & Choices*, 2003:8). Stakeholders in this case are groups concerned with school safety and include school governing body members, educators and learners, representatives of local government, youth organisations, the community police forum, local business and key stakeholders in the community (IPT, 1999:3).

A school safety and security action team is a group dedicated to assessing safety and security threats, developing strategies for action, advocating for change, facilitating improvements and evaluating outcomes.

IPT (1999:4) succinctly describes the areas of responsibility of the action team or School Safety Committee (SSC) as identifying the school's safety and security problems, liaising with significant people in the community, drafting a school safety and security plan, overseeing and monitoring implementation of the plan and charting the rise or decline in school-based crime and violence.

The SSC plays a planning and oversight role and reports to the principal and the SGB. This in essence means that the SSC is not charged with disciplining learners, controlling school expenditure or setting policy (IPT, 1999:4).

2.3.4.2 ***Identify safety and security problems***

The action team will use various research tools to get a clear picture of safety and security risks at the school so as to make recommendations to the SGB about which problem(s) should receive priority and essentially involve the schools' safety needs assessment. Since the whole school safety needs are to be identified, this stage involves decision-making as to the best means of identifying the school's safety needs (Nhlapo, 2006:45). Among others, it involves deciding which needs assessment instruments are to be used, for instance, questionnaires, surveys, instruments, *in loco* inspections and observation. Included are such issues as time frames, persons or groups responsible for various activities and reporting mechanisms. The outcome of

this process culminates into the school safety profile, which will comprise the current school safety status and assists in establishing a school safety vision, so as to enable the drafting of the school safety plan.

2.3.4.3 *Hold a school safety and security forum*

Once the action team has identified a list of school safety and security problems through research, it will convene a larger group of community members in a forum. Forum participants will decide which problems need the most attention and will brainstorm strategies for addressing those problems.

2.3.4.4 *Develop an action plan*

Recommendations from the forum will form the basis for a safety and security action plan. The plan will spell out specific safety and security improvements at the school and how the action team will implement them. This will entail planning for short, medium and long-term activities for specific areas of need. The plan according to Nhlapo (1996:46):

- should be drafted in a simple and easily understandable manner;
- should be documented so as to be passed around, shared and discussed;
- should be easy to implement;
- should be within the budget allocated by the SGB and or community donations;
- and should state areas of responsibility and persons responsible.

The final plan should include monitoring and evaluation strategies. It should also include time frames, costs of activities, resources needed and should indicate performance indicators or expected outcomes for each activity.

2.3.4.5 *Publicise the school safety initiative*

The SSC must get the word out about its safety initiative and begin follow through on action plan items. The SSC must create support for the initiative by publicising the safety action plan. The reason for this is that the safety and security improvement efforts should be viewed as ongoing and not as a finite project and consequently, increased community awareness will make it easier to generate support for new safety and security improvements as the plan is revised in the future and may also attract additional action team members. Once the plan is made public, there will be more incentives for those who have made commitments, including school officials, parents, learners, business partners, and legislators to follow through.

2.3.4.6 *Implement the plan*

The safety plan will contain areas for high priority implementation. The SSC should determine these priorities and draw action plans to address these. This should entail areas that address the school's immediate safety needs, like the drawing of the school safety policy, assigning of school safety responsibility to a safety officer, reporting mechanisms, procedures for implementing safety measures, standards setting and auditing of existing structures. It is important to ensure that time frames are adhered to and continuous monitoring takes place.

2.3.4.7 *Evaluate success and revise the plan*

Once safety and security improvements have been made at the school, the SSC will conduct follow-up research to determine whether the changes are making a difference. This research will help the committee make adjustments to the action plan.

The evaluation stage should focus on firstly, the implementation process by focusing on such questions as:

- How well is SSC functioning as a group?

- Are there changes that would make meetings, events, and deadlines more effective?

- If the SSC experimented with different ways of getting things done, what effect did the variations have? For example, was it easier to coordinate meeting times, dates, and locations by e-mail or by phone?

- Did more people show up for meetings when follow-up reminders were sent out?

- Has it been discovered that the SSC lacks a certain type of expertise and could use an additional recruit or two?

Secondly, evaluation must focus on the outcomes of the implementation process by answering such questions as:

- Did the SSC accomplish the tasks spelled out in the action plan?

- Did the SSC outreach or publicisation process garner any publicity?

- Did the advocacy efforts lead to new funding opportunities or partnerships with businesses for instance?

Thirdly, evaluation must focus on the impact of the action plan and its implementation and answer such questions as:

- Did safety and security changes in the school environment have an effect on the school physical environment safety? For example, did the number of injuries, safety threats or intrusions in school decrease after the SSC interventions were introduced?

- Did the incidence of vandalism go down after new lights were installed in the school parking lot?

- Did changes to the school environment affect how safe learners, parents, and staff feel inside the school?

- Can the safety and security upgrades be correlated to positive changes in the school or community, such as increased school attendance rates or fewer disciplinary actions? In short, were the goals stated in the action plan achieved?

If the evaluation research provides evidence of positive change, it would be prudent to share the news with the media and other important stakeholders, including past partners, forum participants, funders, parents, elected officials, business contacts, and the community. This way the safety intervention efforts will be even more accepted and there will be more commitment to school safety from the various stakeholders. In addition, it can be averred that the school's safety improvement can serve as an example of good practice and thus encourage other schools to emulate the intervention to an extent of forming a school cluster network for safety.

The foregoing exposition has indicated clearly that creating a safe physical environment involves ensuring that buildings, grounds and safety systems are in place and functional at school. This involves the maintenance and surveillance of the whole school's physical environment. Clearly this is a task that can best be carried out through the interaction of people with their physical environment. It is also clear that the SGB is the key to ensuring that the school physical environment is safe and secure. However, the principal plays a pivotal role in ensuring that policy around safety is implemented and that safety action planning is facilitated throughout the school and by involving all key stakeholders.

2.4 SUMMARY

This chapter presented an exposition of the essence of the school physical environment safety. The school physical environment was presented from a school ecological perspective, which relates to the physical environment

including building conditions and school cleanliness and safety. This was projected as implying that people interact with the environment. This implies creating conditions that foster physical environment safety. The importance of safe school planning which culminates into a school safety plan is thus a quintessential aspect of a safe school physical environment.

The following chapter presents the empirical research method of this study.

CHAPTER 3

EMPIRICAL RESEARCH DESIGN

3.1 INTRODUCTION

Chapter 2 dealt extensively through a literature survey with the essence of school physical environment safety. This chapter outlines the empirical research process undertaken in this study.

3.2 RESEARCH DESIGN AND METHODOLOGY

The research design and methodology outlines the process undertaken in conducting the research. This is because conducting research needs the creation of a framework within which the research project is to be conducted so as to ensure that the research follows a direction that will be focussed in terms of the research inquiry.

3.2.1 Research design

A research design provides the overall structure for the procedures the research follows, the data collection and analysis, which put simply means planning (Leedy & Ormrod, 2005:85). In this regard, Denzin and Lincoln (2005:32) point out that due to many factors that must be considered in planning the research, *inter alia*, time and costs, it is imperative for researchers to select and utilise consciously and purposely those research methods that would permit better, convenient and successful attainment of specific research aims.

There are two broad approaches commonly used by researchers to collect data. These are the quantitative and qualitative approaches. In this research, a qualitative approach is used to investigate how learner discipline in secondary schools is currently managed. This approach was deemed suitable because it would be convenient for the researcher and would facilitate the attainment of this research's aim.

3.2.2 **Qualitative research**

Many approaches that are quite different from one another are used in qualitative research. Leedy and Ormrod (2005:133) state in this regard that these approaches all have two things in common. Firstly, they focus on phenomena that occur in natural settings and secondly, they involve studying these phenomena in all their complexity and thus qualitative researchers recognises that phenomena they study have many dimensions and layers. To this end, qualitative research relies on researchers' abilities to interpret and make sense of what they see as critical for understanding any social phenomenon, which makes the research instruments in qualitative research varied and important when selection of one is concerned.

Qualitative research, according to Gay and Airasian (2003:13), seeks to probe deeply into the research setting to obtain a deep understanding about the way things are and participants perceive them, provides insights into what people believe and feel about the way they are, allows researcher to maintain a physical presence in the research setting and involves texts of written words and the analysis of collected data.

In this research, the researcher used a data collection method that allowed extensive interaction with the participants in their own natural settings. For this purpose, observations combined with photography and informal conversational interviews were used as research instruments.

3.2.3 **Data collection**

3.2.3.1 ***Observations***

Leedy and Ormrod (2005:145) describe observations as intentionally unstructured and free-flowing, where the researcher observes phenomena in their natural settings. The advantage of observations in qualitative research is that they allow the researcher a wide range of instruments, from watching phenomena, recordings, interviews, informal and informational discussions to photography and field-noting (De Vos, 2002:340).

In this research, it was decided that this phase would employ informal discussions, direct observations and photography of observed phenomena. This was influenced by the focus of the study phenomenon namely, the status of schools' physical environment safety and security. Observations of physical environmental features were photographed, recorded and field notes of direct observations and informational discussions were taken. Consequent to that, the following features were observed (annexure A). :

- *Buildings*: Observations entailed cleanliness, maintenance, storage rooms and equipment. Focus was on the status of the building and equipment usage and storage, including maintenance.

- *Grounds*: Observations focussed on the safety of school grounds and playgrounds, the security of the schools' perimeter fencing, the general layout of vegetation and shrubbery, the visibility or obscurity of such amenities as toilets, playgrounds, parking areas as well as the safety and status of equipment.

- *Safety systems and procedures*: Focus was on the safety of such systems as electrical systems, sanitation systems, refuse disposal systems and procedures for movement into and out of the school premises, classrooms and general access control.

This stage provided a rich source of data which was transcribed and analysed after every session at a school to establish emerging patterns and possible categories of data.

3.2.3.2 ***Interviews***

Interviews relate to a two-person conversation on a phenomenon that is research-relevant. The researcher initiates and directs the interview. Interviews therefore aim at gathering data through direct verbal interaction between individuals (Cohen, Manion & Morrison 2000:260).

The interviews were unstructured, informal and conversational and were conducted during site visit observations so as to allow for as much flexibility as possible in order to gain in-depth data (Greef, 2002:302). Interviews were used to fill data gaps that could not be observed or photographed (annexure B). In all instances, field notes were taken and impressions gained were jotted down after every interview (Greef, 2002:304). Coding and analysis were done every evening after school site visits. In this way, data saturation and informational considerations became clear from school site visits (cf. Greef, 2002:305).

3.2.3.3 **Data analysis**

Data analysis is the process in which one seeks to understand more about the study phenomenon and a process whereby this is described. According to Merriam (1998:178) and De Vos (2002:344), data analysis involves the process of making sense out of data collected by consolidating, reducing and interpreting what participants have said and what the researcher observed. In line with De Vos' (2002:341) assertion, data in this research was analysed at the research site during actual data collection and after the actual research site visit.

The following process was followed in the data analysis (Leedy and Ormrod, 2005:150; De Vos, 2002:340):

- Data was organised into smaller units in the form of main concepts, sentences and individual words;
- The data was perused several times to get a sense of what it contained as a whole. Notes suggesting categories or interpretation were jotted down;
- General categories were identified and, it was at this stage that a general impression of the study phenomenon began to emerge;
- Data was then summarised and integrated into the text for reporting.

Data analysis involved a triangulation of collected data. This, according to De Vos (2002:341), means that the researcher uses different types of sources that can provide insights about the same events or relationships. In this research, the investigation of schools' physical environment safety was done through observations, photography and informal interviews. Therefore data analysis involved triangulation of data from the three investigation sources.

After compiling the report, discussions with three veteran principals of schools in the area were taken on the findings so as to eliminate any bias. This whole process managed to describe the findings on the school physical environment safety in the area.

3.2.3.4 **Reporting**

The findings of the study were then reported in narrative form with identifiable categories identified from the interview responses. Quotes were conceptualised and integrated into the report's text and names that could violate confidentiality were altered.

3.3 ETHICAL CONSIDERATIONS

Firstly, the researcher obtained permission to conduct the research from the Greater Taung Project Area Office manager and school principals by following the prescribed departmental protocol (annexure C). Permission was also obtained from the participant SSCs. It was ensured that maximum cooperation was obtained by (Creswell, 1998:37):

- articulating the topic and objectives to the participants beforehand;
- availing transcripts and interpretations to the participants before the actual textual reporting;
- considering participants' wishes for anonymity and confidentiality. Consequently, actual school names and names of participants are not mentioned in the report.

3.4 SUMMARY

This chapter presented the empirical research design by outlining the design of the research and the research method. The next chapter presents the data analysis and interpretation.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

The main aim of this study was to investigate the safety status of schools' physical environment. To achieve this aim, schools located in rural and urban areas were observed in the Greater Taung Area Office. These schools included both primary and secondary schools. School safety coordinators of these schools were also interviewed to establish safety measures with features regarding safety of school environments. This entailed, among other features, visitation procedures, emergency procedures and maintenance plans. Photography was used as an instrument to supplement the observation.

Findings with regard to observations, photographs and informal interviews are integrated and presented in the next sections.

4.2 FINDINGS

To explore the phenomenon of school physical environment safety, the findings are presented in terms of categories identified through both the literature review as well as the process of data analysis. This involved category formation, comparisons and contextualisation and generally making sense of the data (Strydom & Delport, 2002:352). The main emergent categories comprised school buildings, school grounds and systems and procedures (cf. Xaba, 2006:569).

4.2.1 School Building

4.2.1.1 School type and design: rural areas

The first observation looked at the age as well as the building design of schools. The type of building design and the state of the buildings at schools portray feelings of being (un)safe and (in)secure. Old and dilapidated buildings, unlike

clean and well-kempt buildings, portray a feeling of being unsafe and inconsiderate.

The first observation related to the age and building design. Old schools had open designs with rows of classrooms facing each other. Table 4.1 shows the number of schools observed in each category. In the old buildings, the main buildings comprise classrooms facing each other with outbuildings like toilet facilities. New schools on the other hand, had most buildings attached to classrooms facing each other. All these buildings are joined with walls, so that all school activities take place in an enclosed area. In terms of this observation and for ethical reasons, fictitious names for schools and school safety coordinators are used in the research report. Table 4.1 illustrates the number of schools and their design type.

Table 4.1 School types and design

Category	Old Design	New Design	Status of Resources		Schools Location	
			Resourced	Less Resourced	Rural Area	Urban Area
Primary	5	3	4	4	4	4
Secondary	2	2	2	2	2	2
TOTAL	7	5	6	6	6	6

As can be seen from the table, 7 schools were of the old design type and 5 schools were of the new design type. Five primary schools of the former type and 2 secondary schools of the latter type were observed. Of these schools, 6 were in the rural areas and another six were in the urban areas. It was observed that schools in the rural areas were poorly resourced, while though relatively better resourced, schools in the township were not as well resourced. The physical environments in these schools attest to this observation.

It was found that schools situated in rural areas had rows of classrooms built facing one another (see fig. 4.1A & 4.1B). One school, Cosmos High, is located in a rural area (fig. 4.1A). It was observed that the buildings were dilapidated with peeling paint. The classroom floors made of concrete cement were old and

almost eroding and were not well maintained, while doors and windows were also malfunctioning.

The school safety coordinator, Mr. Rose attributed these safety threatening features of the school buildings to lack of funds in the school. He stated:

> "We experience a very serious problem when it comes to funds. As you can see, our school is located in the most rural area where most parents are not working. They rely on government grants, and therefore, the school does not have money to maintain buildings. To make matters even worse, we have not been granted the section 21 status"*.

This feeling was supported by another school safety co-ordinator, Mr King of Pan Primary School, a school situated in the rural area who commented:

> "I am not impressed by the buildings on which we teach our learners. As you can see, there are serious cracks on the walls, the floor is in a bad condition and the ceiling can fall at any time while you are still teaching and cause injuries to the learners. ... These buildings are a real hazard to the safety of learners and educators. Another thing which makes matters worse is that most parents rely on old age pension payouts for survival and therefore the school does not have money to maintain buildings. Perhaps, things will be better if we can be given the Section 21 status as we still fall under section 20" (see the SASA, 1996 for definition of Section 20 and 21 schools).

* Section 21 school are allocated funds to carry out their own maintenance, pay services and purchase teaching and learning support materials (see South African Schools Act, 1996).

Figure 4.1A The Cosmos High school buildings

However, a different view was expressed by another school safety coordinator. Mr. Dejo, from Rift Primary School, also situated in a rural area held a different view. He stated:

> "In our school, parents agreed to contribute towards the development fund so that there should be continuous maintenance of buildings, floors, door, and windows. The Section 21 money which comes late does not affect us that much because parents are really responding well with the contributions. Our parents also organise themselves and arrange fundraising activities for the school. So the situation here is better".

This accounted for the school's better physical environment, especially regarding school buildings (see fig. 4.1B). The buildings of the school were relatively well maintained, had window panes and doors which were fully functional. This was reportedly a result of the community taking pride in the ownership of their school.

Figure 4.1B: Rift Primary School

Generally, observations of most rural schools indicated a state of disrepair, with school buildings being old and unkempt. The maintenance factor seemed to be a task most neglected in these schools. Of course, the one school with well maintained buildings did provide an oasis view of what could be done to keep these schools well kept. In terms of school safety, it was observed and noted that old and malfunctioning doors and windows were a safety hazard.

4.2.1.2 School type and building design: urban areas

School building design in urban areas portrayed a feeling of safety consciousness and induced a sense of safety and security. This could be because the design of the buildings was done with safety in consideration. One school had the two storey design (fig. 4.2A), while another had the latest school building design (fig. 4.2B) with buildings enclosing the classrooms and offering better natural surveillance.

Figure 4.2A: A double storey school building

Figure 4.2B The latest school building design

Because these schools are relatively new, their buildings were found to be well kept and clean. It was also noted that all the doors and windows were functioning well and posed no safety hazard to learners and educators. The doors were reinforced with iron burglar-proofing for safety and security purposes (see fig. 4.2B).

An encouraging observation related to electrical wiring in the buildings. At no school was this found to be in a state of disrepair or posing any safety hazard. All wiring was concealed and inaccessible to learners.

School buildings include toilets. Dirty and unsafe toilets are not only a danger physically, but can also pose health hazards to all people who use them at schools. It was noticed that the toilet facilities of one school in a rural area were in a poor state (fig. 4.3). These toilets were availed for the learners' use. This is degrading to learners' dignity and at the same time poses a very serious health risk. The school safety coordinator of the school denied that toilets were opened for learners. He claimed:

> "It is true our toilets are not in a very good condition. That is why the SGB and the management of the school decided to close them for the learners' and nobody is using them at the moment".

Figure 4.3: Unhealthy and unsafe school toilets

However, a few minutes later, two learners were seen visiting the same toilets. It was noted that despite the statement about the closure of these toilets, these were actually not locked and could be accessed anytime. Besides, there did not seem to be any alternative arrangements for other toilets.

In another school in the rural area (fig. 4.4) hygiene was emphasised. Learners were taught to wash their hands before and after eating and also washing hands after they had been to the toilets. It can be seen from figure 4.4 that great care was taken by the school to ensure learner safety in terms of hygienic conditions. This was coupled with the general cleanliness of the school environment.

Figure 4.4 Pursuit of hygienic conditions at a rural school

It is clear from the foregoing exposition that school buildings at schools where observations were made generally did not offer safety and security. A stark difference relates to schools as per location. Rural schools seemed to be the worst in terms of building safety. Township schools seem relatively better in terms of school buildings.

The state of the school buildings complements and is complemented by the safety status of the school grounds.

4.3 SCHOOL GROUNDS

School grounds include such features as the perimeter fencing and gates, sports grounds, landscaping, vehicular traffic routes and parking areas and signage.

4.3.1 Perimeter fencing and gates

The perimeter fencing must provide safety and security for the people in the school and the school property. This means that the perimeter fencing must be intact, secure and be able to allow for access control so as to prevent easy access and intrusions to the school (3.2.2.2).

It was observed that township schools had secure and strong gate material and intact fencing. This offered a sense of security at these schools and enhanced policies made as procedural strategies such as body and bag searches, visitors' check-in and closed campus policies (fig. 4.5A). On the other hand, schools in the rural area (6 observed) still had some corrugated fence which could be easily tempered with. In one school it was found that the fence had completely fallen and was neglected while another had some sort of makeshift fence which offered no security at all (fig. 4.5B). Another school did not even have a fence (fig. 4.5C).

Mrs. Chair, the school safety coordinator from Orchard Secondary School in the rural area and which did not have a fence had this to say:

> "Our lives are really in danger. ... you can see that the school is not fenced. Each day as it comes, I just cross my fingers that there should be no incident of attack in the school. People are just passing through the school yard because there is nothing that prohibits them from trespassing. I sometimes wonder if people have the same fears that I have."

Another safety officer Mr. King from Pan Primary School (fig. 4.5C) in another rural school without a secure fence despondently complained:

> "(it is) a very serious problem ... our poor fencing makes it easy for people to trespass. We are especially under threat from people who are mentally disturbed. They really pose a serious danger to the learners and educators."

Figure 4.5A A secure school perimeter fence and gate

Figure 4.5B: Schools with a fallen and neglected makeshift fences

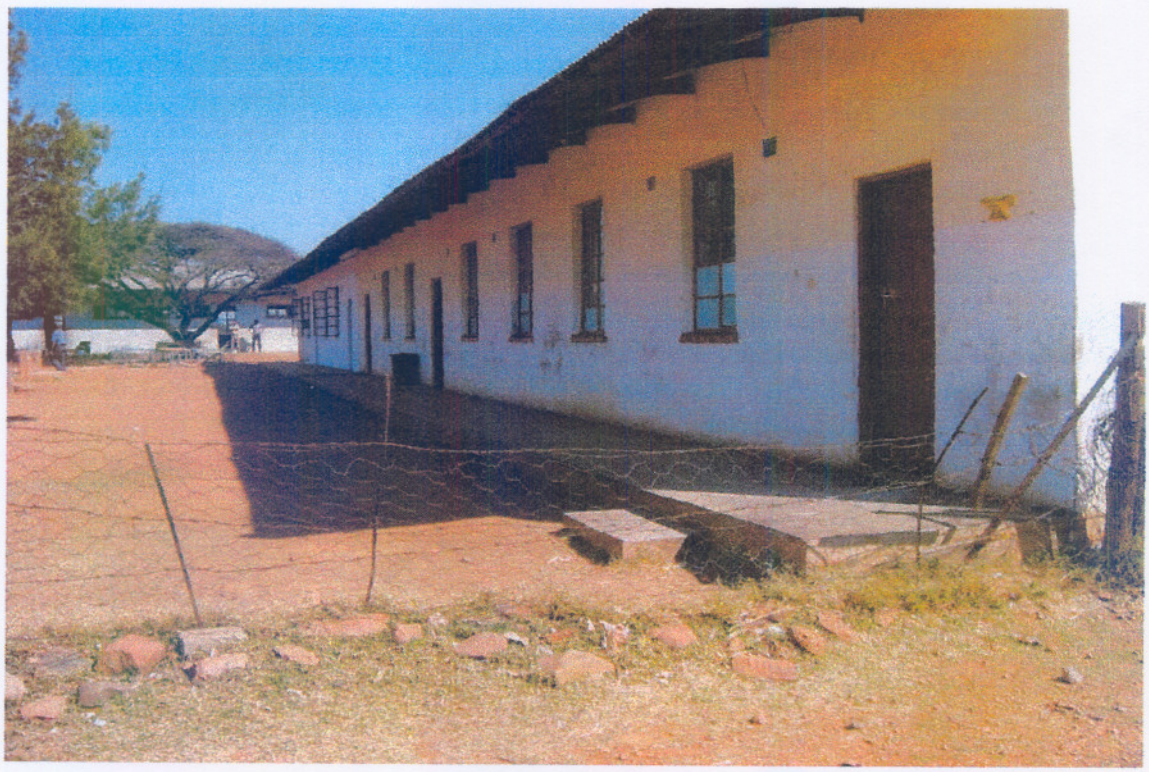
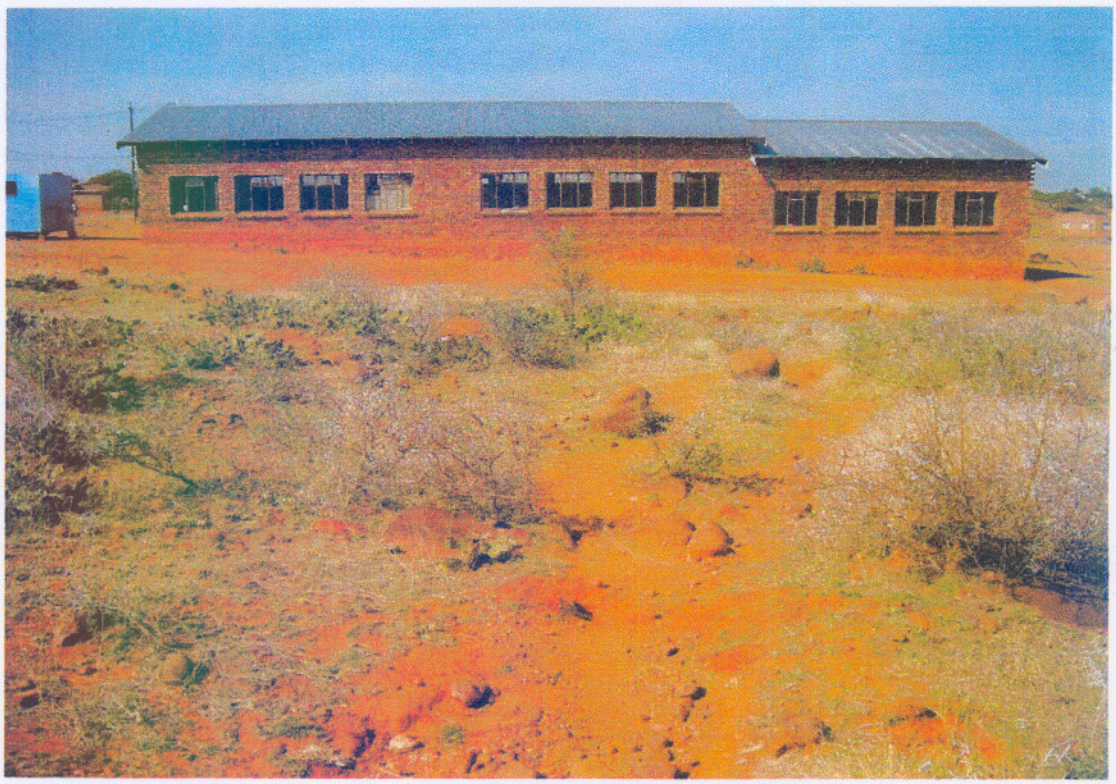


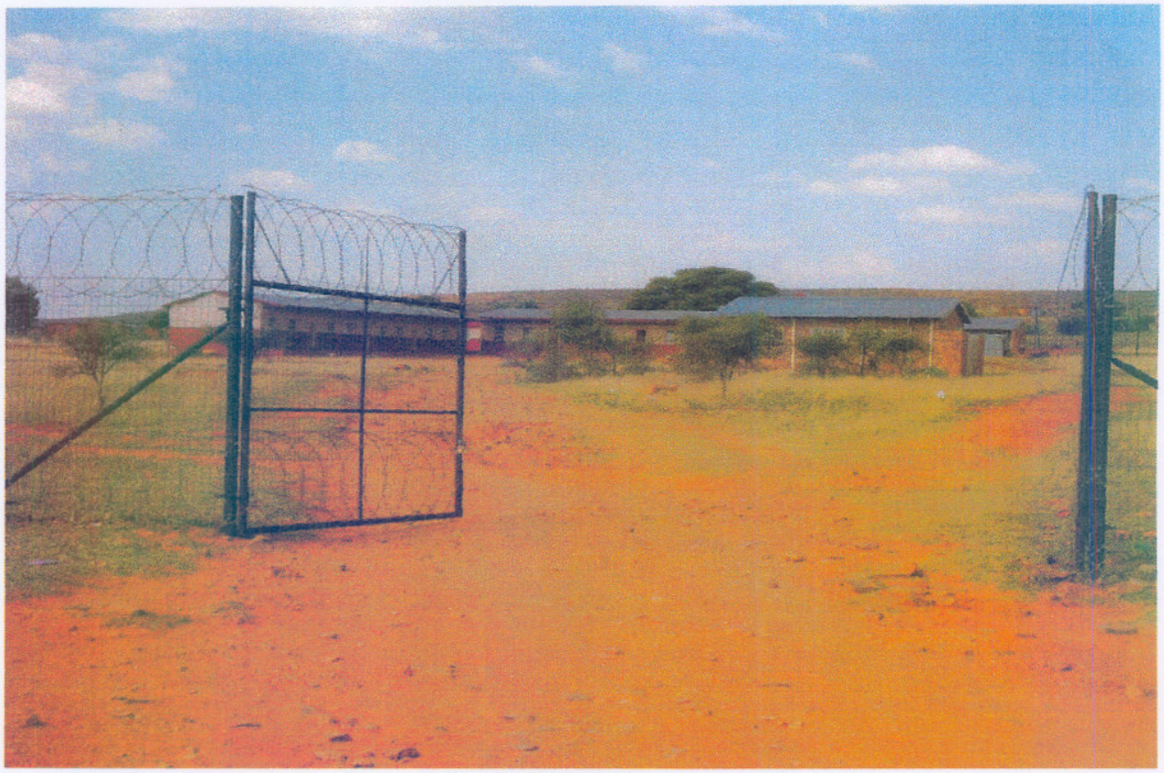
Figure 4.5C: A school without any perimeter fence



A disturbing observation related to gates that were not locked (fig. 4.6A). This made access to the schools premises to be easily gained, as it was easy to go directly into the classrooms, which therefore means that the schools were not closed to intruders and trespassers. Mrs. Fire, the safety co-ordinator of Channel High School was asked about this and she responded:

> "We don't have security personnel to take care of the gate, so if we decide on locking gates during contact time and a departmental official or person visits the school, then who will come out to open the gates?"

Figure 4.6A: Unlocked school gates

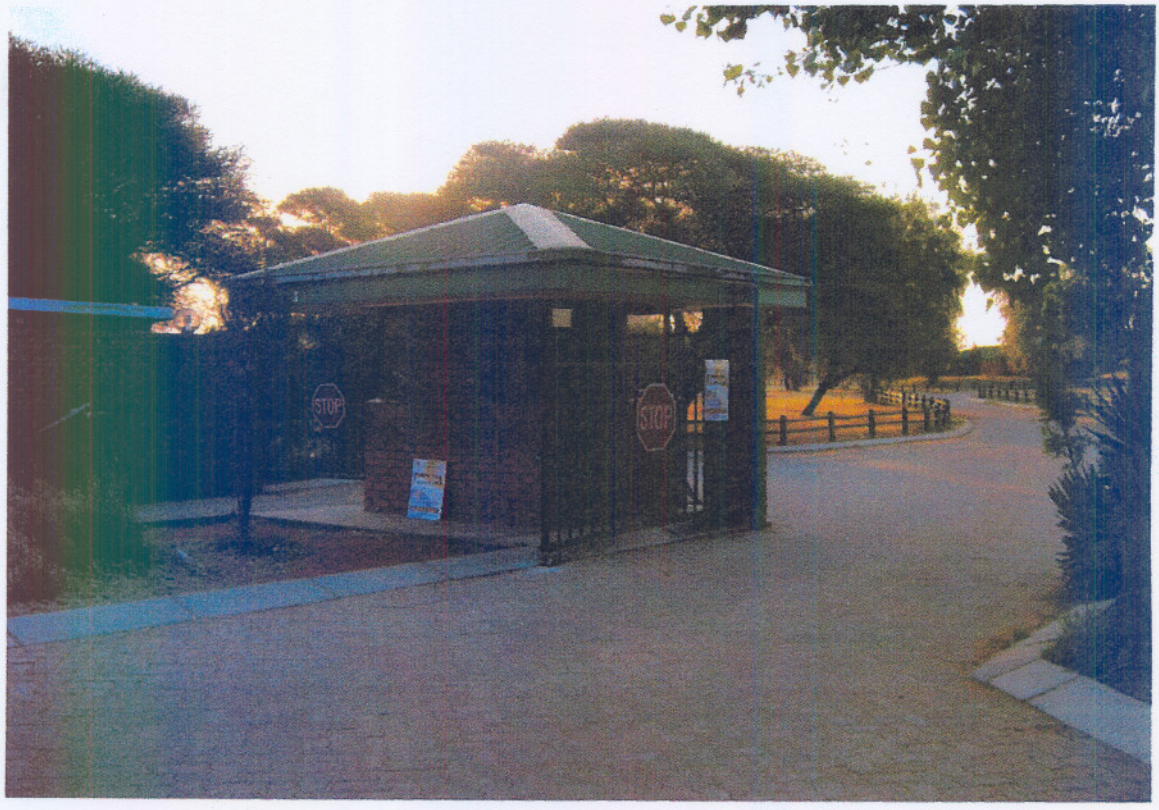


Township schools on the other hand seemed to pay attention to securing the schools through secure perimeter fencing and gates. Mrs. Groen of a school in the township looked very happy when she said

> "... security at our school is very tight. We have security personnel that works for 24 hours. They ensure that all visitors coming in and out of the school do not pose any danger to the learners and staff. They actually record their particulars and direct them to the office."

It was observed that at this school there was a security office at the main gate (fig. 4.6B) and routes to the office were channelled by means of corrugated iron fencing. This ensured that visitors reported directly to the office.

Figure 4.6B: A secure school gate and security office



Safe and secure school perimeter fencing and gates imply safe and secure school sports and playgrounds.

4.3.2 Sports and playgrounds

Sports and playgrounds are areas where learners spend time playing, usually in uncontrolled and undirected conditions and thus pose a number of safety threats, especially when there is no supervision of their activities.

It was observed that sports facilities were not up to acceptable standards, especially in rural schools. In the four rural schools observed, sports grounds were poorly maintained and not standardised. The netball courts inside the school yard were of hard ground (fig. 4.7A). Mr. Folk of Gift Primary School said the following about the nature of their netball court:

> "Firstly you must know that the school was built by the community ... the little resources that we have are because of the contributions made by this poor community. Therefore much cannot be expected from us as compared to township schools."

He went on to say about learner safety on these kinds of netball courts:

> "Of course learners get injured sometimes, from falls – they get bruises and we almost always have to treat girls bruised by falling on this hard ground. Our children have however, got used to playing here. I mean, even at their villages they play in worse grounds."

In most schools in the township, netball courts were up to standard and laid with correct tarring material (fig. 4.7B). This was attributed to the department building schools that have these amenities. Giving his opinion, Mr. Phene, a school safety coordinator of one of these better resourced township schools said:

> "We are lucky to have the department building schools for us with good sports facilities which include a netball court, tennis court, and soccer fields. However, (*pessimistically*) the problem is that

with time they end up being bad because they are poorly maintained."

Figure 4.7A: A netball court at a rural school

Figure 4.7B: Netball courts in a better resourced township school

Soccer grounds in rural schools were situated outside the school premises. This seems to be common in all schools in the township and rural areas. This was largely attributed to school yards whose sizes were so small that they could not accommodate soccer fields. As a result, soccer grounds were situated outside the school, while some schools used community sports grounds. This was said to be one of many learner safety hazards in these schools as learners had to walk to these grounds, sometimes over long distances.

There were however, soccer grounds that were well maintained and up to good standards (fig. 4.8). This was attributed to the fact that these schools had support staff which helped with maintenance.

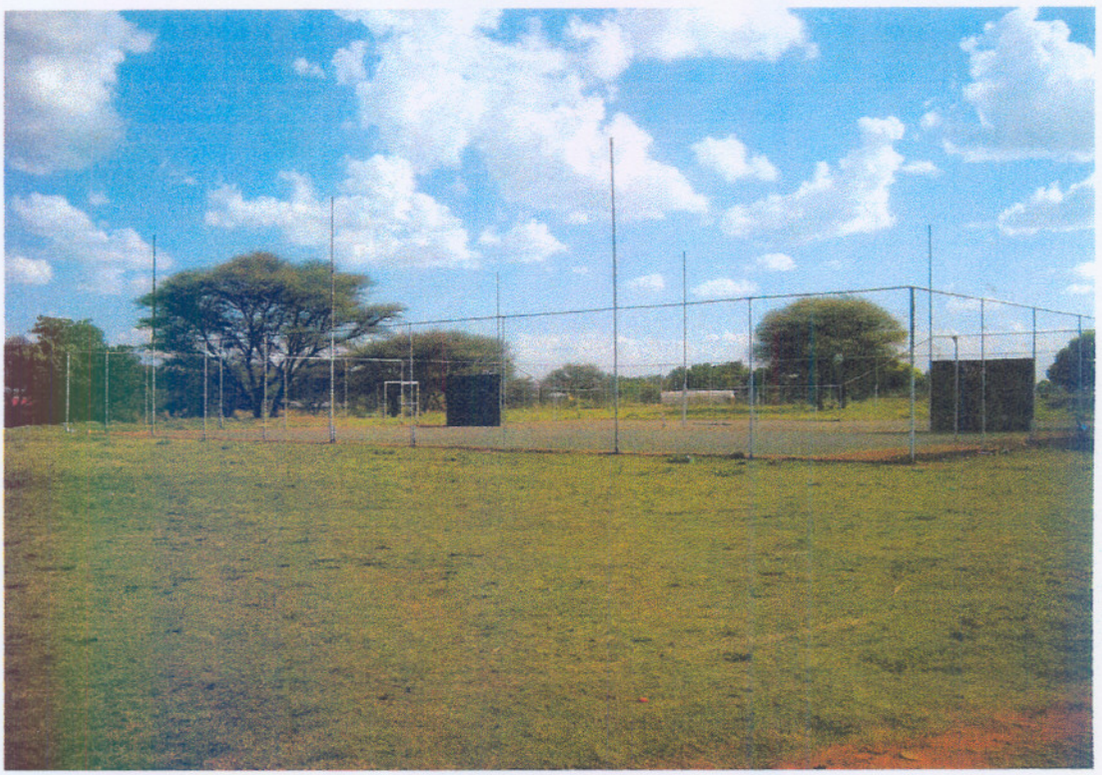
Figure 4.8: A well maintained soccer ground at a township school

Some schools had tennis courts. These were particularly in township schools (2 observed) and were poorly maintained (Fig.9).

Figure 4.9: Poorly maintained tennis courts

However, there were some tennis courts which (2 observed) were highly maintained (fig. 4.10).

Figure 4.10: A well maintained tennis court at a township school



The implications of well maintained or poorly maintained sports ground relate mainly to the safety of learners during playtime or when these amenities are used. As stated in Chapter 1, most injuries to learners happen on the school and sports grounds.

One particular observation made was that in almost all schools, learners played or milled around school grounds during recesses and playtimes. Of particular note, was that there were no areas designated for playtimes and there were few or no areas designated as being out of bounds, even though they offered poor natural surveillance.

Landscaping provides safe school physical environment in terms of territoriality and surveillance of the school environment.

4.3.3 **Landscaping**

Landscaping refers to the horticultural design of the school surrounding. This means that the school garden should be properly designed and planted to enhance educator and learner safety (3.2.2.4). It was found that most township schools' landscaping comprised grass (lawn), trees and shrubbery hedges. In most instances these were well cared for and there were green lush lawns (fig. 4.11).

Figure 4.11: Landscapes with well-kept lawns

Some school landscaping was found to comprise vegetable gardens cultivated by community members (fig. 4.11), while at other schools it was found that schools (2 observed), particularly in townships, resorted to a modern way of environment management, that is, paving the school yard (fig. 4.12). However, it must be mentioned that paving has serious financial implications, which is why in some rural schools (2 observed) there were rocks exposed and which posed a very serious danger to learners and educators. Mr. Taza, a safety coordinator of one of the these schools indicated that they had a plan of paving the area, but because of financial constraints, their plan would take some years before being implemented.

Figure 4.12: Vegetable gardens and paved landscapes

These kinds of landscapes offered some measure of learner safety. Learners could be observed sitting under the trees and some playing on the lawns. It was also observed in township schools where the hedges and grass were green, taken good care of, properly cut and maintained that an image of proper management was portrayed.

However, it was different with rural schools. Most had landscapes with barren (fig. 4.13) and rocky soil, which were certainly safety hazards for learners. This was compounded by the fact that these areas were also playgrounds for learners.

Figure 4.13: Barren school landscapes

A peculiar feature of schools was found to relate to the sizes of the schoolyard and how best the schoolyards are used. In some cases, particularly in rural schools (5 schools observed), there were sizeable portions of land that were unused because of the hard ground with barren soil (fig. 13). The safety coordinator of one of these schools lamented:

"I have a passion for gardening but the problem is that our school is situated in an area that is very rocky. However, we have not despaired, as you can see, we have used tyres to plant some vegetables to help with the school's fundraising programme."

Meanwhile, there was another school in the rural area (fig. 4.14), which had very good soil that made it easy for vegetables to be planted throughout the year. The safety coordinator of the school, Mrs. Moitsei proudly indicated the way in which "our vegetable garden helps in alleviating poverty and malnutrition" as they provided families with healthy and freshly grown food.

Figure 4.14: A vegetable garden at a rural school

Parking areas are another important feature of the school physical environment safety.

4.3.4 Parking areas

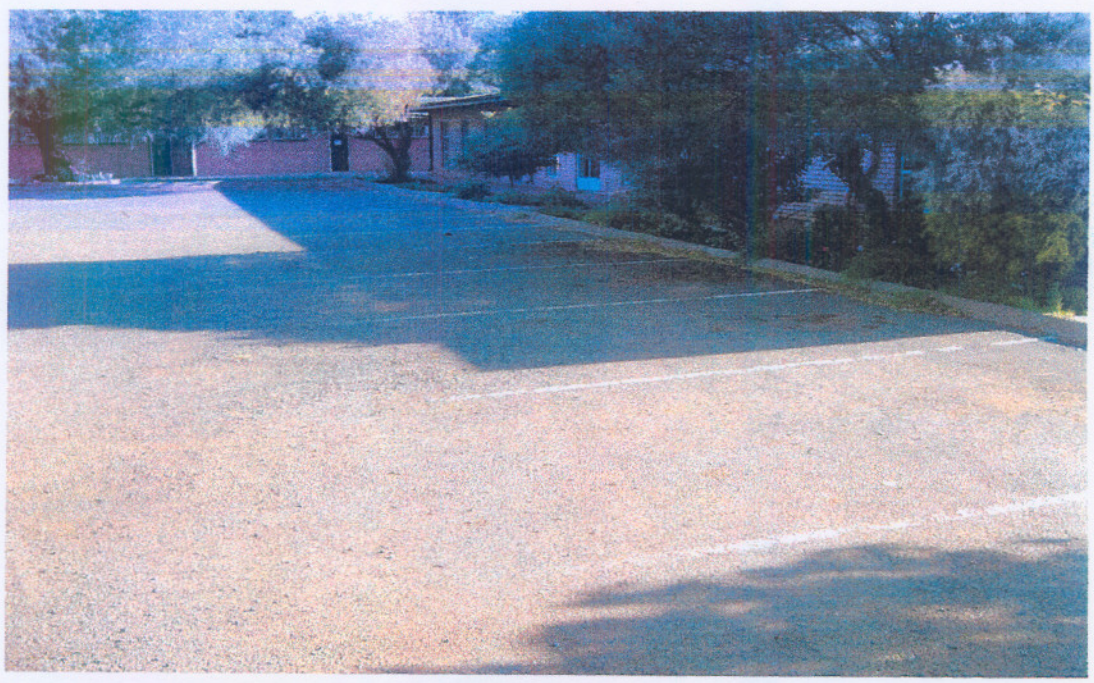
It was argued earlier (3.2.2.7) that schools should ensure a distinct area for pedestrians and vehicles, so that parking lots should be clearly marked, while remote parking lots should be made safe by building *inter* alia, sidewalks, shuttles, lighting, blue emergency telephones and security buildings, even if they are not manned full time. Gates should be used to restrict unwanted traffic from walkways and driveways and the location of parking areas should allow for easy and direct visual observation including boards which indicate the direction of vehicular flow. For instance, there should be designated drop-off, delivery and pick-up points as well as entrance and exit points. Plant materials and large hedges where people can hide or stand behind must be avoided in these areas.

In rural schools (4 observed), car parking areas were in unmarked areas or open space not designed for proper parking. In fact, cars seemed to be competing for the shade of a big tree (fig. 4.15). It was clear that access to the cars was not controlled and as such, could pose danger to learners and educators from intruders who could hide behind cars or even vandalise them.

Figure 4.15: An unmarked parking area under a tree

It was found, however, that township schools (2 observed) had properly designated and marked parking areas for employees and visitors and these had shelter that provided shade for parked cars. It was also observed that the parking areas for visitors were clearly marked (fig. 4.16).

Figure 4.16: Properly designated and marked parking areas



Along with parking areas, scholar patrols are an important traffic control aspect of vehicular safety.

4.3.5 Scholar patrols

The intention for having scholar patrols is to ensure the safety of learners when they come and leave school. It was found in one rural school which was near the road that learners were taught and helped on how to cross the road safely through the assistance of scholar patrols (fig. 4.17). The issue of scholar patrols also emerged from the interviews. Mr Kroeg, a safety coordinator from Gift Primary School had this to say:

> "As you can see, our school is near the road, we have come up with the initiative of enhancing safety on our school by having scholar patrols to assist learners to cross the road safely. I must say we are really winning the battle of reducing accidents in our school and this is attributed to the fact that there is a lot of co-operation amongst us as a staff."

Figure 4.17: Scholar patrol and equipment

4.4 Safety systems and procedures

Safety systems and procedures relate to those systems and procedures that are intended to maintain and promote the safety of the school's physical environment or those systems and procedures that exercise and influence on the school's physical environment.

In this regard, such systems as alarm systems, fire control systems, drainage, sanitation and waste management, communication systems, maintenance and surveillance systems, and emergency procedures were the subjects of observations at schools.

4.4.1 Alarm systems

A number of safety threats were mentioned by school safety coordinators. Among other threats, burglaries, theft and damage to property were reportedly common threats. For this reason, alarm systems would be ideal in combating these threats. It was however, clear that most schools did not have alarms systems. Numerous reasons were provided, the dominant of which was lack of funds to install alarms systems. This was despite schools having such sophisticated facilities as computer labs. Added to lack of alarm systems, burglar proofing was also very poor, and in some instances non-existent. The following responses indicate this.

Mr Bike a safety co-ordinator in one of the township schools said:

> "Our school cannot afford the maintenance of the alarm system because of its costly nature, but I think in future the department will consider installing alarm systems to ensure that computers that they are supplying to schools are secured."

The situation was even worse in rural schools. In these schools, due to poor resources and lack of financial resources in particular, there were no alarm systems and whatever burglar proofing existed, was of the most basic kind.

4.4.2 **Fire control systems**

Fire control equipment includes such items as fire extinguishers, standpipe cabinets, sprinklers and fire hoses (3.2.3.1). The importance of fire control systems cannot be overemphasised. It was found in this regard that generally schools do not have formalised and coordinated systems for fire control. In most instances the question as to what systems were there to ensure that there would be no fire hazards was met with blankness, ignorance and obliviousness.

However, it was observed that some schools (7 observed) had equipment like fire extinguisher and fire hoses (fig. 4.18).

Figure 4.18: A fire extinguisher at a school

Figure 18 shows a fire extinguisher at a school. It was found that accessibility posed a challenge and this raised concerns in terms of how it would be used during a fire. Besides, only one extinguisher seemed to serve a whole block of about ten classrooms. Interviews revealed though that although the fire hoses were functioning well, the fire extinguishers were not properly serviced. Mr Mange from one senior secondary school in a rural area indicated that "We do have fire extinguishers in our school, but we do not know how to use them"

whilst Mr Phene a safety coordinator from a high school in the township laughed as he remarked that:

> "Ever since these fire extinguishers were installed, we have not been taught how to use them, and again they have never being serviced so we do not know if they can still extinguish any fire."

The situation regarding fire control in schools is a cause for concern, especially regarding the safety of learners and educators.

4.4.3 **Drainage, sanitation and waste management**

Drainage, sanitation and waste management refers to good organisation of cleaning and maintenance of the water and sanitation facilities at schools. This is mainly because poorly maintained sanitation facilities often cause a health risk and stagnant water around tap stands and in blocked drainage channels attract rodents and forms a breeding place for mosquitoes (3.2.3.1).

A disturbing observation in one school in the rural area was stagnant water around tap stand (fig. 4.19). This displayed improper practice of hygiene because stagnant water attracts rodents and forms a breeding place for mosquitoes.

Figure 4.19: Stagnant water around a tap stand

Another safety threat related to both rural and township schools (7 observed), was the existence of open refuse dumps, some of which were even used as sites for dumping rubbish (fig. 4.20) with refuse ranging from plastic, toilet paper, newspapers and tins which are real hazardous to the learners as well as the teaching staff. A common feature in most rural schools (4 observed) was unused, old and broken furniture lying all over the school yard (fig 4.21). Apart from being an eyesore, these items pose a safety hazard to learners, who could be seen sometimes playing with them.

Figure 4.20: Open refuse dumps

Figure 21: Old broken furniture strewn around

Safety systems and procedures include communication systems. It was found that schools generally did not have internal communication systems like the intercom. In some schools, while there were telephones lines, these were

centrally situated and could be accessed by the school administration only. This poses a safety threat in that it would be difficult to communicate emergencies to staff and learners in the event of unforeseen events. The most common reason for this was attributed to lack of funds and poor service from the telephone service provider. This situation was worse in the rural schools, where some relied on neighbours for the telephone.

The picture depicted in foregoing section relies mostly on proper maintenance systems at schools.

4.4.4 **Maintenance systems**

Maintenance of the school's physical environment involves the repair, replacement and general upkeep of physical features as found in the school's buildings, grounds and safety systems (3.2.5).

It was found through informal conversational interviews that there were no constant and formal maintenance systems and whatever maintenance was done, was on an *ad hoc* basis. This could explain why broken furniture was strewn around the school premises, waste management was poorly done and there was stagnant water around tap stands. This includes such anomalies as malfunctioning doors and windows that were reported earlier in this text. This indicates that there are no routine maintenance or check ups at schools.

In this regard, the school safety coordinator, Mr Block commented:

> "Maintenance is really a course for concern in our school, as reporting and checking damages on classrooms is the responsibility of the grade educators only, and there are only a few of those grade educators who are committed to that task, hence you find that there are still doors and windows which are not working."

This was further endorsed by Ms Minor, a school safety coordinator at Rhino Primary School:

"Basically there is no maintenance plan, maintenance is only done when a problem is noticed and brought to the attention of the site manager."

It was clear form the responses of the school safety coordinators that maintenance of school property was not a formalised process with a management plan detailing different kinds of maintenance. What seemed to take place at schools was emergency maintenance.

The status of safety systems at schools points to the safety procedures exercised.

4.4.5 Surveillance and emergency procedure

Surveillance is the process of monitoring the behaviour of people, objects or processes within the systems of conformity to expected or desired norms in trusted systems for security or social control. Therefore in the context of school safety, surveillance entails monitoring or watching the whole school environment closely for safety threats of any kind, both tangible and intangible (3.2.6). What is important in this regard is the awareness of people in the school about procedures for surveillance and the need for constant vigilance.

On the other hand, emergency procedures relate to procedures for dealing with unexpected crises situations including among other crises, natural disasters, severe weather, fires, chemical or hazardous material spills, bus crashes, school shootings, bomb threats, medical emergencies and learner or staff deaths including suicide or homicide both unintentional or natural. In terms of the school physical environment safety, emergency procedures require that there be plans and known procedures for evacuations and response to such crises, taking into account the school's physical environmental features like building evacuation routes (3.2.3.2).

Responses from informal interviews indicated that surveillance was really not an issue at schools. Only in one school was a system for monitoring the school environment. As reported earlier, this school's perimeter fence was intact and

there was a security office manned for 24 hours. In other schools, especially in the rural areas, access control was non-existent and monitoring of the school campus was assumed to be a natural part of the school's functions. There were however, no detailed plans of systems and procedures for this.

Most school safety coordinators, while admitting to knowing about the need for detailed surveillance plans and procedures, pleaded ignorance regarding the implementation of such plans. It was also found that there was no stakeholder involvement in school safety planning. Mr Taza commented (speaking for all):

> "Some of as safety coordinators for our schools face the problem of lack of cooperation. It is like this is our job – no one else is responsible. Plans are for the department – we (schools) do not really implement them. But again there are no funds to carry most of the functions needed for school safety."

The same observation was made regarding emergency procedures. Schools generally did not have emergency procedures. The following are some of the comments made:

> "We react to the crises as they happen."

> "There are no serious crisis situations here. Otherwise learners know they must listen to us. So if there is one, we'll tell them what to do."

> "Yes, unforeseen events can be difficult to deal with. But there never is support."

> "This is something that we have never thought of as a staff and indeed such things do happen and there is no plan in place."

> "Oh! To be honest with you sir, nobody in our staff ever thought about safety measures in case of an emergency and thanks for the brilliant question, and I'll share it with colleagues."

These responses led to questions about school safety committees and school safety policies. In this regard, it was found that most schools (8 observed) formulated safety policies in order to comply with the directives of the department. The plans were, in other words, not directed at schools' safety visions and missions and they really did not delve into the safety and security needs of schools.

That probably explains why the contents of such policies did not have activities which would help in case of emergencies and even did no address issues of surveillance and maintenance. This is confirmed by an analysis of responses from the school safety coordinators.

An issue worth mentioning related to areas that could pose danger to learners. These were not demarcated, nor were they marked as danger areas. Such an example can be seen in figures 4.21 and 4.22. The two scenarios depict an open and unprotected dumping site and an open fire place. Both these safety hazards are not protected or fenced off. It can be concluded that learners would want to exercise adventurousness by playing there. In the absence of safety policies, it can be concluded that no one would know how to react speedily to any harm that befalls learners or educators. This would be compounded by lack of safety resources, including rescue resources.

Figure 4.22: An unmarked safety hazard

The findings on the safety of schools' physical environments exposed in this chapter have revealed that schools in the Greater Taung Area Project Office are not very ideal. It became clear that schools did not really have formalised schools safety policies. This accounts for the reasons why school safety issues

are dealt with on an *ad hoc* basis. There is thus a need for schools to institute a drive towards school safety consciousness. It is on this basis that the entire school safety programmes can be established. These programmes would focus on both the physical and psychosocial aspects of school safety.

However, it must be noted that the disparity of resources that is prevailing contributes towards other schools not being safe. It was observed that township schools were better resourced than schools in the rural areas. These disparities give expression to the differences in the school safety status of township and rural schools. It is also noted that despite the poor resources, schools are going the extra mile in other areas of learner safety. An example is that of the psychosocial welfare of learners.

Even though not part of this research, it is worth mentioning that there were such ventures as the vegetable garden project as well as numerous poverty alleviation projects, which in themselves contribute to the learners' well-being and therefore their psychosocial welfare.

4.5 CHAPTER SUMMARY

This chapter presented the empirical research findings regarding the physical school environment safety of schools in the Greater Taung Area Project Office. The next chapter presents the summary, conclusions and recommendations of the research.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents a summary of this study. Focus will be on the important aspects which emerged from the literature study regarding the safety status of schools' physical environments. Furthermore this presentation will be based on findings of the empirical study concerning schools' physical environments in the Greater Taung Area Project Office and conclusions and recommendations will also be presented.

5.2 SUMMARY

Chapter 1 outlined the purpose of the study. The problem statement highlighted the importance of focusing on the safety of the school physical environment. This was based on the various media reports focusing on incidents that show schools to be vulnerable to safety threats, both to learners and staff. This chapter outlined the research design wherein the chosen research method was explicated. The thrust of the study is on schools' physical environment safety. This does not in any way elevate the physical environment above other aspects of school safety, but highlights the importance of taking care of the basics of school safety in the form of the physical environment. Since schools are sites of teaching and learning, safety threatening situations are supposed to be eliminated so that schools can render their educational mandate in safe and secure environments. This will enable educators to teach and learners to learn.

Chapter 1 thus served as a prelude to this research study. It was explicitly made clear that the physical environment safety of schools is a major component of school safety and by implication can be considered as the first step towards ensuring overall schools safety.

In chapter 2, the focus was on the essence of the school physical environment safety. The rationale for a focus on the school physical environment safety was firstly highlighted (cf. 2.2).

It was made clear that the schools' physical environment is one critical aspect of overall school safety and presents a basis for programmes dealing with, firstly, the school's psychosocial safety and lastly whole school safety. The chapter then outlined the theoretical perspective from which the phenomenon of school safety was approached.

The school physical environment safety was seen within the context of the safety of the whole school. In this regard, school safety is the sum collection of the school's physical and psychosocial environment. Therefore the safety of the school's physical environment was located within the theoretical foundation of the school as an ecology which relates to the physical environment, including building condition and cleanliness and focuses on understanding the school in the context of its social-ecological environment (cf. 2.1).

The main elements of the school physical environment were found to be the school buildings and grounds as well as safety systems and procedures. These elements emerged as the ones which could either contribute adversely to the safety of the school physical environment or promote school safety, depending on how well they are taken care of. In essence, the school physical environment safety highlighted important features of basic school safety such as buildings, (cf. 2.2.1), school grounds (cf. 2.2.2) and safety systems and procedures (cf. 2.2.3).

Theories studied on the physical environment safety highlighted its essence from various perspectives. The main points which were raised encompass the need to have good buildings which are clean and well maintained (cf. 2.2.1); schools grounds which are free of any safety threat and a welcoming school campus (cf. 2.2.2) and systems and procedures which relate to ways in which things are done, like procedures for communication, emergencies, safety evaluation, visitation and school campuses conducive to teaching and learning

(cf. 2.2.3). Firstly for school environments to be safe, a holistic picture of schools safety elements must be taken care of (cf. 2.1). Secondly, the importance of implications of and for managing the school physical environment safety was highlighted (cf. 2.3).

Chapter 3 presented the empirical research design using a two-aspect qualitative research strategy. The first aspect of the research consisted of school environmental observations and used photography as a technique of data collection (cf. 3.2.2) while the second aspect comprised informal conversational interviews with school safety coordinators. During observations and photo-taking, conversational interviews were held with designated or tasked school safety coordinators.

Chapter 4 presented the results of the empirical investigation to determine the status of the safety of schools' physical environments.

5.3 RESEARCH FINDINGS

5.3.1 Findings with regard to research Aim 1: the essence of school safety

The following findings were made with regard to the essence of school safety:

- Schools safety is located within the ecological perspective of the school as a social environment and therefore school safety is a function of the school community's interaction with the school environment (cf. 2.2);
- The school environment comprises the physical environment and the psychosocial environment (cf. 2.3);
- The school's physical environment comprises buildings and school grounds and its safety status is made up of the following elements:
    - School buildings - which must be clean and comfortable and devoid of signs of vandalism, damage and graffiti. Schools

buildings must be safe and secure and have no safety threats (cf. 2.3.2.1);

- Grounds – which entail shrubs, trees and grass, drainage, fencing, gates, access to transportation and emergency procedures (cf. 2.3.2.2). School grounds must thus be welcoming and friendly, clean and have regular maintenance to remove all safety threats, School grounds entail surroundings, perimeter fencing, walkways, playgrounds, vehicular routes and parking areas, landscaping, signage and exterior lighting.

- *Systems and procedures* - which relate to service systems and procedures (cf. 2.3.2.3). Included in systems and procedures are fire control, drainage and sanitation, electricity, access control, incident registers, emergency systems and procedures and emergency drills.

- Creating a safe and secure school physical environment necessitates:

  - Maintenance which relates to the repair, replacement and general upkeep of physical features as found in school buildings, grounds and safety systems (cf. 2.3.2.4). Maintenance should thus allow for emergencies, prevention, routine and prediction maintenance.

  - Surveillance which entails monitoring the school's environment closely and is made up of natural surveillance, access control and territoriality (cf. 2.3.2.4).

    Natural surveillance refers to the placement of physical features to reduce the amount of secluded spaces and increase visibility throughout the school buildings and campus.

    Access control relates to controlling entry into and out of the school and in this regard signage, fencing, landscaping and lighting are crucial. Therefore access control relates to the

campus perimeter, entrances and exits, visitor parking and visitor screening.

Territoriality (cf. 2.3.2.4) entails the use of the school's physical elements to create a sense of ownership among learners and educators and increase the sense of pride and give a message that unacceptable behaviour is not tolerated.

- Creating and managing a safe and secure school physical environment necessitates (cf. 2.3.2.5):
  - Forming an action team
  - Identifying safety and security problems
  - Holding a school safety and security forum
  - Developing an action plan
  - Publicising the school safety initiative
  - Implementing the school safety plan; and
  - Evaluating success and revising the plan

5.3.2 Findings with regard to research Aim 2: how safe schools' physical environments are in the Greater Taung Project Area of the North West Province

The following findings were found on the current status of safety in schools in the Greater Taung Project Area of the North West Province:

- School type, design and buildings
  - schools in the area are situated in townships and rural areas;
  - township schools are better resourced than rural schools;

- township school buildings are mostly of the latest design as compared to rural schools;

- lack of funds is cited mostly as a reason for poor resources and for the poor status of buildings in most schools;

- Most school buildings are old and some are in a dilapidated state, especially in the rural areas, while township schools of the latest building design present neater and better cared-for school buildings;

- School toilets generally are in a poor state. This state of affairs could be attributed to the absence of formalised and implementable school maintenance systems;

- There is a vast difference between township schools and rural schools. Township schools present a better school physical environment as opposed to rural schools which present old and dilapidated school physical environments.

- School grounds

  - The perimeter fencing and gates of rural schools were mostly damaged and inadequate in terms of offering security, while township schools mostly had strong and secure perimeter fencing and gates. Some schools were found not to have any fence and in other schools, gates were left unlocked during the day, especially in the rural areas.

  - Sports and playgrounds were found to be mostly inadequate in terms of resources and providing safety to learners. Rural school hardly had any sports grounds and where they were available, these were not up to acceptable standards. For example, most sports ground were located on hard and stony soil where injuries were possible. There were comments relating to learner injuries on the playgrounds.

  - Township schools on the other hand, had better sports grounds and though not adequate, these were well cared for. However, most

schools did not have sports grounds in the school campus, which presents a safety hazards to learners who have to walk to sport facilities in the community.

- Landscaping

  - Landscaping at most schools was found to be incidental, that is, there were no deliberate and planned landscaping programmes. Whatever horticultural activities done were found to be a "normal" requirement for schools to appear beautiful and attractive. Needless to say, issues like placement of trees, shrubs and vegetation were found to be done without consideration for safety of the physical environment. While some schools had neat and well kept lawns and vegetable gardens, these were done for purposes other than enhancing physical environmental safety.

    It was found that generally, rural school had safety threatening landscapes. However, as stated above, where landscaping was attractive, especially in township schools, this was incidental rather than deliberate.

    Most parking areas were found to be unmarked and having no signage indicating any demarcation. Some schools had well-demarcated parking areas, although these offered little natural surveillance.

    An exception was found with regards to one school in the rural areas that had a scholar patrol system.

- Safety systems and procedures

  Safety systems and procedures were found to be lacking in terms of formalised processes of enactment. Once more, it was found that whatever systems and procedures existed were incidental and not deliberate and well planned. This was evident in findings relating to:

- Systems for fire control, which were found to be non-existent in most schools. In schools were there were such facilities as fire extinguishers, these were availed as a school building package, that is, they were installed when schools were built. Nobody knew how to operate them and they were not serviced, which could be a fire hazard in itself.

- Drainage, sanitation and waste management were found to be poor in most schools. Among other safety threats, stagnant water, indiscriminate dumping and waste disposal and poor control of old and obsolete furniture and were commonly found at schools.

- Maintenance systems were found to be non-existent. This was evidenced by damaged old furniture strewn around the school campus and stagnant water emanating form poorly maintained taps.

- There were no formal surveillance systems and emergency procedures at schools. It was commonly found that responses to emergencies were largely *ad hoc*, without a system or plan detailing what was to be done in terms of maintenance and emergencies.

- There was generally no signage at schools, except for signage indicating where certain buildings like offices and toilets were. No signage relating to visitation procedures, parking and out of bounds areas were seen.

- The overall impression formed from the findings was that schools did not have functional school safety committees and school safety policies.

These findings induce a great concern in so far as school safety is concerned. What the results actual imply, is that drastic action is needed to institute an awareness of the importance of school safety-related issues. It might be that the area does not really experience incidents of safety threats due to their school environments. However, the overall summation from this study is that schools in

the Greater Taung Area Project Office present unsafe physical environment safety. Recommendations in this regard are presented in the next section.

5.4 Recommendations

Based on the findings of the literature and empirical studies, the following recommendations are made:

Recommendation 1

Schools need to engage in comprehensive school safety initiatives which must include establishing school safety priorities and plans.

Motivation

It is clear from the findings that while schools are aware of threats to safety in general, no real concrete steps have been taken to prioritise issues of school safety.

Recommendation 2

Schools need to establish the necessary school safety infrastructure, starting with the establishment of school safety committees.

Motivation

School safety committees do not seem to be functional and as a result, school safety issues are not deliberate or formalised into functional strategic and operational plans. School safety issues seem to be largely *ad hoc*.

Recommendation 3

There is a need for both capacity building and empowerment of school safety coordinators at schools.

Motivation

While present at schools, it seems school safety coordinators only pay attention to particular school safety issues as opposed to a holistic safety approach. Formalised action plans addressing such issues as school safety systems and procedures, maintenance systems and surveillance systems do not seem to be in place.

Recommendation 4

The inequity between rural schools and township schools in terms of buildings and other safety-related resources needs to receive utmost attention.

Motivation

The government's mandate of redress and equity seems to be taking too slow a pace, especially with regard to schools in rural areas. Consequently, schools in these areas find themselves in a situation where they have to make do with what they have. Priority should be endowed to matters of safety infrastructure provision.

Recommendation 5

Schools should also prioritise basic safety measures to improve the schools' safety status.

Motivation

While recognising the shortage of resources and lack of funds, schools should ensure that resources they possess are taken care of and well-maintained. An example is the need to repair furniture, recycle old and obsolete materials, repair and maintain taps and water supply systems.

Recommendation 6

School Governing Bodies (SGBs) should be capacitated in terms of their roles and responsibilities in, for example, maintaining and taking care of the school buildings and safety infrastructure.

Motivation

The South African Schools Act 84 of 1996 expressly puts the school maintenance in the functional domain of the SGB. It is therefore of cardinal importance that SGBs be capacitated in terms of safe school planning and alignment of their current activities into functional and "traceable" school development plans.

Recommendation 7

School principals should be at the forefront of ensuring that their schools are safe and secure by invoking and enacting all the necessary and available means of doing so.

Motivation

School principals are finally accounting officers at their institutions. Therefore the onus is on them to ensure that all the necessary steps and procedures are followed and implemented in terms of the school safety planning and implementation.

5.5 LIMITATIONS OF THE RESEARCH

This research could not explore the schools' documentation regarding school safety. This would have shed even more light on the actual school safety activities.

Another limitation related to the vast expanse of the area in which the research was conducted. Consequently, it was not possible to include the other adjacent Area Project Offices; hence data collected did not include the town schools in the form of ex-model C schools.

The major limitation of this research was the low amount of South African literature on the study phenomenon. It was even found that the phenomenon of schools' physical environment safety was not addressed on its own in most

literature. Consequently, the research established variables on the phenomenon and opened further scope for studies in this regard.

5.6 RECOMMENDATION FOR FURTHER RESEARCH

It is recommended that further research be conducted on the concept of the school's physical environment, especially with a South African orientation.

It is recommended that a quantitative survey of the entire North West Province be conducted to determine the status of school physical environment safety.

Research should also be conducted to determine the role of the department of education regarding redress issues in rural schools.

Research could also be conducted to determine how particular circumstances of rural schools contribute to the phenomenon of schools safety as well as how rural school communities can be capacitated to deal with school safety issues within the context of their current and differing circumstances.

5.7 SUMMARY

This chapter concluded the research study by presenting a summary of the literature study and findings. Recommendations for both the study and further research were then made. Limitations of the study were also presented.

It came out clearly from this research study that issues of school safety require much more attention than they are receiving presently. An important aspect of the findings relates to the continuing disparities between township and rural schools, which actually implies the need for a concerted effort to redress the imbalances of the past by skewing delivery towards the rural area.

BIBLIOGRAPHY

AITS. 2004. System and emergency maintenance. [web] http://www.aits.uillionois.edu/live/Site.xml?document=ArtEmergencyMaintanance.xml&focus=nul. Date accessed: 12/03/2006.

Atlas R. 2002. Designing safe schools. *Campus Security Journal*. Dec. Florida: Atlas Safety & Security Design.

Baghri, S. & Wilson, T. 2004. Plan's approach to water and environmental sanitation. Working Paper Series. Surrey: Plan Limited.

Bastidas, P. 1998. Maintenance manual for school buildings in the Caribbean. USAID-OAS Caribbean Disaster Mitigation Project.

Bransby, M.L. & Jenkinson J. 1997. The management of alarm systems. www.hse.gov.uk/research/crr_pdf/1998/CRR98166.pdf. Date accessed: 2006/03/27.

Brunner, J. & Lewis, D. 2005. School Safety's Top Ten. *Principal Leadership*. May. [Web:] http://www.findarticles.com/p/articles/mi_qa4002/is_200505/ai_n13637067. [Date accessed: 13/01/2005].

California Department of Education's School Safety and Violence Prevention Office, Undated. *Safe school plans*. Sacramento: Office of the California Attorney General, Crime Prevention Centre.

Carter, S.P. & Carter, S.L. 2001. Planning safer schools. USA: PRIMEDIA Business Magazines and Media Inc.

Children's Safety Network. 1997. Injuries in the school environment: A resource guide. Newton, MA: Children's Safety Network.

Cohen, L. Manion, L. & Morrison, K. 2000. Research methods in education. London: Routledge Falmer.

Creswell, J.W. 1998. Qualitative inquiry and research design: choosing among five traditions. New Delhi: Sage Publications.

Curriculum review. 1992. 12 school-safety moves you can make. *Curriculum Review.* 8(9).

Denzin, N.K. & Lincoln, Y.S. 2005 The SAGE Handbook Of Qualitative Research. Thousand Oaks: Sage Publications,

Dhollander, T. 2005. Voetgangersbeweging vzw Belgium: Octopus, up to safer and child friendly routes to school. [Web:] http://www.iwalktoschool .org/award_app_template.cfm?ID=305&ayear=2005. Date accessed: 2006/12/02.

Donson, H. & Wyngaard, G. 2003. School injury surveillance in South Africa: Towards a platform for safety promotion in schools. *African Safety Promotion: A journal of injury and violence prevention.*

Dorset Police. 2004. Knowing your school. [Web:] www.dorset .police.uk/ crimesafety/pdfs/school.pdf. Date accessed: 2006/04/23.

Eliasov N. & Frank C. 2000. Crime and violence in schools in transition a survey of crime and violence in twenty schools in the Cape Metropole and beyond. [Web:] http://web.uct.ac.za/depts/sjrp/publicat /Schools.pdf. Date accessed: 2005/06/09.

FARA. Undated. False alarm prevention for schools. [Web:] www.faraonline.org. Date accessed: 2006/05/05.

Florida Department of Education, 1993. Safe school design guidelines. Florida: The Florida Centre for Community design +Research.

Garret, S. 2005. Safe school guide: selected strategies and resources. A huge school through prevention. Oklahoma City: Oklahoma State Department of Education.

Gay, L. R. Airasian P. 2003 Educational research: Competencies for analysis and applications . Upper Saddle River, N.J.: Merrill/Prentice Hall.

Goldstein, A.P. & Close-Conoley, J. (1997). School violence intervention. United States of America: The Guldford Press.

Greef, M. 2002. Information collection: interviewing. (*In* De Vos, (ed). Research at grass roots for the social sciences and human service professions. Pretoria: van Schaik. pp 291-320).

Guderian B. 2003. Increase school safety with wireless communications. *School Business Affairs*. Sep. www.asbointl.org. Date accessed: 2006/09/09.

Hancock, B. 2002. Trent focus for research and development in primary health care: an introduction to qualitative research. Trent focus group.

Hanson D.W., Vardon P., Lloyd J. Undated. Safe Communities: An Ecological Approach to Safety Promotion. [Web:] http://www.jcu.edu.au/school/sphtm/documents/rimnq/Paper2.pdf. Date of access: 2006/03/06.

Henderson a & Rowe D.E. 1998. A healthy school environment. (*In* Marx E Wooley F & Northop D (eds). Health is academic. A guide to coordinated school health programs. New York: Teachers College Press. pp. 96-115).

IPT (Independent Project Trust). 1999. Protecting your school from violence and crime. Guidelines for principals and school governing bodies. Durban: IPT.

Kennedy, M. 2004. Providing safe schools. *American School and University*. 76(5):61-64. Jan. [Web:] http://asumag.com/mag/university_providing_safe.schools/. [Date accessed: 14/05/2005]

Keys, S.G. 2005. Special issue: Collaborating for Safe Schools and Safe Communities. 3(5). [Web:] http://web11.epnet.com/DeliveryPrintSave.asp?tb=1&_ug=sid+9080711F-4A70-4BB. [Date accessed: 2005/03/24].

Kimbrough, R.B. & Burkett, C.W. 1990. The Principalship: concepts and practices. Englewood Cliffs, N.J.: Prentice-Hall.

Kirk D.J. & Jones, T.L. 2004. Effective Schools. San Antonio, TX: Harcourt Assessment, Inc.

Kirk, P.J. & Ward, M.E. 1998. Safe schools facilities planner. Raleigh, NC.: State Board of Education, Department of Public Instruction.

Kromkowski, S. 2003. Welcoming and secure. USA: Primedia Business Magazines and Media Inc.

Leedy, P.D. & Ormrod, J.E. 2005. Practical research. Planning and design. Upper Saddle River, N.J.: Pearson Merril Prentice Hall.

Loupe, D. 2006. e-SN Special Report: Focus on School Safety Keeping students safe with technology http://www.eschoolnews.com/news/showstory.cfm?ArticleID=1305. Date accessed: 2006/10/05.

Lundberg, L. 1994. Safe schools Planning. *Thrust for Educational Leadership.* 24(2).

Mackin, J. 1997. What makes schools inviting? *Human Ecology.* 25(1). Winter.

Mckenzie, F.D. & Richmond, J.B. 1998. Linking health and learning. (*In* Marx, E., Wooley, F. & Northop, D., eds. 1998. Health is academic. A guide to coordinated school health programs. New York: Teachers College Press. p. 1-14).

Merriam, S.B. 1998. Qualitative research and case study applications in education. San Fransisco: Jossey-Bass.

MMWR, 2001. School health guidelines to prevent unintentional injuries and violence. 50(RR22):1-46. Dec.

Monroe, J. 2004. Urban educational setting: A case study analysis of a school social worker's perceptions. *E-Journal of Teaching and Learning in*

Diverse Settings. 2:(1). [Web:] http://www.subr.edu/coeducation/ejournal/Monroe%20Article.htm. Date accessed: 2005/06/04.

National Crime Prevention Council. 2003. School safety and security toolkit: A guide for parents, schools, and communities. Washington, DC.

News24.com. 2004. School half-empty after tragedy 01 November.

Nhlapo, V.A. 2006. Managing school safety in the primary school. M.Ed dissertation. pp 131. Vanderbijlpark: North West University: Vaal Triangle Campus.

Office of the Attorney General of Washington. Undated. School safety and security. [Web]: [http://dev.ossa.net/safetycommittee/school%20safety%20and%20security.pdf. Date accessed: 14/05/2005.

Organization of American States General Secretariat, 1998. Maintenance manual for school buildings in the Caribbean. USAID-OAS Caribbean Disaster Mitigation Project: Unit for sustainable development and environment. [Web:] http://www.oas.org/CDMP/document/schools/maintman.htm. [Date accessed: 08/05/2006].

Reid, D. 2000. Building a safe environment. American school & University-Nov 1

Riley, P. Undated. How to establish and maintain safe, orderly, and caring schools. Raleigh, N.C.: Center for Prevention of School Violence. [Web:] http://www.ncdjjdp.org/cpsv/Acrobatfiles/SOC_1pager.pdf. Date accessed: 2006/11/12.

San Diego Country Office of Education. 2003. Crime Prevention through environmental design: How can it make your school safe? [web] http://www.sdcol.net/cpted/cpetd.asp. Date accessed: 12/05/2006.

Schiffbauer, P. 2000. A checklist for safe schools. *Educational Leadership.* 57(6), 72-74.

Schneider, T. 2001. Safer schools through environmental design. *ERIC Digest* 144. January.

Scottish Executive 2003. Fire safety in schools building our future: Scotland's School Estate. Scotland: Scottish Executive Publications.

Simpers, B. 2004. Safety first. *American School and University*. 76(6): 12-14. Feb. [Web;] http://asumag.com/mag/universitysafety_first/. Date accessed: 23/07/2005.

Squelch, J. 2001. Do school governing bodies have a duty to create safe schools? An education law perspective. *Perspectives in Education.* 19(4):137-149.

State Department of Education 2005. Manual for Planning and Construction of School Buildings (DRAFT. Concord, NH: Office of School Building Aid.

Stephens, R.D.1995. Safe Schools: a handbook for violence prevention. Bloomington, Ind.: National Educational Service.

Strydom, H. & Delport, C.S.L.. 2002. Sampling and sampling method (*in*: De Vos, A.S. (ed). Research at grass root for the social sciences and human service professions. pp. 333-338).

Swart, T. & Stevens, G. (2002). Preliminary result and prevention implications of the learner incident and injury Surveillance system. *Injury and Safety Monitor*, 1(1), 5-8.

Szuba & Young, 2003. Planning guide for maintaining school facilities. Washington DC: National Forum on Education Statistics.

UCSC Physical Plant. 2004. Frequently Asked Questions. University of Carlifornia. [Web:] http://ucscplant.ucsc.edu/ucscplant/index.jsp?page=FAQ#faq11. Date accessed: 12/03/2005.

UNESCO-2004. What else can schools do to improve the school environment? Paris: UNESCO.

UNICEF. 1998. Towards better programming a manual on school sanitation and hygiene. New York: United Nations Children's Fund.

United States Department of Education, Office of Safe and Drug-free Schools. 2003. Practical information on crisis planning. a guide for schools and communities. Washington D.C.:US Department of Education.

Vienings, T., Commys, C. & Geyer, Y. 2001. Safety now. step by step guide on how to develop a Safe Schools Policy. Johannesburg: Centre for the Study of Violence and Reconciliation.

Voices and Choices. 2003. introductory document. [web]. http://www.phac-aspc.gc.ca/ree-ss/intro-e.html. Date accessed: 13/01/2006.

Wargo, J. 2004. The world Health Organisation's information series on school health: The Physical school Environment. New Haven Connecticut: Yale University.

WCED (Western Cape Education Department). 2003. Managing safety and security within WCED institutions. Cape Town: Western Cape Education Department.

Xaba, M.I. 2005. Minding the basics of school safety. (Unpublished paper: Available from the author).

Xaba, M.I. 2006. An investigation into the basic safety and security status of schools' physical environments. *South African Journal of Education*. 26(4):565-580.

ANNEXURE A

OBSERVATION AND PHOTOGRAPHY SCHEDULE

Observation and photo taking were guided by the following features of schools' physical environments:

- School buildings

  Cleanliness

  Access

  Maintenance

  Surveillance

  Systems

- School grounds

  Landscaping

  Playgrounds

  Perimeter fencing and gates

  Walkways

  Vehicular traffic and parking

- Safety systems and procedures

  Fire control

  Drainage, sanitation and waste management

  Electrical systems

  Alarm systems

- Communication systems

ANNEXURE B

INFORMAL CONVERSATIONAL INTERVIEWS

The informal conversational interviews were guided by the following aspects:

- School Safety Committee and Policies
- Maintenance plans
- Surveillance plans

ANNEXURE C

Lefapha la Thuto la Bokone Bophirima
Onderwys Departement van Noord-Wes
Department of Education

Private Bag X1936 TAUNG STATION, 8580. Tel: (053) 994 1868 / 9 - Fax: (053) 994 1162
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GREATER TAUNG AREA PROJECT OFFICE

05 December 2006

TO : **PRINCIPALS**
GREATER TAUNG APO

FROM : **OFFICE OF THE APO MANAGER**

SUBJECT : **PERMISSION TO CONDUCT RESEARCH**

I Mr *T.G.* ***Ditseho*** the APO manager of Greater Taung, grant Mr *T.S.* ***Morebodi*** permission to conduct research in schools which falls within my area.

I believe the research will be of great help to all Department of Education.

Your co-operation with regard to this is highly appreciated.

Sincerely

.....
T.G. DITSEHO
APO MANAGER

0 : DEC 2006

"Opening the Doors of learning and Culture through Quality Education in the Year of the Foot Soldier!"
"Building a South Africa that truly belongs to All!"